

Functional Specification of EURent

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Chapter 1

Introduction

This document specifies automated support for the EU-Rent example as described in 'DEMO-3 Way of Working (version 3, 1 September 2009)' by Jan L.G. Dietz. The purpose of the effort that resulted in this document is to provide case material to support statements regarding the extent that the DEMO approach and the Ampersand approach interfere and/or support one another.

We use the notation 'slide n' to refer to a specific slide in the DEMO-3 document mentioned above. In this notation, n is the slide number that can be found at the bottom of the slide. We use 'Slide n,m' to refer to slides n and m.

We use the notation 'Px:y', to refer to a specific sentence in the EU-Rent description of slide 3. In this notation, x identifies the paragraph number, and y identifies the sentence in that paragraph. Occasionally, the letter 'a' or 'b' may be appended to indicate the first or second part of (long) sentences. The notation 'Px:y-z' is used to refer to sentences y through z of paragraph x.

P2:1 states: "A car may be rented by a reservation in advance or by a 'walk-in' customer on the day of renting". The Note on slide 10 says that there is no difference between these two. We will follow this idea so as not to digress too much from the case. The consequence of this is that making a reservation in advance does not mean that there is a higher chance that a car of the requested type will be available.

This document¹ defines the functionality of an information system called 'EU-Rent'. It defines the database and the business services of EURent by means of business rules². Those rules are listed in chapter 2, ordered by theme. , ordered by theme.

The diagnosis in chapter 3 is meant to help the authors identify shortcomings in their Ampersand script.

¹This document was generated at 6-6-2014 on 16:51:10, using Ampersand v3.0.2.1357, build time: 06-Jun-14 14:50:03 UTC.

²Rule based design characterizes the Ampersand approach, which has been used to produce this document.

Chapter 2

Shared Language

This chapter defines the natural language, in which functional requirements of ‘EURent’ can be discussed and expressed. The purpose of this chapter is to create shared understanding among stakeholders. The language of ‘EURent’ consists of concepts and basic sentences. All functional requirements are expressed in these terms. When stakeholders can agree upon this language, at least within the scope of ‘EURent’, they share precisely enough language to have meaningful discussions about functional requirements. All definitions have been numbered for the sake of traceability.

2.1 EU-Rent

This pattern models the organizational structure of rental companies (limited to EU-Rent), as well as company-wide policies such as the maximum rental duration and rental and penalty tariffs.

At this point, the definitions of *branch*, *carRentalCompany*, *rentalCase*, *location*, *carType*, *brand*, *model*, and *amount* are given.

This system is designed for companies that rent cars according to the business essence as described in the DEMO document.

Definition 1: a company whose business is renting cars.

CarRentalCompany

Car rental companies operate from branch offices at different geographical locations, each of which must be identifiable.

Definition 2: an office of a car rental company at a specific location.

Branch

Branch offices are at different geographical locations. In order to compute penalties for dropping off cars at another branch than contractually agreed, the locations of such branches must be known.

Definition 3: a city (at which a branch office is located).

Location

Rental charges (and penalties) depend on the type of a car.

Definition 4: the brand and model of a car.

CarType

Car types are composed of a brand and a model. Examples of brands are: 'Volkswagen', 'Audi'.

Definition 5: the brand of a car.

Brand

Car types are composed of a brand and a model. Examples of models are: 'Polo' or 'Beetle'.

Definition 6: the model of a car.

Model

Tariffs, charges etc. are amounts of money. It is necessary to be specific about the nature of amounts, such as the sum and the currency.

Definition 7: a sum of money, expressed in 'Euro'.

Amount

A common practice in case management is to define an anchorpoint for everything whose life cycle has to be managed, monitored, etc. To this end, we introduce such an anchorpoint for rentals, and call it a 'RentalCase'.

Definition 8: an information object that contains all information about a rental, including contractual items, rental items, billing items etc.

RentalCase

EU-Rent is a company that rents cars to persons, operating from geographically dispersed braches. Therefore, we must know what branches exist with EU-Rent.

P1:1

Agreement 9: Every branch is part of a car rental company.

Phrases that can be made are for instance:

AMS is a branch of EU-Rent.

DHG is a branch of EU-Rent.

RTD is a branch of EU-Rent.

EU-Rent operates from geographically dispersed braches. We need to know where such locations are in order to compute penalty charges for drivers that drop off their car at a location other than is contracted, because such charges depend on the distance between the actual and the contracted drop-off branch.

P1:1, P4:5

Agreement 10: Every branch operates from a geographical location.

Phrases that can be made are for instance:

AMS is located in Amsterdam.

DHG is located in Den Haag.

RTD is located in Rotterdam.

Since only cars that are available at the pick-up branch may be rented, the availability of these cars at the branches must be known. *P3.4*

Agreement 11: It is known which cars are available at a branch.

Phrases that can be made are for instance:

Car with license plate 1-AMS-11 is available at EU-Rent branch AMS.

Car with license plate 1-AMS-12 is available at EU-Rent branch AMS.

Car with license plate 1-AMS-13 is available at EU-Rent branch AMS.

In order for the renter/driver to specify the car (s)he wants to rent, but also to correctly compute rental charges, the type of every car must be known.

Agreement 12: Every car is of a specific type (brand, model).

Phrases that can be made are for instance:

Car with license plate 1-AMS-11 is a VW Polo.

Car with license plate 1-AMS-12 is a VW Polo.

Car with license plate 1-AMS-13 is a VW Passat.

The cars of EU-Rent are divided in car types (brands and models). *P1:2a*

Agreement 13: A cartype has a specific brand.

Phrases that can be made are for instance:

The brand of Audi A4 is Audi.

The brand of VW Beetle is Volkswagen.

The brand of VW Passat is Volkswagen.

The cars of EU-Rent are divided in car types (brands and models). *P1:2a*

Agreement 14: A cartype has a specific model.

Phrases that can be made are for instance:

The model of Audi A4 is A4.

The model of VW Beetle is Beetle.

The model of VW Passat is Passat.

For every car type there is a particular rental tariff per day.

P1:2b

Agreement 15: All car types have a specified rental tariff (Euros/day).

Phrases that can be made are for instance:

The rental tariff for Audi A4 is 93 Euros/day.

The rental tariff for VW Beetle is 60 Euros/day.

The rental tariff for VW Passat is 90 Euros/day.

In order to compute the penalty charge for exceeding the contracted rental duration, for each type of car it is specified what the excess charge per day will be.

Agreement 16: All car types have a specified excess tariff (Euro/day)

Phrases that can be made are for instance:

For cars of type Audi A4 the extra charge for a late drop-off is 56 Euro/day.

For cars of type VW Beetle the extra charge for a late drop-off is 38 Euro/day.

For cars of type VW Passat the extra charge for a late drop-off is 47 Euro/day.

Since EURent has specified a maximum duration for a rental, rental contracts must state whether or not the period between the specified pick-up and drop-off dates exceeds this maximum duration. *P2:3*

Agreement 17: the date interval (e.g.: [start date,end date]) is within the maximum rental duration as specified by EURent.

Phrases that can be made are for instance:

The period between 01-06-2014 and 07-06-2014 does not exceed the maximum allowed rental duration.

The period between 01-07-2014 and 10-07-2014 does not exceed the maximum allowed rental duration.

In order to compute the correct charge for renting a car, the start date must be known. Note that the meaning of this date depends on whether or not the rental has already started. If the rental has not yet started, it is the date that the rental is foreseen to start. If the rental has started, it is the date on which the rental actually started. *P2:2*

Agreement 18: Rental contracts may specify the actual (and contractual) start date of the rental.

Phrases that can be made are for instance:

The contractual and/or actual starting date of the rental of RC_AMS_123 is 01-07-2014.

The contractual and/or actual starting date of the rental of RC_RTD_262 is 01-06-2014.

In order to determine whether or not a penalty has to be paid for a late drop-off, the end date before which the car will be dropped off must be contractually administrated. *P2:2*

Agreement 19: Rental contracts may specify the (contractual) end date of the rental.

Phrases that can be made are for instance:

The contractual end date of the rental of RC_AMS_123 is 10-07-2014.

The contractual end date of the rental of RC_RTD_262 is 07-06-2014.

In order to keep track of the cars that EU-Rent owns, every case must specify the car that is being rented.

Agreement 20: Rental contracts specify the car that is (to be) issued to the driver.

Phrases that can be made are for instance:

The car that will be, or has been issued under RC_AMS_123 has license plate 1-AMS-12.

The car that will be, or has been issued under RC_RTD_262 has license plate 3-RTD-18.

During the lifetime of a rental, i.e. between the start and end of a rental, the renter has the right to make use of the rented car. For this reason, it is necessary to know which rentals have been started. Other reasons include that from the time of the start of a rental, payment is due, and the car that is mentioned in the rental case is no longer available for rent. *P4:2*

The transaction result B-R01 ([rental] has been started) must be modeled. *Slide 4-5*

Agreement 21: Rental cases may have the property 'rental has been started'.

A phrase that can be formed is for instance:

RC_RTD_262 has the property 'rental has started', meaning that the rental associated with RC_RTD_262 has started.

During the lifetime of a rental, i.e. between the start and end of a rental, the renter has the right to make use of the rented car. For this reason, it is necessary to know which rentals have been ended. Other reasons include that at the time a rental is ended *P4:2*

- the bill can be made up,
- payment can be requested, and
- the returned car is again available for rent.

The transaction result B-R02 ([rental] has been ended) must be modeled. *Slide 4-5*

Slide 26 states that the rental ends after the rental has been paid. According to slide 4, P4:2, the renter has the right to make use of the rented car between the start and end of a rental. However, when rental payment is stated, it must be checked that 'everything is ok' (slide 30), which takes time. In that time, according to Slide 4, P4:2, the renter still has the right to make use of the rented car, and if he does so, it is undefined what will happen. *Slide 26, 30*

Agreement 22: Rental cases may have the property 'rental has been ended'.

While our scope is limited to EU-Rent, we need to explicitly model it as a company in order to be able to define company policy that holds for all branches. An example of this would be the maximum rental period. *P2:3*

Agreement 23: The system is limited to branches that are part of EU-Rent.

In order to ensure that cars are not lost 'administratively', every car must be accounted for.

Agreement 24: All cars must either be rented, or in stock at one of the branches.

Since EUREnt has specified a maximum duration for a rental, it must be checked (computed) whether or not the period between the specified pick-up and drop-off dates exceeds this maximum duration. *P2:3*

Agreement 25: The difference between the contracted end date and start date may not exceed the maximum duration for rentals.

In order to prevent errors from occurring when Yes/No answers are answered differently, it is necessary to check whether such answers are either 'Yes' or 'No'.

Agreement 26: A Yes/No answer may only take the values 'Yes' or 'No'.

2.2 Rental Contracts

This pattern defines the contents of rental contracts and any constraints that must apply. It was decided not to introduce a specific concept 'RentalContract' because such an information object was also not mentioned in the slides.

The sequel introduces the language of Rental Contracts.

In order to be sure that a driver has a valid driving license, an identification number of the driving license must be known.

Definition 27: the identification number of a (valid) driving license.

DrivingLicense

Since the daily charges depend on the car type, the contract must mention what type of car is (going to be) rented. P2:2

Agreement 28: Rental contracts may specify the car type of the rental.

Phrases that can be made are for instance:

The contractual type of the car being rented under RC_AMS_123 is VW Polo.

The contractual type of the car being rented under RC_RTD_262 is VW Polo.

Drivers can only rent cars that are available at the pick-up branch. Therefore, it must be known which branch this is. P2:2

Agreement 29: Rental contracts may specify the branch where the rental starts (i.e.: the car is picked up).

Phrases that can be made are for instance:

The contractual and/or actual pick-up branch for the rental of RC_AMS_123 is AMS.

The contractual and/or actual pick-up branch for the rental of RC_RTD_262 is RTD.

In order to allow branches to plan their stock of available cars, it helps to know what cars will be dropped off at what branch. P2:2

Agreement 30: Rental contracts may specify the branch where the rental supposedly ends (i.e.: the car is dropped off).

Phrases that can be made are for instance:

The contractual drop-off branch for the rental of RC_AMS_123 is DHG.

The contractual drop-off branch for the rental of RC_RTD_262 is UTR.

The person that will be held accountable for the rent, in particular for the payment thereof, must be administered. *P3.1*

Agreement 31: The person who rents the car is called the renter.

Phrases that can be made are for instance:

The renter for RC_AMS_123 is Richard Enter.

The renter for RC_RTD_262 is Richard Enter.

The person that will be held driving the rented car, must be administered, allowing amongst others that his driving license is checked. *P3.2*

Agreement 32: The person who is going to drive is called the driver.

Phrases that can be made are for instance:

The driver for RC_AMS_123 is Dick River.

The driver for RC_RTD_262 is Dick River.

Since rentals may only be started if the driver has a valid driving license, the number of such a license will be registered. Registration must imply that the license is valid. *P3.3*

Agreement 33: A person may have a valid driving license.

A phrase that can be formed is for instance:

The driving license of Dick River , with number DL01235467 , is valid.

Whenever the driver in a rental contract is known, his/her driving license must be checked for validity. If it is valid, the license number must be registered. *P3.3*

Agreement 34: Drivers must have a valid driving license.

In order to ensure that the information contents of the cases are valid, it must be checked whether the car that is issued is of the type that is mentioned in the contract.

Agreement 35: The type of a rented car must be the same as the type mentioned in the contract.

2.3 Handling Rental Requests

This process models the interaction between a renter and/or branch office employee as they prepare a request for obtaining a car rental. The bulk of the work consists of filling in most parts of the contract. The result of the process is that the rental has been promised (B-T01). *B-T01 promised*

The sequel introduces the language of Handling Rental Requests.

Some questions should only be answered with 'Yes' or 'No'. For automated reasoning it is necessary to be certain that no other answers can be given.

Definition 36: the answer to a question that must be 'Yes' or 'No'.

YesNoAnswer

Before a rental may start, it must be known that the corresponding rules are satisfied. Rental cases that have the property of having been promised satisfy these rules. *Slide 18*

Agreement 37: Rental cases may have the property 'rental has been promised'

The rules that need to be satisfied in order for a rental case to have the property 'rental has been promised', are as follows: *Slide 11*

1. the following contractual items must all have been filled in:
 - the pick-up branch;
 - the drop-off branch;
 - the start date;
 - the end date;
 - the car type;
 - the driver;
 - the renter.
2. it must have been ascertained that the driver has a valid driving license.
3. the drop-off branch must have a car available of the type specified in the contract.

Agreement 38: A rental request is only considered if all required fields are filled in.

2.4 Issuing Rental Cars

This process models the work for the car rental company employee, starting with a filled in rental request and leading up to the result that the car of a rental has been picked up (B-R03) and the rental has started (B-R01). *Results: B-R01, B-R03*

A rental starts when a driver has been handed the car keys. In order for the system to keep track of its cars (amongst other things), this (manual) action must be registered. Registration of this action presupposes that the information as registered in the rental contract is in accordance with reality, which the issuer of the keys must check. Note that when a rental is started, the car is no longer available for rent.

Agreement 40: Branches must register the handover of car keys (i.e. the responsibility for the car).

The rules that need to be satisfied in order for a rental case to have the property 'rental has been started', are as follows: *Slide 4-5, 18*

1. the rental case has the property 'rental has been promised'.
2. a car (of the type as listed in the contract) has been assigned to the rental case;
3. keys of that car are handed to the driver, which we assume to imply that
 - the driver has picked up the car at the contracted start date;
 - the driver has promised to drop off the car according to the contractual constraints.

Agreement 41: A rental starts when the rental has been promised, a car of the correct type has been assigned and the driver has received the keys for this car.

The type of car that is requested can only be one for which the pick-up branch has cars available. *P3.4*

Agreement 42: Rentals may only be promised if a car of the type specified in the contract is available at the pick-up branch.

For sanity reasons, the question of whether or not the keys are handed over can only be answered if the driver is known.

Agreement 43: Keys may only be handed over to the driver that is mentioned in the contract.

When the keys are handed to the driver, and the renter is not specified, we may assume that the driver also fulfills the role of renter, and fill this in the contract.

2.5 Dropoff Handling

This process models the work for the car rental company employee when a car is being dropped off and leading up to the results where the car of the rental has been dropped off (B-R04) and the rental has ended (B-R02). *Results: B-R02, B-R04*

In order to allow checking whether or not the dropped off car is the same car as was rented, the dropped off car must be identified. *P4.1*

Agreement 45: Rental contracts may specify the car that has actually been dropped off.

A phrase that can be formed is for instance:

The car that has been dropped-off for RC_RTD_262 is 3-RTD-18.

In order to make up the bill for the rental, the date at which the rented car is dropped off must be known.

Agreement 46: Rented cars are dropped off on specific dates.

A phrase that can be formed is for instance:

The car rented under RC_RTD_262 has been dropped off on 14-06-2014.

In order to make up the bill for the rental, the branch at which the rented car is dropped off must be known.

Agreement 47: Rented cars must be dropped off at a specific branch.

A phrase that can be formed is for instance:

The car rented under RC_RTD_262 has been dropped off at AMS.

In order to be able to terminate the rental, it must be known that payment is received.

Agreement 48: Payments for rental contracts need to be accepted (or declined).

The rules that need to be satisfied in order for a rental case to have the property 'rental has been ended', are as follows:

1. the rental case has the property 'rental has been started'.

2. The following information is available
 - the license plate of the returned car
 - the date of return;
 - the actual drop-off branch;
3. the rental has been paid.

Agreement 50: The car that is dropped off must be the one that has been issued.

2.6 Rental Payment

This process models the work for the car rental company, starting when the rental charge is computed (the renter is presented the bill), and leading up to the result that the rental has ended (B-R05). *Result: B-R05*

In order for a renter/driver to pay for a rental, the total amount (rental charge) must be known.

Agreement 51:

Agreement 52: Payment for a rental may only be accepted if the total amount of the rental charge is known.

2.7 Rental Billing

This process models the work for the car rental company, starting when the car has been dropped off, and leading up to the result that the bill is made. This (fully automated) process consists of the following parts: *Result: Bill presented*

1. Computing the basic charge;
2. Computing the penalty charge for the use of the car beyond the contractual end date;
3. Computing the penalty charge in case the car is dropped off at a location other than contractually agreed;
4. Computing the total of these charged.

In order to compute the basic rental charge, the period of the actual rental must be known. *P4.3*

Agreement 53:

The first component of the rental charge is the rental basic charge. *P4.3*

Agreement 54: Rental contracts may specify an amount for the basic charge

In order to compute the penalty charge for exceeding the contracted rental duration, the period of the actual rental must be known. *P4.4*

Agreement 55:

The second component of the rental charge is the penalty charge (for exceeding the contracted rental duration). *P4.4*

Agreement 56: Rental contracts may specify an amount for the penalty charge for late drop-offs

In order to compute the penalty charge for dropping of a car at another location than was contractually agreed, the amount that will be charged as a penalty for this must be known. *P4.5*

Agreement 57: There is a penalty charge for cars that are dropped-off at another branch than agreed.

Phrases that can be made are for instance:

The penalty charge for dropping off a car at a branch that is AMS-DHG km away from the contracted drop-off branch, is 61 Euros.

The penalty charge for dropping off a car at a branch that is AMS-RTD km away from the contracted drop-off branch, is 67 Euros.

The penalty charge for dropping off a car at a branch that is AMS-UTR km away from the contracted drop-off branch, is 38 Euros.

The third component of the rental charge is the penalty for dropping off a rented car another location than was contractually agreed. *P4.5*

Agreement 58: Rental contracts may specify an amount for the penalty charge for late drop-offs

The period of the actual rental is the difference between the date of the drop-off and the date of the pick-up of the rented car, plus one (so that if the drop-off date and the pick-up date are the same, the period is 1 day). *P4.3*

Agreement 59: The number of days that a rental has lasted is one more than the difference between the date that the rented car has been dropped off, and the date that the rented car was picked up.

The basic rental charge is the product of the period of the actual rental times the daily tariff that is valid for the type of car that was rented. *P4.3*

Agreement 60: The basic charge for a rental is the number of days the rental has lasted multiplied with the daily tariff for the type of car that was rented.

The excess period of the rental is zero, unless the drop-off date exceeds the contracted end date, in which case the period is the number of days between these two. *P4.4*

Agreement 61: The number of days in the excess period of a rental is zero, or the difference between the date that the rented car has been dropped off, and the contracted end date, whichever is more.

The penalty charge (for exceeding the contracted rental duration) is basic rental charge is the product of the excess period of the rental times the excess charge per day for the type of car that was rented. *P4.4*

Agreement 62: The penalty charge for a rental is the number of days in the excess period of the rental, multiplied with the excess tariff.

The penalty charge for dropping off a rented car another location than was contractually agreed is an amount that depends on the distance between the branches. *P4.5*

Agreement 63: The penalty charge for a drop-off at another location than the contracted one, is the number of kilometres between the actual and contracted drop-off locations, multiplied with the location penalty tariff.

The rental charge consists of three amounts: *P4:2-5*

1. the basic rental charge,
2. the penalty charge when the car is returned after the contracted drop-off date, and
3. a penalty charge in case the car is dropped off at a different branch than contractually agreed.

2.8 New Rental (User)

2.9 New Rental (Branch Office)

When a rental request is submitted by a branch, this branch will play the role of pick-up branch.

2.10 Car Returns

Agreement 70: A car can only be returned if it is actually in the possession of the renter or driver

Handling a returned car means that payment for the associated rental is obtained.

When a car is returned to a branch, this branch will play the role of drop-off branch.

When a car is returned to a branch, that date is the drop-off date.

Chapter 3

Diagnosis

This chapter provides an analysis of the Ampersand script of ‘EURent’. This analysis is intended for the authors of this script. It can be used to complete the script or to improve possible flaws.

EURent does not specify which roles may change the contents of which relations.

EURent assigns rules to roles. The following table shows the rules that are being maintained by a given role.

rule	ExecEngine	Developer	User	Branch
Promising rental requests	×			
Compute max rental duration	×			
Starting the rental	×			
Auto fill in renter in rental contract	×			
Ending the rental	×			
Rental period computation	×			
Basic charge computation	×			
Excess period computation	×			
Excess charge computation	×			
Location penalty computation	×			
Rental charge computation	×			
Submit rental request			×	
Fill in default renter	×			
Submit branch rental request				×
Fill in default renter (at a branch)	×			
The branch that fills in the request is the pick-up branch	×			

Car return handling	×
Return cars to drop-off branch	×
Drop-off date is date of car return	×

Concepts Car, Integer, Date, Person, and DistanceBetweenLocations remain without a purpose.

The purpose of relations *maxRentalDuration*, *rcUserRequestedQ*, *rcBranchRequestedQ*, *rcMaxRentalDuration*, *arg1*, *arg2*, *arg3*, *computedRentalCharge*, *earliestDate*, *latestDate*, *computedRentalPeriod*, *ctcNrOfDays*, *ctcDailyAmount*, *computedTariffedCharge*, *firstDate*, *lastDate*, *computedNrOfExcessDays*, *distbranch*, *sessionUser*, *sessionToday*, *sessionNewUserRC*, *sessionBranch*, *sessionNewBranchRC*, and *sessionReturnedCar* is not documented.

Relations *branchLocation*, *brand*, and *model* are not used in any rule.

Figure 3.1 shows a conceptual diagram with all relations declared in ‘EU-Rent’.

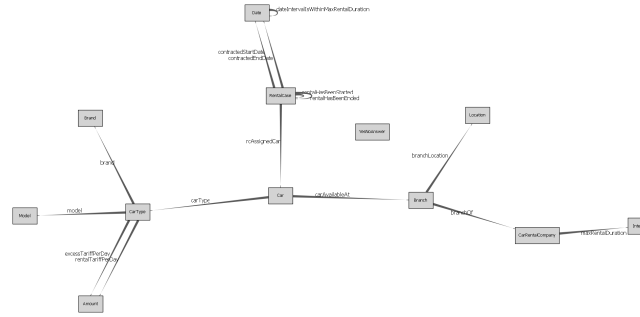


Figure 3.1: Concept diagram of the rules in EU-RentDiagnosisConceptualDiagram

Figure 3.2 shows a conceptual diagram with all relations declared in ‘Rental Contracts’.

On line numbers 217 and 238 of file `.\EURent Ontology.adl` and on line number 115 of file `.\EURent BRANCH interface.adl` rules are defined without documenting their purpose. On line numbers 187, 201, and 305 of file `.\EURent Ontology.adl` and on line numbers 82, 122, 128, and 135 of file `.\EURent BRANCH interface.adl` rules are defined, the meaning of which is documented by means of computer generated language. On line number 146 of file `.\EURent Ontology.adl`, on line numbers 77 and 83 of file `.\EURent RENTER interface.adl`, and on line numbers 70 and 76 of file `.\EURent BRANCH interface.adl` rules are defined without any explanation.

The table below shows for each theme (i.e. process or pattern) the number of relations and rules, followed by the number and percentage that have a reference. Relations declared in multiple themes are counted multiple times.

Theme	Relations	With reference	%	Rules	With reference
EU-Rent	10	7	70%	4	2
Rental Contracts	9	8	88%	2	1
Handling Rental Requests	3	1	33%	2	1
Issuing Rental Cars	2	1	50%	4	2
Dropoff Handling	4	2	50%	2	0
Rental Payment	1	0	0%	1	0
Rental Billing	7	6	85%	6	6
Enforcing maximum rental duration	2	0	0%	1	0
Compute total rental charge	4	0	0%	3	0
Compute number of regular days (period)	3	0	0%	3	0
Compute tariffed (regular or excess) charge	3	0	0%	4	0
Compute number of excess days (period)	3	0	0%	3	0
Distance computations	2	0	0%	1	0
Session settings	0	0	-	2	0
Computing Projected Costs	2	0	0%	4	0
New Rental (User)	0	0	-	2	0
New Rental (Branch Office)	0	0	-	3	0
Car Returns	0	0	-	4	0
Entire context	61	25	40%	51	12

The following table shows which rules are not linked to a role within a particular process. This has as consequence that these rule(s) will be maintained by the computer.

process	rule
Issuing Rental Cars	Rentable cars, Keys must be handed over to driver
Dropoff Handling	Dropped-off car type integrity, UNI rcDroppedOffCar::RentalCase*Car, UNI rcDropp
Rental Payment	Rental payment amount is known
Rental Billing	UNI rentalPeriod::RentalCase*Integer, UNI rentalBasicCharge::RentalCase*Amount,
Car Returns	Car returns

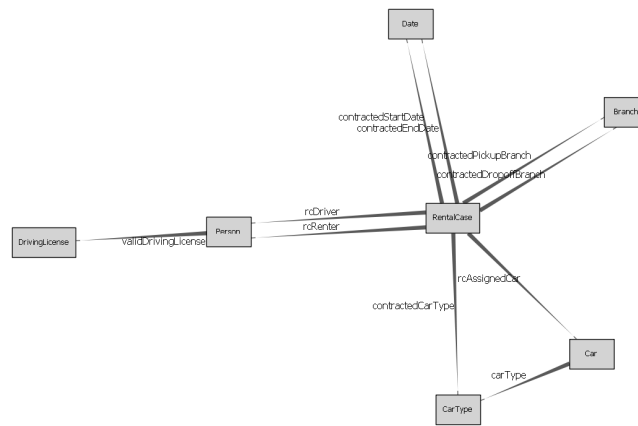


Figure 3.2: Concept diagram of the rules in Rental Contracts Diagnosis Conceptual Diagram

The role-rule assignments in any of the described processes have been assigned to rules within that same process.

The population in this script does not specify any work in progress.

The population in this script violates no rule.

Chapter 4

Conceptual Analysis

This chapter defines the formal language, in which functional requirements of 'EURent' can be analysed and expressed. The purpose of this formalisation is to obtain a buildable specification. This chapter allows an independent professional with sufficient background to check whether the agreements made correspond to the formal rules and definitions.

This document specifies automated support for the EU-Rent example as described in 'DEMO-3 Way of Working (version 3, 1 September 2009)' by Jan L.G. Dietz. The purpose of the effort that resulted in this document is to provide case material to support statements regarding the extent that the DEMO approach and the Ampersand approach interfere and/or support one another.

We use the notation 'slide n' to refer to a specific slide in the DEMO-3 document mentioned above. In this notation, n is the slide number that can be found at the bottom of the slide. We use 'Slide n,m' to refer to slides n and m.

We use the notation 'Px:y', to refer to a specific sentence in the EU-Rent description of slide 3. In this notation, x identifies the paragraph number, and y identifies the sentence in that paragraph. Occasionally, the letter 'a' or 'b' may be appended to indicate the first or second part of (long) sentences. The notation 'Px:y-z' is used to refer to sentences y through z of paragraph x.

P2:1 states: "A car may be rented by a reservation in advance or by a 'walk-in' customer on the day of renting". The Note on slide 10 says that there is no difference between these two. We will follow this idea so as not to digress too much from the case. The consequence of this is that making a reservation in advance does not mean that there is a higher chance that a car of the requested type will be available.

4.1 EU-Rent

This pattern models the organizational structure of rental companies (limited to EU-Rent), as well as company-wide policies such as the maximum rental duration and rental and penalty tariffs.

Figure 4.1 shows a conceptual diagram of this pattern.

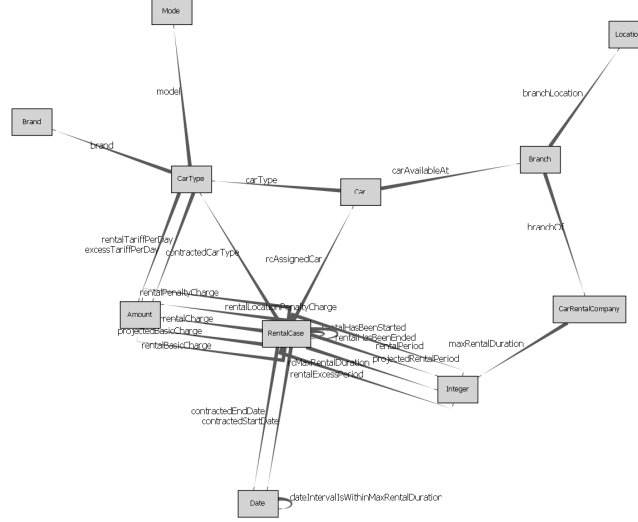


Figure 4.1: Concept diagram of EU-Rent

The definitions of concepts can be found in the glossary.

4.1.1 Declared relations

This section itemizes the declared relations with properties and a meaning.

EU-Rent is a company that rents cars to persons, operating from geographically dispersed braches. Therefore, we must know what branches exist with EU-Rent. P1:1

For this purpose, the following function has been defined

$$\text{branchOf} : \text{Branch} \rightarrow \text{CarRentalCompany} \quad (4.1)$$

Every branch is part of a car rental company.

EU-Rent operates from geographically dispersed braches. We need to know where such locations are in order to compute penalty charges for drivers that drop off their car at a location other than is contracted, because such charges depend on the distance between the actual and the contracted drop-off branch. P1:1, P4:5

For this purpose, the following function has been defined

$$\text{branchLocation} : \text{Branch} \rightarrow \text{Location} \quad (4.2)$$

Every branch operates from a geographical location.

Since only cars that are available at the pick-up branch may be rented, the availability of these cars at the branches must be known. P3.4

For this purpose, the following univalent relation has been defined

$$carAvailableAt : Car \times Branch \quad (4.3)$$

It is known which cars are available at a branch.

In order for the renter/driver to specify the car (s)he wants to rent, but also to correctly compute rental charges, the type of every car must be known.

For this purpose, the following function has been defined

$$carType : Car \rightarrow CarType \quad (4.4)$$

Every car is of a specific type (brand, model).

The cars of EU-Rent are divided in car types (brands and models). P1:2a

For this purpose, the following function has been defined

$$brand : CarType \rightarrow Brand \quad (4.5)$$

A cartype has a specific brand.

The cars of EU-Rent are divided in car types (brands and models). P1:2a

For this purpose, the following function has been defined

$$model : CarType \rightarrow Model \quad (4.6)$$

A cartype has a specific model.

For every car type there is a particular rental tariff per day. P1:2b

For this purpose, the following function has been defined

$$rentalTariffPerDay : CarType \rightarrow Amount \quad (4.7)$$

All car types have a specified rental tariff (Euros/day).

In order to compute the penalty charge for exceeding the contracted rental duration, for each type of car it is specified what the excess charge per day will be.

For this purpose, the following function has been defined

$$excessTariffPerDay : CarType \rightarrow Amount \quad (4.8)$$

All car types have a specified excess tariff (Euro/day)

The following relation has been defined

$$\text{maxRentalDuration} : \text{CarRentalCompany} \times \text{Integer} \quad (4.9)$$

Rental companies must have specified the maximum duration of a rental.

Since EURent has specified a maximum duration for a rental, rental contracts must state whether or not the period between the specified pick-up and drop-off dates exceeds this maximum duration. P2:3

For this purpose, the following relation has been defined

$$\text{dateIntervalIsWithinMaxRentalDuration} : \text{Date} \times \text{Date} \quad (4.10)$$

the date interval (e.g.: [start date,end date]) is within the maximum rental duration as specified by EURent.

In order to keep track of the cars that EU-Rent owns, every case must specify the car that is being rented.

For this purpose, the following univalent relation has been defined

$$\text{rcAssignedCar} : \text{RentalCase} \times \text{Car} \quad (4.11)$$

Rental contracts specify the car that is (to be) issued to the driver.

During the lifetime of a rental, i.e. between the start and end of a rental, the renter has the right to make use of the rented car. For this reason, it is necessary to know which rentals have been started. Other reasons include that from the time of the start of a rental, payment is due, and the car that is mentioned in the rental case is no longer available for rent. P4:2

The transaction result B-R01 ([rental] has been started) must be modeled. Slide 4-5

For this purpose, the following relation has been defined

$$\text{rentalHasBeenStarted} : \text{RentalCase} \times \text{RentalCase} \quad (4.12)$$

Rental cases may have the property 'rental has been started'.

During the lifetime of a rental, i.e. between the start and end of a rental, the renter has the right to make use of the rented car. For this reason, it is necessary to know which rentals have been ended. Other reasons include that at the time a rental is ended P4:2

- the bill can be made up,
- payment can be requested, and
- the returned car is again available for rent.

The transaction result B-R02 ([rental] has been ended) must be modeled. *Slide 4-5*

Slide 26 states that the rental ends after the rental has been paid. According to slide 4, P4:2, the renter has the right to make use of the rented car between the start and end of a rental. However, when rental payment is stated, it must be checked that 'everything is ok' (slide 30), which takes time. In that time, according to Slide 4, P4:2, the renter still has the right to make use of the rented car, and if he does so, it is undefined what will happen. *Slide 26, 30*

For this purpose, the following relation has been defined

$$rentalHasBeenEnded : RentalCase \times RentalCase \quad (4.13)$$

Rental cases may have the property 'rental has been ended'.

In order to compute the correct charge for renting a car, the start date must be known. Note that the meaning of this date depends on whether or not the rental has already started. If the rental has not yet started, it is the date that the rental is foreseen to start. If the rental has started, it is the date on which the rental actually started. *P2:2*

For this purpose, the following univalent relation has been defined

$$contractedStartDate : RentalCase \times Date \quad (4.14)$$

Rental contracts may specify the actual (and contractual) start date of the rental.

In order to determine whether or not a penalty has to be paid for a late drop-off, the end date before which the car will be dropped off must be contractually administrated. *P2:2*

For this purpose, the following univalent relation has been defined

$$contractedEndDate : RentalCase \times Date \quad (4.15)$$

Rental contracts may specify the (contractual) end date of the rental.

4.1.2 Formal rules

This section itemizes the formal rules with a reference to the shared language of stakeholders for the sake of traceability.

While our scope is limited to EU-Rent, we need to explicitly model it as a company in order to be able to define company policy that holds for all branches. An example of this would be the maximum rental period. *P2:3*

Therefore the following requirement has been defined in section 2.1 p. 10:

The system is limited to branches that are part of EU-Rent.
This is formalized - using relations 5.9 - as

$$branchOf \vdash branchOf;'tEU - Rent' \quad (4.16)$$

In order to ensure that cars are not lost 'administratively', every car must be accounted for.

Therefore the following requirement has been defined in section 2.1 p. 10:
All cars must either be rented, or in stock at one of the branches.

This is formalized - using relations 5.12, 4.12, 4.13, 5.14 - as

$$I_{Car} \vdash rcAssignedCar \sim ; (rentalHasBeenStarted \cap rentalHasBeenEnded); rcAssignedCar \cup carAvailableAt; \quad (4.17)$$

Since EURent has specified a maximum duration for a rental, it must be checked (computed) whether or not the period between the specified pick-up and drop-off dates exceeds this maximum duration. P2:3

Therefore the following requirement has been defined in section 2.1 p. 11:
The difference between the contracted end date and start date may not exceed the maximum duration for rentals.

This is formalized - using relations 5.3, 5.4, 4.10 - as

$$contractedStartDate \sim ; contractedEndDate \vdash dateIntervalIsWithinMaxRentalDuration \quad (4.18)$$

In order to prevent errors from occurring when Yes/No answers are answered differently, it is necessary to check whether such answers are either 'Yes' or 'No'.

Therefore the following requirement has been defined in section 2.1 p. 11:
A Yes/No answer may only take the values 'Yes' or 'No'.

This is formalized - using relations - as

$$I_{YesNoAnswer} \vdash 'tYes' \cup 'tNo' \quad (4.19)$$

4.2 Rental Contracts

This pattern defines the contents of rental contracts and any constraints that must apply. It was decided not to introduce a specific concept 'RentalContract' because such an information object was also not mentioned in the slides.

Figure 4.2 shows a conceptual diagram of this pattern.

The definitions of concepts can be found in the glossary.

4.2.1 Declared relations

This section itemizes the declared relations with properties and a meaning.

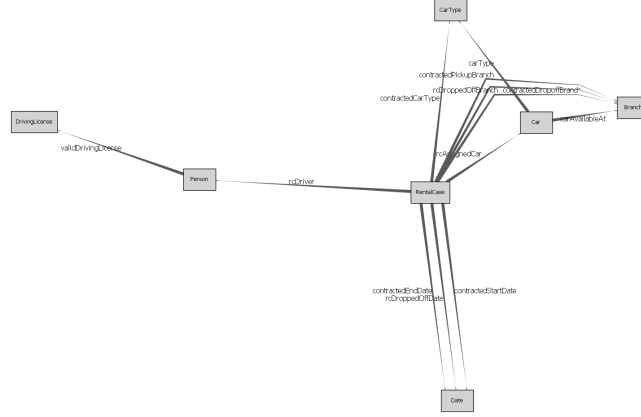


Figure 4.2: Concept diagram of Rental Contracts

In order to compute the correct charge for renting a car, the start date must be known. Note that the meaning of this date depends on whether or not the rental has already started. If the rental has not yet started, it is the date that the rental is foreseen to start. If the rental has started, it is the date on which the rental actually started. P2:2

For this purpose, the following univalent relation has been defined

$$\text{contractedStartDate} : \text{RentalCase} \times \text{Date} \quad (4.20)$$

Rental contracts may specify the actual (and contractual) start date of the rental.

In order to determine whether or not a penalty has to be paid for a late drop-off, the end date before which the car will be dropped off must be contractually administrated. P2:2

For this purpose, the following univalent relation has been defined

$$\text{contractedEndDate} : \text{RentalCase} \times \text{Date} \quad (4.21)$$

Rental contracts may specify the (contractual) end date of the rental.

Since the daily charges depend on the car type, the contract must mention what type of car is (going to be) rented. P2:2

For this purpose, the following univalent relation has been defined

$$\text{contractedCarType} : \text{RentalCase} \times \text{CarType} \quad (4.22)$$

Rental contracts may specify the car type of the rental.

Drivers can only rent cars that are available at the pick-up branch. Therefore, it must be known which branch this is. P2:2

For this purpose, the following univalent relation has been defined

$$\text{contractedPickupBranch} : \text{RentalCase} \times \text{Branch} \quad (4.23)$$

Rental contracts may specify the branch where the rental starts (i.e.: the car is picked up).

In order to allow branches to plan their stock of available cars, it helps to know what cars will be dropped off at what branch. P2:2
 For this purpose, the following univalent relation has been defined

$$\text{contractedDropoffBranch} : \text{RentalCase} \times \text{Branch} \quad (4.24)$$

Rental contracts may specify the branch where the rental supposedly ends (i.e.: the car is dropped off).

The person that will be held accountable for the rent, in particular for the payment thereof, must be administered. P3.1
 For this purpose, the following univalent relation has been defined

$$\text{rcRenter} : \text{RentalCase} \times \text{Person} \quad (4.25)$$

The person who rents the car is called the renter.

The person that will be held driving the rented car, must be administered, allowing amongst others that his driving license is checked. P3.2
 For this purpose, the following univalent relation has been defined

$$\text{rcDriver} : \text{RentalCase} \times \text{Person} \quad (4.26)$$

The person who is going to drive is called the driver.

Since rentals may only be started if the driver has a valid driving license, the number of such a license will be registered. Registration must imply that the license is valid. P3.3
 For this purpose, the following relation has been defined

$$\text{validDrivingLicense} : \text{Person} \times \text{DrivingLicense} \quad (4.27)$$

A person may have a valid driving license.

In order to keep track of the cars that EU-Rent owns, every case must specify the car that is being rented.
 For this purpose, the following univalent relation has been defined

$$\text{rcAssignedCar} : \text{RentalCase} \times \text{Car} \quad (4.28)$$

Rental contracts specify the car that is (to be) issued to the driver.

In order for the renter/driver to specify the car (s)he wants to rent, but also to correctly compute rental charges, the type of every car must be known.
 For this purpose, the following function has been defined

$$\text{carType} : \text{Car} \rightarrow \text{CarType} \quad (4.29)$$

Every car is of a specific type (brand, model).

4.2.2 Formal rules

This section itemizes the formal rules with a reference to the shared language of stakeholders for the sake of traceability.

Whenever the driver in a rental contract is known, his/her driving license must be checked for validity. If it is valid, the license number must be registered. Therefore the following requirement has been defined in section 2.2 p. 12: Drivers must have a valid driving license. This is formalized - using relations 5.6, 4.27 - as P3.3

$$rcDriver \vdash rcDriver; (I_{Person} \cap validDrivingLicense; validDrivingLicense^{\sim}) \quad (4.30)$$

In order to ensure that the information contents of the cases are valid, it must be checked whether the car that is issued is of the type that is mentioned in the contract. Therefore the following requirement has been defined in section 2.2 p. 12: The type of a rented car must be the same as the type mentioned in the contract. This is formalized - using relations 5.12, 5.5, 5.15 - as

$$rcAssignedCar \vdash contractedCarType; carType^{\sim} \quad (4.31)$$

Chapter 5

Process Analysis

This document specifies automated support for the EU-Rent example as described in 'DEMO-3 Way of Working (version 3, 1 September 2009)' by Jan L.G. Dietz. The purpose of the effort that resulted in this document is to provide case material to support statements regarding the extent that the DEMO approach and the Ampersand approach interfere and/or support one another.

We use the notation 'slide n' to refer to a specific slide in the DEMO-3 document mentioned above. In this notation, n is the slide number that can be found at the bottom of the slide. We use 'Slide n,m' to refer to slides n and m.

We use the notation 'Px:y', to refer to a specific sentence in the EU-Rent description of slide 3. In this notation, x identifies the paragraph number, and y identifies the sentence in that paragraph. Occasionally, the letter 'a' or 'b' may be appended to indicate the first or second part of (long) sentences. The notation 'Px:y-z' is used to refer to sentences y through z of paragraph x.

P2:1 states: "A car may be rented by a reservation in advance or by a 'walk-in' customer on the day of renting". The Note on slide 10 says that there is no difference between these two. We will follow this idea so as not to digress too much from the case. The consequence of this is that making a reservation in advance does not mean that there is a higher chance that a car of the requested type will be available.

EURent does not specify which roles may change the contents of which relations.

EURent assigns rules to roles. The following table shows the rules that are being maintained by a given role.

Role	Rule
ExecEngine	Promising rental requests Compute max rental duration Starting the rental Auto fill in renter in rental contract Ending the rental Rental period computation Basic charge computation Excess period computation Excess charge computation Location penalty computation Rental charge computation Trigger interval computation Trigger rental charge computation Compute rental charge Trigger rental period computation Compute number of days in period Trigger regular charge computation Trigger excess charge computation Compute charge based on number of days Trigger excess period computation Compute number of excess period days Initialize today's date Trigger projected rental period computation projectedRentalPeriod computation Trigger projected basic charge computation projectedBasicCharge computation Fill in default renter Fill in default renter (at a branch) The branch that fills in the request is the pick-up branch Return cars to drop-off branch Drop-off date is date of car return
Developer	Dummy rule
User	Submit rental request
Branch	Submit branch rental request Car return handling

5.1 Handling Rental Requests

This process models the interaction between a renter and/or branch office employee as they prepare a request for obtaining a car rental. The bulk of the work consists of filling in most parts of the contract. The result of the process is that the rental has been promised (B-T01). *B-T01 promised*

Figure 5.1 shows the process model.

Figure 5.1: Process model of Handling Rental RequeststxtProcess

The conceptual diagram of figure 5.2 provides an overview of the language in which this process is expressed.

Figure 5.2: Basic sentences of Handling Rental RequestsConceptualProcess

Promising rental requests The rules that need to be satisfied in order for a rental case to have the property 'rental has been promised', are as follows: Slide 11

1. the following contractual items must all have been filled in:
 - the pick-up branch;
 - the drop-off branch;
 - the start date;
 - the end date;
 - the car type;
 - the driver;
 - the renter.
2. it must have been ascertained that the driver has a valid driving license.
3. the drop-off branch must have a car available of the type specified in the contract.

Drivers can only rent cars that are available at the pick-up branch. Therefore, it must be known which branch this is. P2:2

In order to allow branches to plan their stock of available cars, it helps to know what cars will be dropped off at what branch. P2:2

In order to compute the correct charge for renting a car, the start date must be known. Note that the meaning of this date depends on whether or not the rental has already started. If the rental has not yet started, it is the date that the rental is foreseen to start. If the rental has started, it is the date on which the rental actually started. P2:2

In order to determine whether or not a penalty has to be paid for a late drop-off, the end date before which the car will be dropped off must be contractually administrated. P2:2

Since the daily charges depend on the car type, the contract must mention what type of car is (going to be) rented. P2:2

The person that will be held driving the rented car, must be administered, allowing amongst others that his driving license is checked. P3.2

The person that will be held accountable for the rent, in particular for the payment thereof, must be administered. P3.1

To arrive at the formalization in equation 5.8, the following 7 relations are introduced.

$$\text{contractedPickupBranch} : \text{RentalCase} \times \text{Branch} \quad (5.1)$$

$$\text{contractedDropoffBranch} : \text{RentalCase} \times \text{Branch} \quad (5.2)$$

$$\text{contractedStartDate} : \text{RentalCase} \times \text{Date} \quad (5.3)$$

$$\text{contractedEndDate} : \text{RentalCase} \times \text{Date} \quad (5.4)$$

$$\text{contractedCarType} : \text{RentalCase} \times \text{CarType} \quad (5.5)$$

$$\text{rcDriver} : \text{RentalCase} \times \text{Person} \quad (5.6)$$

$$\text{rcRenter} : \text{RentalCase} \times \text{Person} \quad (5.7)$$

We also use definitions $??$ (rcUserRequestedQ) and $??$ ($\text{rcBranchRequestedQ}$).

Activities that are defined by this rule are finished when:

$$I_{\text{RentalCase}} \cap (\text{rcUserRequestedQ};'tY es'; \text{rcUserRequestedQ}^\sim \cup \text{rcBranchRequestedQ};'tY es'; \text{rcBranchRe} \quad (5.8)$$

This corresponds to ‘Promising rental requests’ (2.3 op pg. 13).

Compute max rental duration EU-Rent is a company that rents cars to persons, operating from geographically dispersed braches. Therefore, we must know what branches exist with EU-Rent. P1:1

To arrive at the formalization in equation 5.11, the following two relations are introduced.

$$\text{branchOf} : \text{Branch} \rightarrow \text{CarRentalCompany} \quad (5.9)$$

$$\text{maxRentalDuration} : \text{CarRentalCompany} \times \text{Integer} \quad (5.10)$$

We also use definitions 5.1 ($\text{contractedPickupBranch}$) and $??$ ($\text{rcMaxRentalDuration}$).

Activities that are defined by this rule are finished when:

$$\text{contractedPickupBranch}; \text{branchOf}; \text{maxRentalDuration} \vdash \text{rcMaxRentalDuration} \quad (5.11)$$

This corresponds to ‘Compute max rental duration’ ($??$ op pg. $??$).

5.2 Issuing Rental Cars

This process models the work for the car rental company employee, starting with a filled in rental request and leading up to the result that the car of a rental has been picked up (B-R03) and the rental has started (B-R01). Results: B-R01, B-R03

Figure 5.3 shows the process model.

The conceptual diagram of figure 5.4 provides an overview of the language in which this process is expressed.

Figure 5.3: Process model of Issuing Rental Car

Figure 5.4: Basic sentences of Issuing Rental Cars

Starting the rental The rules that need to be satisfied in order for a rental case to have the property 'rental has been started', are as follows: Slide 4-5, 18

1. the rental case has the property 'rental has been promised'.
2. a car (of the type as listed in the contract) has been assigned to the rental case;
3. keys of that car are handed to the driver, which we assume to imply that
 - the driver has picked up the car at the contracted start date;
 - the driver has promised to drop off the car according to the contractual constraints.

In order to keep track of the cars that EU-Rent owns, every case must specify the car that is being rented.

In order to formalize this, a relation $rcAssignedCar$ is introduced (5.12):

$$rcAssignedCar : RentalCase \times Car \quad (5.12)$$

We also use definitions 5.1 ($contractedPickupBranch$), ?? ($rentalHasBeenPromised$), 4.12 ($rentalHasBeenStarted$), and ?? ($rcKeysHandedOverQ$) to formalize requirement 2.4 (page 14):

Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rentalHasBeenPromised \cap rcAssignedCar; rcAssignedCar \sim \cap rcKeysHandedOverQ; tYes; r \quad (5.13)$$

Rentable cars The type of car that is requested can only be one for which the pick-up branch has cars available. P3.4

Since only cars that are available at the pick-up branch may be rented, the availability of these cars at the branches must be known. P3.4

In order for the renter/driver to specify the car (s)he wants to rent, but also to correctly compute rental charges, the type of every car must be known.

To arrive at the formalization in equation 5.16, the following two relations are introduced.

$$carAvailableAt : Car \times Branch \quad (5.14)$$

$$carType : Car \rightarrow CarType \quad (5.15)$$

We also use definitions 5.1 (*contractedPickupBranch*), 5.5 (*contractedCarType*), and ?? (*rentalHasBeenPromised*).

This means:

$$contractedPickupBranch^\sim; (I_{RentalCase} \cap rentalHasBeenPromised); contractedCarType \vdash carAvailableAt \quad (5.16)$$

This corresponds to the requirement on page 14:

Rentals may only be promised if a car of the type specified in the contract is available at the pick-up branch.

Keys must be handed over to driver For sanity reasons, the question of whether or not the keys are handed over can only be answered if the driver is known.

We use definitions 5.6 (*rcDriver*) and ?? (*rcKeysHandedOverQ*).

This means:

$$I_{RentalCase} \cap rcKeysHandedOverQ; tYes'; rcKeysHandedOverQ^\sim \vdash rcDriver; rcDriver^\sim \quad (5.17)$$

Auto fill in renter in rental contract When the keys are handed to the driver, and the renter is not specified, we may assume that the driver also fulfills the role of renter, and fill this in the contract.

We use definitions 5.6 (*rcDriver*), 5.7 (*rcRenter*), and ?? (*rcKeysHandedOverQ*).

Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rcKeysHandedOverQ; tYes'; rcKeysHandedOverQ^\sim \vdash rcRenter; rcRenter^\sim \quad (5.18)$$

5.3 Dropoff Handling

This process models the work for the car rental company employee when a car is being dropped off and leading up to the results where the car of the rental has been dropped off (B-R04) and the rental has ended (B-R02). *Results: B-R02, B-R04*

Figure 5.5 shows the process model.

The conceptual diagram of figure 5.6 provides an overview of the language in which this process is expressed.

Figure 5.5: Process model of Dropoff HandlingtxtProcess

Figure 5.6: Basic sentences of Dropoff HandlingConceptualProcess

Ending the rental The rules that need to be satisfied in order for a rental case to have the property 'rental has been ended', are as follows:

1. the rental case has the property 'rental has been started'.
2. The following information is available
 - the license plate of the returned car
 - the date of return;
 - the actual drop-off branch;
3. the rental has been paid.

We use definitions 4.12 (*rentalHasBeenStarted*), 4.13 (*rentalHasBeenEnded*), ?? (*rcDroppedOffCar*), ?? (*rcDroppedOffDate*), ?? (*rcDroppedOffBranch*), and ?? (*rentalIsPaidQ*).

Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rentalHasBeenStarted \cap rcDroppedOffCar; rcDroppedOffCar \sim \cap rcDroppedOffDate; rcDroppedOffBranch \quad (5.19)$$

Dropped-off car type integrity We use definitions 5.12 (*rcAssignedCar*) and ?? (*rcDroppedOffCar*).

This means:

$$rcDroppedOffCar \vdash rcAssignedCar \quad (5.20)$$

5.4 Rental Payment

This process models the work for the car rental company, starting when the rental charge is computed (the renter is presented the bill), and leading up to the result that the rental has ended (B-R05). *Result: B-R05*

Figure 5.7 shows the process model.

Figure 5.7: Process model of Rental PaymenttxtProcess

The conceptual diagram of figure 5.8 provides an overview of the language in which this process is expressed.

Figure 5.8: Basic sentences of Rental PaymentConceptualProcess

Rental payment amount is known We use definitions ?? (*rentalIsPaidQ*) and ?? (*rentalCharge*).
This means:

$$I_{RentalCase} \cap rentalIsPaidQ; 'tYes'; rentalIsPaidQ^\sim \vdash rentalCharge; rentalCharge^\sim \quad (5.21)$$

5.5 Rental Billing

This process models the work for the car rental company, starting when the car has been dropped off, and leading up to the result that the bill is made. This (fully automated) process consists of the following parts: *Result: Bill presented*

1. Computing the basic charge;
2. Computing the penalty charge for the use of the car beyond the contractual end date;
3. Computing the penalty charge in case the car is dropped off at a location other than contractually agreed;
4. Computing the total of these charged.

Figure 5.9 shows the process model.

Figure 5.9: Process model of Rental BillingtxtProcess

The conceptual diagram of figure 5.10 provides an overview of the language in which this process is expressed.

Figure 5.10: Basic sentences of Rental BillingConceptualProcess

Rental period computation The period of the actual rental is the difference between the date of the drop-off and the date of the pick-up of the rented car, plus one (so that if the drop-off date and the pick-up date are the same, the period is 1 day). *P4.3*

We use definitions 5.3 (*contractedStartDate*), ?? (*rcDroppedOffDate*), ?? (*rentalPeriod*), ?? (*earliestDate*), ?? (*latestDate*), and ?? (*computedRentalPeriod*).

Activities that are defined by this rule are finished when:

$$(contractedStartDate; earliestDate \sim \cap rcDroppedOffDate; latestDate \sim); computedRentalPeriod \vdash rentalPeriod \quad (5.22)$$

Basic charge computation The basic rental charge is the product of the period of the actual rental times the daily tariff that is valid for the type of car that was rented. P4.3

For every car type there is a particular rental tariff per day. P1:2b

In order to formalize this, a function rentalTariffPerDay is introduced (5.23):

$$rentalTariffPerDay : CarType \rightarrow Amount \quad (5.23)$$

We also use definitions 5.15 (*carType*), 5.12 (*rcAssignedCar*), ?? (*rentalPeriod*), ?? (*rentalBasicCharge*), ?? (*ctcNrOfDays*), ?? (*ctcDailyAmount*), and ?? (*computedTariffedCharge*) to formalize requirement 2.7 (page 18):

Activities that are defined by this rule are finished when:

$$(rentalPeriod; ctcNrOfDays \sim \cap rcAssignedCar; carType; rentalTariffPerDay; ctcDailyAmount \sim); computedNrOfDays \vdash rentalPeriod \quad (5.24)$$

Excess period computation The excess period of the rental is zero, unless the drop-off date exceeds the contracted end date, in which case the period is the number of days between these two. P4.4

We use definitions 5.4 (*contractedEndDate*), ?? (*rcDroppedOffDate*), ?? (*rentalExcessPeriod*), ?? (*firstDate*), ?? (*lastDate*), and ?? (*computedNrOfExcessDays*).

Activities that are defined by this rule are finished when:

$$(rcDroppedOffDate; lastDate \sim \cap contractedEndDate; firstDate \sim); computedNrOfExcessDays \vdash rentalExcessPeriod \quad (5.25)$$

Excess charge computation The penalty charge (for exceeding the contracted rental duration) is basic rental charge is the product of the excess period of the rental times the excess charge per day for the type of car that was rented. P4.4

In order to compute the penalty charge for exceeding the contracted rental duration, for each type of car it is specified what the excess charge per day will be.

In order to formalize this, a function excessTariffPerDay is introduced (5.26):

$$\text{excessTariffPerDay} : \text{CarType} \rightarrow \text{Amount} \quad (5.26)$$

We also use definitions 5.15 (*carType*), 5.12 (*rcAssignedCar*), ?? (*rentalExcessPeriod*), ?? (*rentalPenaltyCharge*), ?? (*ctcNrOfDays*), ?? (*ctcDailyAmount*), and ?? (*computedTariffedCharge*) to formalize requirement 2.7 (page 18):

Activities that are defined by this rule are finished when:

$$(\text{rentalExcessPeriod}; \text{ctcNrOfDays} \sim \cap \text{rcAssignedCar}; \text{carType}; \text{excessTariffPerDay}; \text{ctcDailyAmount} \sim); c \quad (5.27)$$

Location penalty computation The penalty charge for dropping off a rented car another location than was contractually agreed is an amount that depends on the distance between the branches. P4.5

We use definitions 5.2 (*contractedDropoffBranch*), ?? (*rcDroppedOffBranch*), ?? (*computedLocationPenaltyCharge*), ?? (*rentalLocationPenaltyCharge*), and ?? (*distbranch*).

Activities that are defined by this rule are finished when:

$$(\text{rcDroppedOffBranch}; \text{distbranch} \sim \cap \text{contractedDropoffBranch}; \text{distbranch} \sim); \text{computedLocationPenaltyCharge} \quad (5.28)$$

Rental charge computation The rental charge consists of three amounts: P4:2-5

1. the basic rental charge,
2. the penalty charge when the car is returned after the contracted drop-off date, and
3. a penalty charge in case the car is dropped off at a different branch than contractually agreed.

We use definitions ?? (*rentalBasicCharge*), ?? (*rentalPenaltyCharge*), ?? (*rentalLocationPenaltyCharge*), ?? (*rentalCharge*), ?? (*arg1*), ?? (*arg2*), ?? (*arg3*), and ?? (*computedRentalCharge*).

Activities that are defined by this rule are finished when:

$$(\text{rentalBasicCharge}; \text{arg1} \sim \cap \text{rentalPenaltyCharge}; \text{arg2} \sim \cap \text{rentalLocationPenaltyCharge}; \text{arg3} \sim); \text{computedRentalCharge} \quad (5.29)$$

5.6 New Rental (User)

Figure 5.11 shows the process model.

The conceptual diagram of figure 5.12 provides an overview of the language in which this process is expressed.

Figure 5.11: Process model of New Rental (User)txtProcess

Figure 5.12: Basic sentences of New Rental (User)ConceptualProcess

Submit rental request In order to formalize this, a relation session-NewUserRC is introduced (5.30):

$$sessionNewUserRC : SESSION \times RentalCase \quad (5.30)$$

Beside that, we use definition ?? (rcUserRequestedQ) to formalize requirement ?? (page ??):

Activities that are defined by this rule are finished when:

$$'t_s ESSION'; sessionNewUserRC \vdash sessionNewUserRC; rcUserRequestedQ; 'tYes'; V_{YesNoAnswerimes} \quad (5.31)$$

Fill in default renter In order to formalize this, a relation sessionUser is introduced (5.32):

$$sessionUser : SESSION \times Person \quad (5.32)$$

We also use definitions 5.30 ($sessionNewUserRC$), 5.7 ($rcRenter$), and ?? ($rcUserRequestedQ$) to formalize requirement ?? (page ??):

Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rcUserRequestedQ; 'tYes'; rcUserRequestedQ \sim \vdash rcRenter; rcRenter \sim \quad (5.33)$$

5.7 New Rental (Branch Office)

Figure 5.13 shows the process model.

Figure 5.13: Process model of New Rental (Branch Office)txtProcess

The conceptual diagram of figure 5.14 provides an overview of the language in which this process is expressed.

Submit branch rental request In order to formalize this, a relation session-NewBranchRC is introduced (5.34):

Figure 5.14: Basic sentences of New Rental (Branch Office)ConceptualProcess

$$sessionNewBranchRC \quad : \quad SESSION \times RentalCase \quad (5.34)$$

Beside that, we use definition ?? (rcBranchRequestedQ) to formalize requirement ?? (page ??):

Activities that are defined by this rule are finished when:

$$'t_S ESSION'; sessionNewBranchRC \vdash sessionNewBranchRC; rcBranchRequestedQ; 'tYes'; V_{YesNoAns} \quad (5.35)$$

Fill in default renter (at a branch) We use definitions 5.6 (rcDriver), 5.7 (rcRenter), and ?? (rcBranchRequestedQ).

Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rcBranchRequestedQ; 'tYes'; rcBranchRequestedQ \sim \cap rcDriver; rcDriver \sim \vdash rcRenter; rcR \quad (5.36)$$

The branch that fills in the request is the pick-up branch When a rental request is submitted by a branch, this branch will play the role of pick-up branch.

In order to formalize this, a relation sessionBranch is introduced (5.37):

$$sessionBranch \quad : \quad SESSION \times Branch \quad (5.37)$$

We also use definitions 5.34 (sessionNewBranchRC), 5.1 (contractedPickupBranch), and ?? (rcBranchRequestedQ) to formalize requirement ?? (page ??):

Activities that are defined by this rule are finished when:

$$(I_{RentalCase} \cap rcBranchRequestedQ; 'tYes'; rcBranchRequestedQ \sim); sessionNewBranchRC \sim; 't_S ESSION \quad (5.38)$$

5.8 Car Returns

Figure 5.15 shows the process model.

Figure 5.15: Process model of Car ReturnstxtProcess

The conceptual diagram of figure 5.16 provides an overview of the language in which this process is expressed.

Figure 5.16: Basic sentences of Car ReturnsConceptualProcess

Car returns In order to formalize this, a relation `sessionReturnedCar` is introduced (5.39):

$$\text{sessionReturnedCar} : \text{SESSION} \times \text{Car} \quad (5.39)$$

We also use definitions 5.14 (`carAvailableAt`), 5.12 (`rcAssignedCar`), 4.12 (`rentalHasBeenStarted`), and 4.13 (`rentalHasBeenEnded`) to formalize requirement 2.10 (page 19):

This means:

$$'t_S \text{SESSION}'; \text{sessionReturnedCar} \vdash \text{sessionReturnedCar}; (I_{\text{Car}} \cap \text{rcAssignedCar}^\sim; (\text{rentalHasBeenStar} \quad (5.40)$$

Car return handling Handling a returned car means that payment for the associated rental is obtained.

We use definitions 5.39 (`sessionReturnedCar`), 5.14 (`carAvailableAt`), 5.12 (`rcAssignedCar`), 4.12 (`rentalHasBeenStarted`), 4.13 (`rentalHasBeenEnded`), and ?? (`rentalIsPaidQ`).

Activities that are defined by this rule are finished when:

$$'t_S \text{SESSION}'; \text{sessionReturnedCar}; (I_{\text{Car}} \cap (\text{carAvailableAt}; \text{carAvailableAt}^\sim)) \vdash \text{sessionReturnedCar}; \text{rcDr} \quad (5.41)$$

Return cars to drop-off branch When a car is returned to a branch, this branch will play the role of drop-off branch.

We use definitions 5.39 (`sessionReturnedCar`), 5.37 (`sessionBranch`), 5.14 (`carAvailableAt`), 5.12 (`rcAssignedCar`), and ?? (`rcDroppedOffBranch`).

Activities that are defined by this rule are finished when:

$$\text{rcAssignedCar}; (I_{\text{Car}} \cap (\text{carAvailableAt}; \text{carAvailableAt}^\sim)); \text{sessionReturnedCar}^\sim; \text{sessionBranch} \vdash \text{rcDr} \quad (5.42)$$

Drop-off date is date of car return When a car is returned to a branch, that date is the drop-off date.

In order to formalize this, a relation `sessionToday` is introduced (5.43):

$$\text{sessionToday} : \text{SESSION} \times \text{Date} \quad (5.43)$$

We also use definitions 5.39 (`sessionReturnedCar`), 5.14 (`carAvailableAt`), 5.12 (`rcAssignedCar`), and ?? (`rcDroppedOffDate`) to formalize requirement ?? (page ??):

Activities that are defined by this rule are finished when:

$$\text{rcAssignedCar}; (I_{\text{Car}} \cap (\text{carAvailableAt}; \text{carAvailableAt}^\sim)); \text{sessionReturnedCar}^\sim; \text{sessionToday} \vdash \text{rcDro} \quad (5.44)$$

Chapter 6

Data structure

This chapter contains the result of the data analysis. It is structured as follows:

We start with the classification model, followed by a list of all relations, that are the foundation of the rest of the analysis. Finally, the logical and technical data model are discussed.

6.1 Classifications

No classifications have been defined

6.2 Fact types

This section enumerates the fact types, that have been used in the design of the datastructure. For each fact type its name, the source and target concept and the properties are documented.

branchOf : *Branch* \times *CarRentalCompany* Every branch is part of a car rental company.

Properties: UNI, TOT

branchLocation : *Branch* \times *Location* Every branch operates from a geographical location.

Properties: UNI, TOT

carAvailableAt : *Car* \times *Branch* It is known which cars are available at a branch.

Properties: UNI, TOT

carType : *Car* \times *CarType* Every car is of a specific type (brand, model).

Properties: UNI, TOT

brand : $\text{CarType} \times \text{Brand}$ A cartype has a specific brand.
Properties: UNI, TOT

model : $\text{CarType} \times \text{Model}$ A cartype has a specific model.
Properties: UNI, TOT

rentalTariffPerDay : $\text{CarType} \times \text{Amount}$ All car types have a specified rental tariff (Euros/day).
Properties: UNI, TOT

excessTariffPerDay : $\text{CarType} \times \text{Amount}$ All car types have a specified excess tariff (Euro/day)
Properties: UNI, TOT

maxRentalDuration : $\text{CarRentalCompany} \times \text{Integer}$ Rental companies must have specified the maximum duration of a rental.
Properties: --

dateIntervalIsWithinMaxRentalDuration : $\text{Date} \times \text{Date}$ the date interval (e.g.: [start date,end date]) is within the maximum rental duration as specified by EURent.
Properties: --

contractedStartDate : $\text{RentalCase} \times \text{Date}$ Rental contracts may specify the actual (and contractual) start date of the rental.
Properties: UNI

contractedEndDate : $\text{RentalCase} \times \text{Date}$ Rental contracts may specify the (contractual) end date of the rental.
Properties: UNI

contractedCarType : $\text{RentalCase} \times \text{CarType}$ Rental contracts may specify the car type of the rental.
Properties: UNI

contractedPickupBranch : $\text{RentalCase} \times \text{Branch}$ Rental contracts may specify the branch where the rental starts (i.e.: the car is picked up).
Properties: UNI

contractedDropoffBranch : $\text{RentalCase} \times \text{Branch}$ Rental contracts may specify the branch where the rental supposedly ends (i.e.: the car is dropped off).
Properties: UNI

rcRenter : $\text{RentalCase} \times \text{Person}$ The person who rents the car is called the renter.
Properties: UNI

rcDriver : $\text{RentalCase} \times \text{Person}$ The person who is going to drive is called the driver.
Properties: UNI

validDrivingLicense : *Person* \times *DrivingLicense* A person may have a valid driving license.

Properties: --

rcAssignedCar : *RentalCase* \times *Car* Rental contracts specify the car that is (to be) issued to the driver.

Properties: UNI, SUR

rentalHasBeenPromised : *RentalCase* \times *RentalCase* Rental cases may have the property 'rental has been promised'

Properties: --

rcUserRequestedQ : *RentalCase* \times *YesNoAnswer* A user has requested a new rental to be started, and has provided all necessary information for that.

Properties: --

rcBranchRequestedQ : *RentalCase* \times *YesNoAnswer* A branch office has requested a new rental to be started, and has provided all necessary information for that.

Properties: --

rentalHasBeenStarted : *RentalCase* \times *RentalCase* Rental cases may have the property 'rental has been started'.

Properties: --

rcKeysHandedOverQ : *RentalCase* \times *YesNoAnswer* Branches must register the handover of car keys (i.e. the responsibility for the car).

Properties: --

rentalHasBeenEnded : *RentalCase* \times *RentalCase* Rental cases may have the property 'rental has been ended'.

Properties: --

rcDroppedOffCar : *RentalCase* \times *Car* Rental contracts may specify the car that has actually been dropped off.

Properties: UNI

rcDroppedOffDate : *RentalCase* \times *Date* Rented cars are dropped off on specific dates.

Properties: UNI

rcDroppedOffBranch : *RentalCase* \times *Branch* Rented cars must be dropped off at a specific branch.

Properties: UNI

rentalIsPaidQ : *RentalCase* \times *YesNoAnswer* Payments for rental contracts need to be accepted (or declined).

Properties: --

rentalPeriod : *RentalCase* \times *Integer* Properties: UNI

rentalBasicCharge : *RentalCase* \times *Amount* Rental contracts may specify an amount for the basic charge
Properties: UNI

rentalExcessPeriod : *RentalCase* \times *Integer* Properties: UNI

rentalPenaltyCharge : *RentalCase* \times *Amount* Rental contracts may specify an amount for the penalty charge for late drop-offs
Properties: UNI

computedLocationPenaltyCharge : *DistanceBetweenLocations* \times *Amount*
There is a penalty charge for cars that are dropped-off at another branch than agreed.
Properties: UNI, TOT

rentalLocationPenaltyCharge : *RentalCase* \times *Amount* Rental contracts may specify an amount for the penalty charge for late drop-offs
Properties: UNI

rentalCharge : *RentalCase* \times *Amount* Properties: UNI

rcMaxRentalDuration : *RentalCase* \times *Integer* Rental contracts may specify the maximum rental duration.
Properties: UNI

arg1 : *CompRentalCharge* \times *Amount* Properties: UNI, TOT

arg2 : *CompRentalCharge* \times *Amount* Properties: UNI, TOT

arg3 : *CompRentalCharge* \times *Amount* Properties: UNI, TOT

computedRentalCharge : *CompRentalCharge* \times *Amount* Properties: UNI

earliestDate : *DateDifferencePlusOne* \times *Date* Properties: UNI, TOT

latestDate : *DateDifferencePlusOne* \times *Date* Properties: UNI, TOT

computedRentalPeriod : *DateDifferencePlusOne* \times *Integer* Properties: UNI

ctcNrOfDays : *CompTariffedCharge* \times *Integer* Properties: UNI, TOT

ctcDailyAmount : *CompTariffedCharge* \times *Amount* Properties: UNI, TOT

computedTariffedCharge : *CompTariffedCharge* \times *Amount* Properties: UNI

firstDate : *DateDifference* \times *Date* Properties: UNI, TOT

lastDate : *DateDifference* \times *Date* Properties: UNI, TOT

computedNrOfExcessDays : *DateDifference* \times *Integer* Properties: UNI

distbranch : *DistanceBetweenLocations* \times *Branch* A distance is computed relative to a branch.

Properties: TOT, SUR

sessionUser : *SESSION* \times *Person* Properties: UNI

sessionToday : *SESSION* \times *Date* Properties: UNI

sessionNewUserRC : *SESSION* \times *RentalCase* Properties: INJ, UNI

sessionBranch : *SESSION* \times *Branch* Properties: UNI

sessionNewBranchRC : *SESSION* \times *RentalCase* Properties: UNI

sessionReturnedCar : *SESSION* \times *Car* Properties: UNI

6.3 Logical datamodel

The functional requirements have been translated into a data model. This model is shown by figure 6.1.

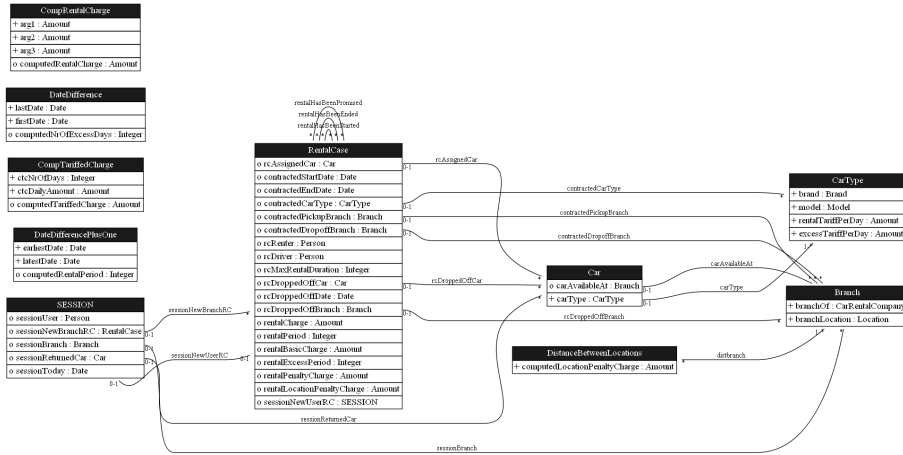


Figure 6.1: Logical data model of EURent

There are 10 entity types. The details of each entity type are described (in alphabetical order) in the following paragraphs:

6.3.1 Entity type: *Branch*

This entity type has the following attributes:

Attribute	Type	
Id	Branch	Primary key
branchOf	CarRentalCompany	Mandatory
branchLocation	Location	Mandatory

Branch has the following associations:

1. Every *Car* ‘carAvailableAt’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *Car*.
2. Every *RentalCase* ‘contractedPickupBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *RentalCase*.
3. Every *RentalCase* ‘contractedDropoffBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *RentalCase*.
4. Every *RentalCase* ‘rcDroppedOffBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *RentalCase*.
5. Every *DistanceBetweenLocations* must ‘distbranch’ at least one *Branch*. For the other way round, for this relation holds that each *Branch* zero or more *DistanceBetweenLocations*.
6. Every *SESSION* ‘sessionBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *SESSION*.

6.3.2 Entity type: *Car*

This entity type has the following attributes:

Attribute	Type	
Id	Car	Primary key
carAvailableAt	Branch	Optional
carType	CarType	Mandatory

Car has the following associations:

1. Every *Car* ‘carAvailableAt’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *Car*.

2. Every *Car* must ‘carType’ at least one *CarType*. For the other way round, for this relation holds that each *CarType* at most one *Car*.
3. Every *RentalCase* ‘rcAssignedCar’ zero or more *Car*. For the other way round, for this relation holds that each *Car* at most one *RentalCase*.
4. Every *RentalCase* ‘rcDroppedOffCar’ zero or more *Car*. For the other way round, for this relation holds that each *Car* at most one *RentalCase*.
5. Every *SESSION* ‘sessionReturnedCar’ zero or more *Car*. For the other way round, for this relation holds that each *Car* at most one *SESSION*.

6.3.3 Entity type: *CarType*

This entity type has the following attributes:

Attribute	Type	
Id	CarType	Primary key
brand	Brand	Mandatory
model	Model	Mandatory
rentalTariffPerDay	Amount	Mandatory
excessTariffPerDay	Amount	Mandatory

CarType has the following associations:

1. Every *Car* must ‘carType’ at least one *CarType*. For the other way round, for this relation holds that each *CarType* at most one *Car*.
2. Every *RentalCase* ‘contractedCarType’ zero or more *CarType*. For the other way round, for this relation holds that each *CarType* at most one *RentalCase*.

6.3.4 Entity type: *CompRentalCharge*

This entity type has the following attributes:

Attribute	Type	
Id	CompRentalCharge	Primary key
arg1	Amount	Mandatory
arg2	Amount	Mandatory
arg3	Amount	Mandatory
computedRentalCharge	Amount	Optional

CompRentalCharge has the following associations:

6.3.5 Entity type: *CompTariffedCharge*

This entity type has the following attributes:

Attribute	Type	
Id	CompTariffedCharge	Primary key
ctcNrOfDays	Integer	Mandatory
ctcDailyAmount	Amount	Mandatory
computedTariffedCharge	Amount	Optional

CompTariffedCharge has the following associations:

6.3.6 Entity type: *DateDifference*

This entity type has the following attributes:

Attribute	Type	
Id	DateDifference	Primary key
lastDate	Date	Mandatory
firstDate	Date	Mandatory
computedNrOfExcessDays	Integer	Optional

DateDifference has the following associations:

6.3.7 Entity type: *DateDifferencePlusOne*

This entity type has the following attributes:

Attribute	Type	
Id	DateDifferencePlusOne	Primary key
earliestDate	Date	Mandatory
latestDate	Date	Mandatory
computedRentalPeriod	Integer	Optional

DateDifferencePlusOne has the following associations:

6.3.8 Entity type: *DistanceBetweenLocations*

This entity type has the following attributes:

Attribute	Type	
Id	DistanceBetweenLocations	Primary key
computedLocationPenaltyCharge	Amount	Mandatory

DistanceBetweenLocations has the following associations:

1. Every *DistanceBetweenLocations* must ‘distbranch’ at least one *Branch*. For the other way round, for this relation holds that each *Branch* zero or more *DistanceBetweenLocations*.

6.3.9 Entity type: *RentalCase*

This entity type has the following attributes:

Attribute	Type	
Id	RentalCase	Primary key
rcAssignedCar	Car	Optional
contractedStartDate	Date	Optional
contractedEndDate	Date	Optional
contractedCarType	CarType	Optional
contractedPickupBranch	Branch	Optional
contractedDropoffBranch	Branch	Optional
rcRenter	Person	Optional
rcDriver	Person	Optional
rcMaxRentalDuration	Integer	Optional
rcDroppedOffCar	Car	Optional
rcDroppedOffDate	Date	Optional
rcDroppedOffBranch	Branch	Optional
rentalCharge	Amount	Optional
rentalPeriod	Integer	Optional

rentalBasicCharge	Amount	Optional
rentalExcessPeriod	Integer	Optional
rentalPenaltyCharge	Amount	Optional
rentalLocationPenaltyCharge	Amount	Optional
sessionNewUserRC	SESSION	Optional

RentalCase has the following associations:

1. Every *RentalCase* ‘rcAssignedCar’ zero or more *Car*. For the other way round, for this relation holds that each *Car* at most one *RentalCase*.
2. Every *RentalCase* ‘rentalHasBeenStarted’ zero or more *RentalCase*. For the other way round, for this relation holds that each *RentalCase* zero or more *RentalCase*.
3. Every *RentalCase* ‘rentalHasBeenEnded’ zero or more *RentalCase*. For the other way round, for this relation holds that each *RentalCase* zero or more *RentalCase*.
4. Every *RentalCase* ‘contractedCarType’ zero or more *CarType*. For the other way round, for this relation holds that each *CarType* at most one *RentalCase*.
5. Every *RentalCase* ‘contractedPickupBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *RentalCase*.
6. Every *RentalCase* ‘contractedDropoffBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *RentalCase*.
7. Every *RentalCase* ‘rentalHasBeenPromised’ zero or more *RentalCase*. For the other way round, for this relation holds that each *RentalCase* zero or more *RentalCase*.
8. Every *RentalCase* ‘rcDroppedOffCar’ zero or more *Car*. For the other way round, for this relation holds that each *Car* at most one *RentalCase*.
9. Every *RentalCase* ‘rcDroppedOffBranch’ zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *RentalCase*.
10. Every *SESSION* ‘sessionNewUserRC’ at most one *RentalCase*. For the other way round, for this relation holds that each *RentalCase* at most one *SESSION*.
11. Every *SESSION* ‘sessionNewBranchRC’ zero or more *RentalCase*. For the other way round, for this relation holds that each *RentalCase* at most one *SESSION*.

6.3.10 Entity type: *SESSION*

This entity type has the following attributes:

Attribute	Type	
Id	SESSION	Primary key
sessionUser	Person	Optional
sessionNewBranchRC	RentalCase	Optional
sessionBranch	Branch	Optional
sessionReturnedCar	Car	Optional
sessionToday	Date	Optional

SESSION has the following associations:

1. Every *SESSION* 'sessionNewUserRC' at most one *RentalCase*. For the other way round, for this relation holds that each *RentalCase* at most one *SESSION*.
2. Every *SESSION* 'sessionNewBranchRC' zero or more *RentalCase*. For the other way round, for this relation holds that each *RentalCase* at most one *SESSION*.
3. Every *SESSION* 'sessionBranch' zero or more *Branch*. For the other way round, for this relation holds that each *Branch* at most one *SESSION*.
4. Every *SESSION* 'sessionReturnedCar' zero or more *Car*. For the other way round, for this relation holds that each *Car* at most one *SESSION*.

6.4 Technical datamodel

The functional requirements have been translated into a technical data model. This model is shown by figure 6.2.

The technical datamodel consists of the following 33 tables:

6.4.1 Table: Amount

This table has the following 1 fields:

- **Amount**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

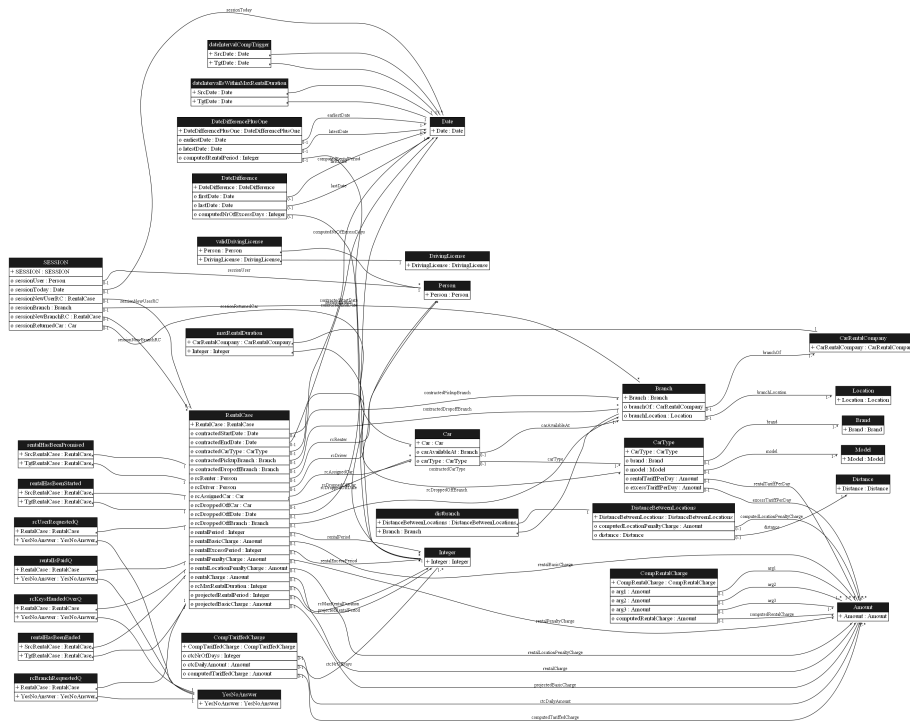


Figure 6.2: Technical data model of EURent

6.4.2 Table: Branch

This table has the following 3 fields:

- **Branch**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **branchOf**
This attribute implements the relation $Branch \xrightarrow{\text{branchOf}} CarRentalCompany$.
SQLVarchar 255, Optional.
- **branchLocation**
This attribute implements the relation $Branch \xrightarrow{\text{branchLocation}} Location$.
SQLVarchar 255, Optional.

6.4.3 Table: Brand

This table has the following 1 fields:

- **Brand**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.4 Table: Car

This table has the following 3 fields:

- **Car**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **carAvailableAt**
This attribute implements the relation $Car \xrightarrow{carAvailableAt} Branch$.
SQLVarchar 255, Optional.
- **carType**
This attribute implements the relation $Car \xrightarrow{carType} CarType$.
SQLVarchar 255, Optional.

6.4.5 Table: CarRentalCompany

This table has the following 1 fields:

- **CarRentalCompany**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.6 Table: CarType

This table has the following 5 fields:

- **CarType**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **brand**
This attribute implements the relation $CarType \xrightarrow{brand} Brand$.
SQLVarchar 255, Optional.
- **model**
This attribute implements the relation $CarType \xrightarrow{model} Model$.
SQLVarchar 255, Optional.
- **rentalTariffPerDay**
This attribute implements the relation $CarType \xrightarrow{rentalTariffPerDay} Amount$.
SQLVarchar 255, Optional.
- **excessTariffPerDay**
This attribute implements the relation $CarType \xrightarrow{excessTariffPerDay} Amount$.
SQLVarchar 255, Optional.

6.4.7 Table: CompRentalCharge

This table has the following 5 fields:

- **CompRentalCharge**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **arg1**
This attribute implements the relation $CompRentalCharge \xrightarrow{arg1} Amount$.
SQLVarchar 255, Optional.
- **arg2**
This attribute implements the relation $CompRentalCharge \xrightarrow{arg2} Amount$.
SQLVarchar 255, Optional.
- **arg3**
This attribute implements the relation $CompRentalCharge \xrightarrow{arg3} Amount$.
SQLVarchar 255, Optional.
- **computedRentalCharge**
This attribute implements the relation $CompRentalCharge \xrightarrow{computedRentalCharge} Amount$.
SQLVarchar 255, Optional.

6.4.8 Table: CompTariffedCharge

This table has the following 4 fields:

- **CompTariffedCharge**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **ctcNrOfDays**
This attribute implements the relation $CompTariffedCharge \xrightarrow{ctcNrOfDays} Integer$.
SQLVarchar 255, Optional.
- **ctcDailyAmount**
This attribute implements the relation $CompTariffedCharge \xrightarrow{ctcDailyAmount} Amount$.
SQLVarchar 255, Optional.
- **computedTariffedCharge**
This attribute implements the relation $CompTariffedCharge \xrightarrow{computedTariffedCharge} Amount$.
SQLVarchar 255, Optional.

6.4.9 Table: Date

This table has the following 1 fields:

- **Date**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.10 Table: DateDifference

This table has the following 4 fields:

- **DateDifference**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **firstDate**
This attribute implements the relation $DateDifference \xrightarrow{firstDate} Date$.
SQLVarchar 255, Optional.
- **lastDate**
This attribute implements the relation $DateDifference \xrightarrow{lastDate} Date$.
SQLVarchar 255, Optional.
- **computedNrOfExcessDays**
This attribute implements the relation $DateDifference \xrightarrow{computedNrOfExcessDays} Integer$.
SQLVarchar 255, Optional.

6.4.11 Table: DateDifferencePlusOne

This table has the following 4 fields:

- **DateDifferencePlusOne**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **earliestDate**
This attribute implements the relation $DateDifferencePlusOne \xrightarrow{earliestDate} Date$.
SQLVarchar 255, Optional.
- **latestDate**
This attribute implements the relation $DateDifferencePlusOne \xrightarrow{latestDate} Date$.
SQLVarchar 255, Optional.
- **computedRentalPeriod**
This attribute implements the relation $DateDifferencePlusOne \xrightarrow{computedRentalPeriod} Integer$.
SQLVarchar 255, Optional.

6.4.12 Table: Distance

This table has the following 1 fields:

- **Distance**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.13 Table: DistanceBetweenLocations

This table has the following 3 fields:

- **DistanceBetweenLocations**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **computedLocationPenaltyCharge**
This attribute implements the relation $DistanceBetweenLocations \xrightarrow{computedLocationPenaltyCharge} Amount$.
SQLVarchar 255, Optional.
- **distance**
This attribute implements the relation $DistanceBetweenLocations \xrightarrow{distance} Distance$.
SQLVarchar 255, Optional.

6.4.14 Table: DrivingLicense

This table has the following 1 fields:

- **DrivingLicense**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.15 Table: Integer

This table has the following 1 fields:

- **Integer**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.16 Table: Location

This table has the following 1 fields:

- **Location**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.17 Table: Model

This table has the following 1 fields:

- **Model**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.18 Table: Person

This table has the following 1 fields:

- **Person**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.19 Table: RentalCase

This table has the following 21 fields:

- **RentalCase**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.
- **contractedStartDate**
This attribute implements the relation $RentalCase \xrightarrow{contractedStartDate} Date$.
SQLVarchar 255, Optional.
- **contractedEndDate**
This attribute implements the relation $RentalCase \xrightarrow{contractedEndDate} Date$.
SQLVarchar 255, Optional.
- **contractedCarType**
This attribute implements the relation $RentalCase \xrightarrow{contractedCarType} CarType$.
SQLVarchar 255, Optional.
- **contractedPickupBranch**
This attribute implements the relation $RentalCase \xrightarrow{contractedPickupBranch} Branch$.
SQLVarchar 255, Optional.
- **contractedDropoffBranch**
This attribute implements the relation $RentalCase \xrightarrow{contractedDropoffBranch} Branch$.
SQLVarchar 255, Optional.
- **rcRenter**
This attribute implements the relation $RentalCase \xrightarrow{rcRenter} Person$.
SQLVarchar 255, Optional.
- **rcDriver**
This attribute implements the relation $RentalCase \xrightarrow{rcDriver} Person$.
SQLVarchar 255, Optional.
- **rcAssignedCar**
This attribute implements the relation $RentalCase \xrightarrow{rcAssignedCar} Car$.
SQLVarchar 255, Optional.
- **rcDroppedOffCar**
This attribute implements the relation $RentalCase \xrightarrow{rcDroppedOffCar} Car$.
SQLVarchar 255, Optional.

- **rcDroppedOffDate**
This attribute implements the relation $RentalCase \xrightarrow{rcDroppedOffDate} Date$.
SQLVarchar 255, Optional.
- **rcDroppedOffBranch**
This attribute implements the relation $RentalCase \xrightarrow{rcDroppedOffBranch} Branch$.
SQLVarchar 255, Optional.
- **rentalPeriod**
This attribute implements the relation $RentalCase \xrightarrow{rentalPeriod} Integer$.
SQLVarchar 255, Optional.
- **rentalBasicCharge**
This attribute implements the relation $RentalCase \xrightarrow{rentalBasicCharge} Amount$.
SQLVarchar 255, Optional.
- **rentalExcessPeriod**
This attribute implements the relation $RentalCase \xrightarrow{rentalExcessPeriod} Integer$.
SQLVarchar 255, Optional.
- **rentalPenaltyCharge**
This attribute implements the relation $RentalCase \xrightarrow{rentalPenaltyCharge} Amount$.
SQLVarchar 255, Optional.
- **rentalLocationPenaltyCharge**
This attribute implements the relation $RentalCase \xrightarrow{rentalLocationPenaltyCharge} Amount$.
SQLVarchar 255, Optional.
- **rentalCharge**
This attribute implements the relation $RentalCase \xrightarrow{rentalCharge} Amount$.
SQLVarchar 255, Optional.
- **rcMaxRentalDuration**
This attribute implements the relation $RentalCase \xrightarrow{rcMaxRentalDuration} Integer$.
SQLVarchar 255, Optional.
- **projectedRentalPeriod**
This attribute implements the relation $RentalCase \xrightarrow{projectedRentalPeriod} Integer$.
SQLVarchar 255, Optional.
- **projectedBasicCharge**
This attribute implements the relation $RentalCase \xrightarrow{projectedBasicCharge} Amount$.
SQLVarchar 255, Optional.

6.4.20 Table: SESSION

This table has the following 7 fields:

- **SESSION**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

- **sessionUser**
This attribute implements the relation $SESSION \xrightarrow{sessionUser} Person$.
SQLVarchar 255, Optional.
- **sessionToday**
This attribute implements the relation $SESSION \xrightarrow{sessionToday} Date$.
SQLVarchar 255, Optional.
- **sessionNewUserRC**
This attribute implements the relation $SESSION \xrightarrow{sessionNewUserRC} RentalCase$.
SQLVarchar 255, Optional, Unique.
- **sessionBranch**
This attribute implements the relation $SESSION \xrightarrow{sessionBranch} Branch$.
SQLVarchar 255, Optional.
- **sessionNewBranchRC**
This attribute implements the relation $SESSION \xrightarrow{sessionNewBranchRC} RentalCase$.
SQLVarchar 255, Optional.
- **sessionReturnedCar**
This attribute implements the relation $SESSION \xrightarrow{sessionReturnedCar} Car$.
SQLVarchar 255, Optional.

6.4.21 Table: YesNoAnswer

This table has the following 1 fields:

- **YesNoAnswer**
This attribute is the primary key.
SQLVarchar 255, Mandatory, Unique.

6.4.22 Table: dateIntervalCompTrigger

This is a link-table, implementing the relation $Date \xrightarrow{dateIntervalCompTrigger} Date$.
It contains the following columns:

- **SrcDate**
This attribute is a foreign key to Date
SQLVarchar 255, Mandatory.
- **TgtDate**
This attribute implements the relation $Date \xrightarrow{dateIntervalCompTrigger} Date$.
SQLVarchar 255, Mandatory.

6.4.23 Table: dateIntervalsWithinMaxRentalDuration

This is a link-table, implementing the relation $Date \xrightarrow{\text{dateIntervalsWithinMaxRentalDuration}} Date$. It contains the following columns:

- **SrcDate**
This attribute is a foreign key to Date
SQLVarchar 255, Mandatory.
- **TgtDate**
This attribute implements the relation $Date \xrightarrow{\text{dateIntervalsWithinMaxRentalDuration}} Date$.
SQLVarchar 255, Mandatory.

6.4.24 Table: distbranch

This is a link-table, implementing the relation $DistanceBetweenLocations \xrightarrow{\text{distbranch}} Branch$. It contains the following columns:

- **DistanceBetweenLocations**
This attribute is the primary key.
SQLVarchar 255, Optional.
- **Branch**
This attribute implements the relation $DistanceBetweenLocations \xrightarrow{\text{distbranch}} Branch$.
SQLVarchar 255, Optional.

6.4.25 Table: maxRentalDuration

This is a link-table, implementing the relation $CarRentalCompany \xrightarrow{\text{maxRentalDuration}} Integer$. It contains the following columns:

- **CarRentalCompany**
This attribute is a foreign key to CarRentalCompany
SQLVarchar 255, Mandatory.
- **Integer**
This attribute implements the relation $CarRentalCompany \xrightarrow{\text{maxRentalDuration}} Integer$.
SQLVarchar 255, Mandatory.

6.4.26 Table: rcBranchRequestedQ

This is a link-table, implementing the relation $RentalCase \xrightarrow{\text{rcBranchRequestedQ}} YesNoAnswer$. It contains the following columns:

- **RentalCase**
This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.

- **YesNoAnswer**

This attribute implements the relation $RentalCase \xrightarrow{rcBranchRequestedQ} YesNoAnswer$.
SQLVarchar 255, Mandatory.

6.4.27 Table: rcKeysHandedOverQ

This is a link-table, implementing the relation $RentalCase \xrightarrow{rcKeysHandedOverQ} YesNoAnswer$.
It contains the following columns:

- **RentalCase**

This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.

- **YesNoAnswer**

This attribute implements the relation $RentalCase \xrightarrow{rcKeysHandedOverQ} YesNoAnswer$.
SQLVarchar 255, Mandatory.

6.4.28 Table: rcUserRequestedQ

This is a link-table, implementing the relation $RentalCase \xrightarrow{rcUserRequestedQ} YesNoAnswer$.
It contains the following columns:

- **RentalCase**

This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.

- **YesNoAnswer**

This attribute implements the relation $RentalCase \xrightarrow{rcUserRequestedQ} YesNoAnswer$.
SQLVarchar 255, Mandatory.

6.4.29 Table: rentalHasBeenEnded

This is a link-table, implementing the relation $RentalCase \xrightarrow{rentalHasBeenEnded} RentalCase$.
It contains the following columns:

- **SrcRentalCase**

This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.

- **TgtRentalCase**

This attribute implements the relation $RentalCase \xrightarrow{rentalHasBeenEnded} RentalCase$.
SQLVarchar 255, Mandatory.

6.4.30 Table: rentalHasBeenPromised

This is a link-table, implementing the relation $RentalCase \xrightarrow{rentalHasBeenPromised} RentalCase$. It contains the following columns:

- **SrcRentalCase**
This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.
- **TgtRentalCase**
This attribute implements the relation $RentalCase \xrightarrow{rentalHasBeenPromised} RentalCase$.
SQLVarchar 255, Mandatory.

6.4.31 Table: rentalHasBeenStarted

This is a link-table, implementing the relation $RentalCase \xrightarrow{rentalHasBeenStarted} RentalCase$. It contains the following columns:

- **SrcRentalCase**
This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.
- **TgtRentalCase**
This attribute implements the relation $RentalCase \xrightarrow{rentalHasBeenStarted} RentalCase$.
SQLVarchar 255, Mandatory.

6.4.32 Table: rentalIsPaidQ

This is a link-table, implementing the relation $RentalCase \xrightarrow{rentalIsPaidQ} YesNoAnswer$. It contains the following columns:

- **RentalCase**
This attribute is a foreign key to RentalCase
SQLVarchar 255, Mandatory.
- **YesNoAnswer**
This attribute implements the relation $RentalCase \xrightarrow{rentalIsPaidQ} YesNoAnswer$.
SQLVarchar 255, Mandatory.

6.4.33 Table: validDrivingLicense

This is a link-table, implementing the relation $Person \xrightarrow{validDrivingLicense} DrivingLicense$. It contains the following columns:

- **Person**
This attribute is a foreign key to Person
SQLVarchar 255, Mandatory.

- **DrivingLicense**

This attribute implements the relation $Person \xrightarrow{\text{validDrivingLicense}} DrivingLicense$.
SQLVarchar 255, Mandatory.

Chapter 7

ECA rules (Flash points)

This chapter lists the ECA rules.

ECA rules:
temporarily not documented

```
ON INSERT Delta IN branchOf[Branch*CarRentalCompany] EXECUTE    -- (ECA rule 1)
BLOCK
(CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EURent branches)
```

----- Derivation ----->

```
BLOCK
(CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EURent branches)
```

<-----End Derivation --

```
ON DELETE Delta FROM branchOf[Branch*CarRentalCompany] EXECUTE    -- (ECA rule 2)
ONE OF DELETE FROM branchOf[Branch*CarRentalCompany]
    SELECTFROM -((branchOf /\ -Delta);'EU-Rent'[CarRentalCompany]) /\ branchOf

    (TO MAINTAIN -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent)
DELETE FROM branchOf[Branch*CarRentalCompany]
    SELECTFROM ((-branchOf /\ branchOf;'EU-Rent'[CarRentalCompany]) \/ (Delta))

    (TO MAINTAIN -(branchOf;'EU-Rent'[CarRentalCompany]) \/ branchOf FROM EURent)
DELETE FROM Isn{dety=Branch}
    SELECTFROM -((branchOf /\ -Delta);'EU-Rent'[CarRentalCompany]);(branchOf /\ branchOf)

    (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf /\ branchOf)
```

```

DELETE FROM Isn{dety=Branch}
SELECTFROM -((branchOf /\ -Delta);(branchOf /\ -Delta)~) /\ I[Branch]

(TO MAINTAIN -I[Branch] \/ branchOf;I[CarRentalCompany];branchOf~ FROM UNI br
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branc
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branc
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branc
(MAINTAINING -(branchOf~;branchOf) \/ I[CarRentalCompany] FROM UNI branchOf::Bra
(MAINTAINING -I[Branch] \/ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRenta

```

----- Derivation ----->

```

ONE OF DELETE FROM branchOf[Branch*CarRentalCompany]
SELECTFROM -((branchOf /\ -Delta);'EU-Rent'[CarRentalCompany]) /\ branchOf

(TO MAINTAIN -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent br
DELETE FROM branchOf[Branch*CarRentalCompany]
SELECTFROM ((-branchOf /\ branchOf;'EU-Rent'[CarRentalCompany]) \/ (Delta /\

(TO MAINTAIN -(branchOf;'EU-Rent'[CarRentalCompany]) \/ branchOf FROM EURent
DELETE FROM Isn{dety=Branch}
SELECTFROM -((branchOf /\ -Delta);'EU-Rent'[CarRentalCompany];(branchOf /\ -D

(TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~ FROM
DELETE FROM Isn{dety=Branch}
SELECTFROM -((branchOf /\ -Delta);(branchOf /\ -Delta)~) /\ I[Branch]

(TO MAINTAIN -I[Branch] \/ branchOf;I[CarRentalCompany];branchOf~ FROM UNI br
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
(MAINTAINING -(branchOf~;branchOf) \/ I[CarRentalCompany] FROM UNI branchOf::Branch*C
(MAINTAINING -I[Branch] \/ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRentalComp

```

<-----End Derivation --

```

ON INSERT Delta IN branchLocation[Branch*Location] EXECUTE -- (ECA rule 3)
ONE OF INSERT INTO Isn{dety=Location}
SELECTFROM ((branchLocation \/ Delta)~;branchLocation /\ -I[Location]) \

(TO MAINTAIN -(branchLocation~;branchLocation) \/ I[Location] FROM UNI b
INSERT INTO Isn{dety=Branch}
SELECTFROM (Delta;Delta~ /\ I[Branch]) - I[Branch]

INSERT INTO Isn{dety=Location}
SELECTFROM (Delta~;Delta /\ I[Location]) - I[Location]

```

```

(MAINTEINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLoc
(MAINTEINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation

```

----- Derivation ----->

```

ONE OF INSERT INTO Isn{dety=Location}
      SELECTFROM ((branchLocation \/ Delta)~;branchLocation /\ -I[Location]) \/ ((b

      (TO MAINTAIN -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branch
INSERT INTO Isn{dety=Branch}
      SELECTFROM (Delta;Delta~ /\ I[Branch]) - I[Branch]

INSERT INTO Isn{dety=Location}
      SELECTFROM (Delta~;Delta /\ I[Location]) - I[Location]

(MAINTEINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocation
(MAINTEINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation::Br

```

<-----End Derivation --

```

ON DELETE Delta FROM branchLocation[Branch*Location] EXECUTE      -- (ECA rule 4)
DELETE FROM Isn{dety=Branch}
      SELECTFROM -((branchLocation /\ -Delta);(branchLocation /\ -Delta)~) /\ I[Branch]

      (TO MAINTAIN -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLo
      (TO MAINTAIN -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocati

```

----- Derivation ----->

```

DELETE FROM Isn{dety=Branch}
      SELECTFROM -((branchLocation /\ -Delta);(branchLocation /\ -Delta)~) /\ I[Branch]

      (TO MAINTAIN -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocati
      (TO MAINTAIN -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation::B

```

<-----End Derivation --

```

ON INSERT Delta IN carAvailableAt[Car*Branch] EXECUTE      -- (ECA rule 5)
ALL of INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;(carAvailableAt \/ I

      (TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{dety=Branch}
      SELECTFROM (rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt

```



```

(TO MAINTAIN  -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt~
(TO MAINTAIN  -(carAvailableAt~;carAvailableAt) \/ I[Branch] FROM UNI car.
INSERT INTO rcDroppedOffDate[RentalCase*Date]
  SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;(carAvailableAt \/ I

(TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{dety=Date}
  SELECTFROM rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;(

(TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
INSERT INTO Isn{dety=Car}
  SELECTFROM (Delta;Delta~ /\ I[Car]) - I[Car]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sess
  THEN INSERT INTO sessionReturnedCar[SESSION*Car]
    SELECTFROM 'a'[SESSION]*'b'[Car]

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar
PICK a,b FROM sessionReturnedCar~;('_SESSION'[SESSION];sess
  THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
    THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

        (TO MAINTAIN  -('_SESSION'[SESSION]
PICK a,b FROM rcAssignedCar;('a'[Car]*'b
  THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
    THEN ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

        (TO MAINTAIN  -('_SESSION'[SESSION]
DELETE FROM rcAssignedCar;('a'[Car]*'b
  THEN ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN  -('_SESSION'[SESSION]
      (MAINTAINING -('_SESSION'[SESSION]
PICK a,b FROM (rentalCase*Car)
  THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
    THEN ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

```

PI
TH

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NEW x:Yes
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(MAINTAINING -('_SESSION' [SE
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SELECTFROM

(TO MAINTAIN
DELETE FROM
SELECTFROM

(TO MAINTAIN
(MAINTAINING -('_SE
ONE OF ONE NONEMPTY
THEN

PICK
THEN

(TO MAINTAIN
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PICK a,b FROM (rentalHas
THEN ONE OF ONE NONEMPTY
THEN

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THEN

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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x' [RentalCase]*((I[Car] /\ -
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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a
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SELECTFROM 'a'

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NEW x:RentalCase;
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SELECTFROM 'x'[RentalCas

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SELECTFROM 'x'[RentalCas

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionReturnedCar~;'_S
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'b'[RentalCase]*'a'[Car]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION]
PICK a,b FROM rcAssignedCar;(sessionReturnedCar~;'_SESSION'
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN ALL of INSERT INTO rentalHasBeenSta
SELECTFROM 'a'[RentalCase]*

(TO MAINTAIN -(sessionRetur
DELETE FROM rentalHasBeenEnd
SELECTFROM 'a'[RentalCase]*

(TO MAINTAIN -(sessionRetur
(MAINAINING -(sessionReturnedCar~;
PICK a,b FROM (rentalHasBeenStarted~ /\
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
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SELECTFROM 'a'[

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ALL of INSERT INTO rentalIsPa
      SELECTFROM 'a'[RentalIsPa]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[_SESSION])
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPa
      THEN INSERT INTO rentalIsPa
        SELECTFROM 'a'[RentalIsPa]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[_SESSION])
      PICK a,b FROM rentalIsPa
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPa
      THEN INSERT INTO rentalIsPa
        SELECTFROM 'a'[RentalIsPa]

      (MAINTAINING
      NEW x:YesNoAnswer;
      ALL of BLOCK
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      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[_SESSION])
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      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[_SESSION])
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[_SESSION])
      NEW x:RentalCase;
      ALL of ALL of INSERT INTO rentalHasBeenStarted
        SELECTFROM 'a'[RentalCase]*'b'

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[_SESSION])
      DELETE FROM rentalHasBeenEnded[
      SELECTFROM 'a'[RentalCase]*'b'

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[_SESSION])
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[_SESSION])
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPa
      THEN INSERT INTO rentalIsPa
        SELECTFROM 'a'[RentalIsPa]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[_SESSION])
      PICK a,b FROM rentalIsPa
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPa
      THEN INSERT INTO rentalIsPa
        SELECTFROM 'a'[RentalIsPa]

      (MAINTAINING
      NEW x:YesNoAnswer;
      ALL of BLOCK
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NEW x:YesNoAnswer;
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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*((I[Car] /\ -((carAvailableAt

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];s
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Ren
THEN ALL of INSERT INTO rentalHasBeenStarte
SELECTFROM 'a'[RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
DELETE FROM rentalHasBeenEnded[
SELECTFROM 'a'[RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
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PICK a,b FROM (rentalHasBeenStarted~ /\ -re
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO rentalI

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SELECTFROM 'a'[RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION]
PICK a,b FROM rentalIsPaid[RENTAL]
THEN ONE OF ONE NONEMPTY ALTERNATIVE
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PICK a,b FROM rentalIsPaid[RENTAL]
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(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaid[RENTAL]
SELECTFROM 'a'[RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION]
ONE OF ONE NONEMPTY ALTERNATIVE
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PICK a,b FROM rentalIsPaid[RENTAL]
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NEW x:YesNoAnswer;
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(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
SELECTFROM 'x'[RentalCase]*(sessionReturnedCar~;'_SESSION'[SESSION]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION]
DELETE FROM rentalHasBeenEnded[RentalCase]

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(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTEINING -(carAvailableAt~;carAvailableAt) \/ I[Branch] FROM UNI carAvailabl

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----- Derivation ----->

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ALL of INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
    SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;(carAvailableAt \/ Delta

    (TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
INSERT INTO Isn{dety=Branch}
    SELECTFROM (rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;(ca

    (TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;
    (TO MAINTAIN -(carAvailableAt~;carAvailableAt) \/ I[Branch] FROM UNI carAvail
INSERT INTO rcDroppedOffDate[RentalCase*Date]
    SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;(carAvailableAt \/ Delta

    (TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
INSERT INTO Isn{dety=Date}
    SELECTFROM rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;(carAv

    (TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
INSERT INTO Isn{dety=Car}
    SELECTFROM (Delta;Delta~ /\ I[Car]) - I[Car]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sessionR
    THEN INSERT INTO sessionReturnedCar[SESSION*Car]
        SELECTFROM 'a'[SESSION]*'b'[Car]

        (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[C
PICK a,b FROM sessionReturnedCar~;('_SESSION'[SESSION];sessionRe
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Car]*
        THEN INSERT INTO rcAssignedCar[RentalCase*Car]
            SELECTFROM 'b'[RentalCase]*'a'[Car]

            (TO MAINTAIN -('_SESSION'[SESSION];sess
PICK a,b FROM rcAssignedCar;('a'[Car]*'b'[Car]
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
        THEN ALL of INSERT INTO re
            SELECTFROM 'a

            (TO MAINTAIN
            DELETE FROM re
            SELECTFROM 'a

            (TO MAINTAIN
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NEW x:RentalCase;
    ALL of ALL of INSERT INTO renta
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NEW x:RentalCase;
    ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x' [RentalCase]*'b' [Car]*'a' [Ca

    (TO MAINTAIN -(' _SESSION' [SESSION];session
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
        THEN ALL of INSERT INTO renta
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NEW x:Car;
ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
SELECTFROM ('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\

(TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar;(I[Car]
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Car]*('_
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'b' [RentalCase]*'a' [Car]

(TO MAINTAIN -('_SESSION' [SESSION];session
PICK a,b FROM rcAssignedCar;('x' [Car]*('_SESSION
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
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NEW x:RentalCase;
  ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'x'[RentalCase]*((I[Car] /\ -((car

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NEW x:RentalCase;

ALL of INSERT INTO rentalHasBeenStart
SELECTFROM 'x' [RentalCase]*'x

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DELETE FROM rentalHasBeenEnded
SELECTFROM 'x' [RentalCase]*'x

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionReturnedCar~;'_SESSIO
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'b'[RentalCase]*'a'[Car]

(TO MAINTAIN - (sessionReturnedCar~;'_SESSION'[SESSION];ses
PICK a,b FROM rcAssignedCar;(sessionReturnedCar~;'_SESSION'[SESS
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN ALL of INSERT INTO rentalHasBeenStarted[
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DELETE FROM rentalHasBeenEnded[Re
SELECTFROM 'a'[RentalCase]*'b'[R

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NEW x:YesNoAnswer;
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NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasBeenStarted[Ren
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -(sessionReturnedCar~;
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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO rentalIsPaid
SELECTFROM 'a'[RentalCa

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NEW x:YesNoAnswer;
        ALL of INSERT INTO rentalIsPaidQ[R
        SELECTFROM 'x'[RentalCase]

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NEW x:RentalCase;
        ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*((I[Car] /\ -((carAvailableAt /\ D

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(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];session
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCa
      THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
      SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

      (TO MAINTAIN -(sessionReturnedCar~;
      DELETE FROM rentalHasBeenEnded[RentalCase]
      SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

      (TO MAINTAIN -(sessionReturnedCar~;
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded~
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
      THEN INSERT INTO rentalIsPaid[RentalCase]
      SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

      (TO MAINTAIN -(sessionReturnedCar~;
      PICK a,b FROM rentalIsPaidQ[RentalCase]
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
      THEN BLOCK
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      PICK a,b FROM rentalIsPaidQ[RentalCase]
      THEN BLOCK
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      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      NEW x:YesNoAnswer;
      ALL of BLOCK
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      (CANNOT
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      NEW x:YesNoAnswer;
      ALL of INSERT INTO rentalIsPaidQ[RentalCase]
      SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCa
      THEN BLOCK
      (CANNOT
      PICK a,b FROM ('x'[RentalCase]
      THEN BLOCK
      (CANNOT
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
      NEW x:YesNoAnswer;
      ALL of BLOCK
      (CANNOT CHANGING
      BLOCK

```



```

ALL of DELETE FROM Isn{dety=Car}
      SELECTFROM -((carAvailableAt /\ -Delta);(carAvailableAt /\ -Delta)~) /\ -(rcAssignedCar;carType)

      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rentalHasBeenPromised;carType)
      ONE OF DELETE FROM contractedPickupBranch[RentalCase*Branch]
            SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised);contractedCarType;

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);carType)
      DELETE FROM Isn{dety=RentalCase}
            SELECTFROM contractedPickupBranch;(-((carAvailableAt /\ -Delta)~;carType)

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);carType)
      DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
            SELECTFROM contractedPickupBranch;(-((carAvailableAt /\ -Delta)~;carType)

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);carType)
      DELETE FROM contractedCarType[RentalCase*CarType]
            SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised~);contractedPickupBranch;

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);carType)
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);carType)
      (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rentalHasBeenPromised;carType)
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);carType)

```

<-----End Derivation --

```

ON INSERT Delta IN carType[Car*CarType] EXECUTE      -- (ECA rule 7)
ONE OF INSERT INTO Isn{dety=CarType}
      SELECTFROM (contractedCarType~;rcAssignedCar;carType /\ -I[CarType]) \/

      (TO MAINTAIN -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM RentedCar
      INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM (rcAssignedCar;carType /\ -contractedCarType) \/ (rcAssignedCar;carType)

      (TO MAINTAIN -(rcAssignedCar;carType) \/ contractedCarType FROM RentedCar
      INSERT INTO rentalBasicCharge[RentalCase*Amount]
            SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalBasicCharge)

      (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalBasicCharge)
      INSERT INTO Isn{dety=Amount}
            SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType)

      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType)
      INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
            SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalPenaltyCharge)

      (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalPenaltyCharge)
      INSERT INTO Isn{dety=Amount}

```



```

SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcA

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
INSERT INTO Isn{dety=CarType}
SELECTFROM ((carType \/ Delta)~;carType /\ -I[CarType]) \/ ((carType \/

(TO MAINTAIN -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*Car
INSERT INTO Isn{dety=Car}
SELECTFROM (Delta;Delta~ /\ I[Car]) - I[Car]

INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta~;Delta /\ I[CarType]) - I[CarType]

(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINTAINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)

```

----- Derivation ----->

```

ONE OF INSERT INTO Isn{dety=CarType}
SELECTFROM (contractedCarType~;rcAssignedCar;carType /\ -I[CarType]) \/ (cont

(TO MAINTAIN -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM R
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM (rcAssignedCar;carType /\ -contractedCarType) \/ (rcAssignedCar;De

(TO MAINTAIN -(rcAssignedCar;carType) \/ contractedCarType FROM Rented car ty
INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTari
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;ca

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exce
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssign

```

```

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
INSERT INTO Isn{dety=CarType}
SELECTFROM ((carType \/ Delta)~;carType /\ -I[CarType]) \/ ((carType \/ Delta

(TO MAINTAIN  -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
INSERT INTO Isn{dety=Car}
SELECTFROM (Delta;Delta~ /\ I[Car]) - I[Car]

INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta~;Delta /\ I[CarType]) - I[CarType]

(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINTAINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)

<-----End Derivation --

```

```

ON DELETE Delta FROM carType[Car*CarType] EXECUTE      -- (ECA rule 8)
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -(contractedCarType;(carType /\ -Delta)~) /\ rcAssignedCar

(TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcAssignedCar;(-(carType /\ -Delta) /\ rcAssignedCar~;contrac

(TO MAINTAIN  -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM contractedCarType;(-(carType /\ -Delta)~ /\ contractedCarType

(TO MAINTAIN  -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented
DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised);contractedCarType;(-

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPr
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM contractedPickupBranch;(-(carAvailableAt~;(carType /\ -Delta)

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPr
DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
      SELECTFROM contractedPickupBranch;(-(carAvailableAt~;(carType /\ -Delta)

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPr

```

```

DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised~);contractedPickupBranch~

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised~)
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM (- (V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod;rentalExcessPeriod~ /\ I[RentalCase])

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM (- (V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod;rentalExcessPeriod~ /\ I[RentalCase])

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (-((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (- (V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=Car}
SELECTFROM -((carType /\ -Delta);(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car*CarType)
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type in CarType)
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type in CarType)
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised~)
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
(MAINTAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINTAINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)

```

----- Derivation ----->

```

ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -(contractedCarType;(carType /\ -Delta)~) /\ rcAssignedCar

(TO MAINTAIN -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car typ
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcAssignedCar;(-(carType /\ -Delta) /\ rcAssignedCar~;contractedCa

(TO MAINTAIN -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented car
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM contractedCarType;(-(carType /\ -Delta)~ /\ contractedCarType~;rcA

(TO MAINTAIN -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented car
DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised);contractedCarType;(-(car

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromise
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM contractedPickupBranch;(-(carAvailableAt~;(carType /\ -Delta)) /\

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromise
DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
      SELECTFROM contractedPickupBranch;(-(carAvailableAt~;(carType /\ -Delta)) /\

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromise
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised~);contractedPickupBranch;(

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromise
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM (-(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~ /\

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM (-(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta)

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~ /\

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -Delta);

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalExcessPeriod[RentalCase*Integer]

```

```

SELECTFROM (-(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -
(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(r
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (-(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcessPerio

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(r
DELETE FROM Isn{dety=RentalCase}
SELECTFROM (-(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;(carType /\ -D

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(r
DELETE FROM Isn{dety=Car}
SELECTFROM (-(carType /\ -Delta);(carType /\ -Delta)~) /\ I[Car]

(TO MAINTAIN -I[Car] \/(carType;I[CarType];carType~ FROM UNI carType::Car*Car
(MAINTAINING -rcAssignedCar \/(contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar \/(contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(rentalExc
(MAINTAINING -(carType~;carType) \/(I[CarType] FROM UNI carType::Car*CarType)
(MAINTAINING -I[Car] \/(carType;carType~ FROM TOT carType::Car*CarType)

```

<-----End Derivation --

```

ON INSERT Delta IN brand[CarType*Brand] EXECUTE -- (ECA rule 9)
ONE OF INSERT INTO Isn{dety=Brand}
SELECTFROM ((brand \/(Delta)~;brand /\ -I[Brand]) \/(brand \/(Delta)~;

(TO MAINTAIN -(brand~;brand) \/(I[Brand] FROM UNI brand::CarType*Brand)
INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

INSERT INTO Isn{dety=Brand}
SELECTFROM (Delta~;Delta /\ I[Brand]) - I[Brand]

(MAINTAINING -(brand~;brand) \/(I[Brand] FROM UNI brand::CarType*Brand)
(MAINTAINING -I[CarType] \/(brand;brand~ FROM TOT brand::CarType*Brand)

```

----- Derivation ----->

```

ONE OF INSERT INTO Isn{dety=Brand}
SELECTFROM ((brand \/(Delta)~;brand /\ -I[Brand]) \/(brand \/(Delta)~;Delta

(TO MAINTAIN -(brand~;brand) \/(I[Brand] FROM UNI brand::CarType*Brand)
INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

```

```

INSERT INTO Isn{dety=Brand}
SELECTFROM (Delta~;Delta /\ I[Brand]) - I[Brand]

(MAINTAINING -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
(MAINTAINING -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)

<-----End Derivation --

ON DELETE Delta FROM brand[CarType*Brand] EXECUTE -- (ECA rule 10)
DELETE FROM Isn{dety=CarType}
SELECTFROM -((brand /\ -Delta);(brand /\ -Delta)~) /\ I[CarType]

(TO MAINTAIN -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
(TO MAINTAIN -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)

```

----- Derivation ----->

```

DELETE FROM Isn{dety=CarType}
SELECTFROM -((brand /\ -Delta);(brand /\ -Delta)~) /\ I[CarType]

(TO MAINTAIN -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
(TO MAINTAIN -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)

<-----End Derivation --

```

```

ON INSERT Delta IN model[CarType*Model] EXECUTE -- (ECA rule 11)
ONE OF INSERT INTO Isn{dety=Model}
SELECTFROM ((model \/ Delta)~;model /\ -I[Model]) \/ ((model \/ Delta)~;

(TO MAINTAIN -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

INSERT INTO Isn{dety=Model}
SELECTFROM (Delta~;Delta /\ I[Model]) - I[Model]

(MAINTAINING -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
(MAINTAINING -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)

```

----- Derivation ----->

```

ONE OF INSERT INTO Isn{dety=Model}
SELECTFROM ((model \/ Delta)~;model /\ -I[Model]) \/ ((model \/ Delta)~;Delta

```

```

        (TO MAINTAIN  -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
        INSERT INTO Isn{dety=CarType}
        SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

        INSERT INTO Isn{dety=Model}
        SELECTFROM (Delta~;Delta /\ I[Model]) - I[Model]

        (MAINTAINING -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
        (MAINTAINING -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)

<-----End Derivation --

```

```

        ON DELETE Delta FROM model[CarType*Model] EXECUTE      -- (ECA rule 12)
        DELETE FROM Isn{dety=CarType}
        SELECTFROM -((model /\ -Delta);(model /\ -Delta)~) /\ I[CarType]

        (TO MAINTAIN  -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
        (TO MAINTAIN  -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)

```

----- Derivation ----->

```

        DELETE FROM Isn{dety=CarType}
        SELECTFROM -((model /\ -Delta);(model /\ -Delta)~) /\ I[CarType]

        (TO MAINTAIN  -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
        (TO MAINTAIN  -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)

<-----End Derivation --

```

```

        ON INSERT Delta IN rentalTariffPerDay[CarType*Amount] EXECUTE      -- (ECA rule 13)
        ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
        SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType]

        (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType])
        INSERT INTO Isn{dety=Amount}
        SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType]

        (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType])
        INSERT INTO projectedBasicCharge[RentalCase*Amount]
        SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType]

        (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType])
        INSERT INTO Isn{dety=Amount}
        SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
        -I[CarType]) /\ I[CarType]

```

```

      (TO MAINTAIN  -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((rentalTariffPerDay \/ Delta)~;rentalTariffPerDay /\ -I[Amount]

      (TO MAINTAIN  -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM
INSERT INTO Isn{dety=CarType}
      SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINTAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI ren
(MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rent

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTari
INSERT INTO Isn{dety=Amount}
      SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;ca

      (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
INSERT INTO projectedBasicCharge[RentalCase*Amount]
      SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
INSERT INTO Isn{dety=Amount}
      SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ cont

      (TO MAINTAIN  -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((rentalTariffPerDay \/ Delta)~;rentalTariffPerDay /\ -I[Amount])

      (TO MAINTAIN  -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI
INSERT INTO Isn{dety=CarType}
      SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay

```



```

(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTa
(MAINAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTar

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalTariffPerDay[CarType*Amount] EXECUTE      -- (ECA rule
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(rentalP
      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod
      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(rentalP
      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod
      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(rentalP
      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;(
      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRen
      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;(
      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRen
      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;(r

```

```

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPer
DELETE FROM Isn{dety=CarType}
      SELECTFROM  -((rentalTariffPerDay /\ -Delta);(rentalTariffPerDay /\ -Delt

      (TO MAINTAIN  -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPer
(MAINTAINING  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[R
(MAINTAINING  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;pro
(MAINTAINING  -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI ren
(MAINTAINING  -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rent

```

----- Derivation ----->

```

ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(rentalTari

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~ /\

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(rentalTari

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~ /\

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(rentalTari

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;(renta

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRentalPe

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;(renta

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRentalPe

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;

```

```

DELETE FROM Isn{dety=RentCase}
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;(rental

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM Isn{dety=CarType}
SELECTFROM -((rentalTariffPerDay /\ -Delta);(rentalTariffPerDay /\ -Delta)~)

(TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projecte
(MAINTAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTa
(MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTar

<-----End Derivation --

```

```

ON INSERT Delta IN excessTariffPerDay[CarType*Amount] EXECUTE -- (ECA rule 15
ONE OF INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ex

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcA

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
INSERT INTO Isn{dety=Amount}
SELECTFROM ((excessTariffPerDay \/ Delta)~;excessTariffPerDay /\ -I[Amou

(TO MAINTAIN -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM
INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

INSERT INTO Isn{dety=Amount}
SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI exc
(MAINTAINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT exce

----- Derivation ----->

```

```

ONE OF INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exce
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssign

```

```

      (TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((excessTariffPerDay /\ Delta)~;excessTariffPerDay /\ -I[Amount])

      (TO MAINTAIN  -(excessTariffPerDay~;excessTariffPerDay) /\ I[Amount] FROM UNI
INSERT INTO Isn{dety=CarType}
      SELECTFROM (Delta;Delta~ /\ I[CarType]) - I[CarType]

INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) /\ I[Amount] FROM UNI excessTa
(MAINTAINING -I[CarType] /\ excessTariffPerDay;excessTariffPerDay~ FROM TOT excessTar

<-----End Derivation --

```

```

ON DELETE Delta FROM excessTariffPerDay[CarType*Amount] EXECUTE      -- (ECA rule
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcess

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=CarType}
      SELECTFROM -((excessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delt

      (TO MAINTAIN  -I[CarType] /\ excessTariffPerDay;I[Amount];excessTariffPer
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (rent
(MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) /\ I[Amount] FROM UNI exc
(MAINTAINING -I[CarType] /\ excessTariffPerDay;excessTariffPerDay~ FROM TOT exce

```

----- Derivation ----->

```

ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(exce

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (r
DELETE FROM rentalExcessPeriod[RentalCase*Integer]

```

```

SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcessPeriod~
(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/\ (rcAssignedCar;carType;excessTariffPerDay)
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;(excessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delta)~)

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/\ (rcAssignedCar;carType;excessTariffPerDay)
DELETE FROM Isn{detyp=CarType}
SELECTFROM -((excessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delta)~)

(TO MAINTAIN -I[CarType] \/\ excessTariffPerDay;I[Amount];excessTariffPerDay~
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/\ (rentalExcessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delta)~)
(MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) \/\ I[Amount] FROM UNI excessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delta)~)
(MAINTAINING -I[CarType] \/\ excessTariffPerDay;excessTariffPerDay~ FROM TOT excessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delta)~)

```

<-----End Derivation --

```

ON INSERT Delta IN maxRentalDuration[CarRentalCompany*Integer] EXECUTE -- (EC
ALL of INSERT INTO rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxRentalDuration)
(TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/\ rcMaxRentalDuration)
INSERT INTO Isn{detyp=Integer}
SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDuration)
(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDuration)
INSERT INTO Isn{detyp=CarRentalCompany}
SELECTFROM (Delta;Delta~ /\ I[CarRentalCompany]) - I[CarRentalCompany]

(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/\ rcMaxRentalDuration)
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/\ rcMaxRentalDuration)

```

----- Derivation ----->

```

ALL of INSERT INTO rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxRentalDuration)
(TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/\ rcMaxRentalDuration)
INSERT INTO Isn{detyp=Integer}
SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDuration)
(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDuration)
INSERT INTO Isn{detyp=CarRentalCompany}
SELECTFROM (Delta;Delta~ /\ I[CarRentalCompany]) - I[CarRentalCompany]

(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/\ rcMaxRentalDuration)
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/\ rcMaxRentalDuration)

```

<-----End Derivation --

```
ON INSERT Delta IN dateIntervalIsWithinMaxRentalDuration[Date*Date] EXECUTE --
INSERT INTO Isn{detyp=Date}
SELECTFROM (Delta;Delta~ /\ I[Date]) - I[Date] \/ (Delta~;Delta /\ I[Date]) - I
```

----- Derivation ----->

```
INSERT INTO Isn{detyp=Date}
SELECTFROM (Delta;Delta~ /\ I[Date]) - I[Date] \/ (Delta~;Delta /\ I[Date]) - I[Date]
```

<-----End Derivation --

```
ON DELETE Delta FROM dateIntervalIsWithinMaxRentalDuration[Date*Date] EXECUTE
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalIsWithinMaxRentalDuration~ /\ con

(TO MAINTAIN -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithi
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalIsWithinMaxRentalDuration /\ co

(TO MAINTAIN -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithi
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMa
```

----- Derivation ----->

```
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalIsWithinMaxRentalDuration~ /\ con

(TO MAINTAIN -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithi
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalIsWithinMaxRentalDuration /\ co

(TO MAINTAIN -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithi
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMaxRent
```

<-----End Derivation --

```
ON INSERT Delta IN contractedStartDate[RentalCase*Date] EXECUTE -- (ECA rule :
ALL of INSERT INTO dateIntervalIsWithinMaxRentalDuration[Date*Date]
```

```

SELECTFROM (contractedStartDate \/ Delta)~;contractedEndDate /\ -dateInt
(TO MAINTAIN -(contractedStartDate~;contractedEndDate) \/ dateIntervalIs
INSERT INTO Isn{dety=Date}
SELECTFROM ((contractedStartDate \/ Delta)~;rcUserRequestedQ;'Yes'[YesNo
(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];
(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer
(TO MAINTAIN -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM
INSERT INTO rentalPeriod[RentalCase*Integer]
SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;late
(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;la
INSERT INTO Isn{dety=Integer}
SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDrope
(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM ((contractedStartDate \/ Delta)~;rcMaxRentalDuration;rcMaxRen
(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurat
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
SELECTFROM ((contractedStartDate;earliestDate~ /\ contractedEndDate;late
(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;l
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rc
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rc
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO dateIntervalCompTrigger
SELECTFROM 'a'[Date]*'b'[Date]

(TO MAINTAIN -(rcMaxRentalDuration
PICK a,b FROM dateIntervalCompTrigger~;
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(rcMaxRentalDuration
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDur
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a'[Date]*'b'[RentalCase]*

```

```
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]*

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedEndDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedEndDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedEndDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedEndDate[RentalCase*Date]
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
((rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Date]
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a' [Date]*'b' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
PICK a,b FROM dateIntervalCompTrigger~;'x' [Date]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
((rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
((rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((contractedStartDate \
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a' [Date]*'b' [Date]

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
PICK a,b FROM dateIntervalCompTrigger~;(((contractedStartDate[RentalCase*Date]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration~ / \ contractedStartDate[RentalCase*Date]
```



```
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
NEW x:Date;
    ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM (((contractedStartDate \ / Delta)~-;rcMaxRentalDuration)
            (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;(contractedStartDate+Delta)
            (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRentalDuration)
THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a' [RentalCase]*'b' [Date]
            (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration)
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRentalDuration)
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a' [Date]*'b' [Date]
            (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
            (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDuration)
            (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate)
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;rcDroppedOffDate)
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a' [RentalCase]*'b' [Date]
                (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
PICK a,b FROM contractedStartDate~;'a' [RentalCase]
        THEN INSERT INTO earliestDate[DateDifference]
            SELECTFROM 'b' [DateDifferencePlusOne]
                (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate)
NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*Date]
```

```

SELECTFROM 'a' [RentalCase]*'b' [DateDi.

(TO MAINTAIN -(rcDroppedOffDate;rcDro
INSERT INTO earliestDate[DateDifferenc
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDro
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffD
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDat
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
THEN INSERT INTO rcDroppedOffDate[Rental
SELECTFROM 'a' [RentalCase]*'b' [Dat

(TO MAINTAIN -(rcDroppedOffDate;rcD
PICK a,b FROM rcDroppedOffDate~;('a' [Ren
THEN INSERT INTO latestDate[DateDifferen
SELECTFROM 'b' [DateDifferencePlusO

(TO MAINTAIN -(rcDroppedOffDate;rcD
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDat
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCas
SELECTFROM 'a' [RentalCase]*'b' [DateDi.

(TO MAINTAIN -(rcDroppedOffDate;rcDro
INSERT INTO latestDate[DateDifferenceP
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDro
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffD
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDat
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contract
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcD
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigg
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedEndDate;contractedE
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
THEN INSERT INTO contractedStartDate[Ren
SELECTFROM 'a' [RentalCase]*'b' [Dat

(TO MAINTAIN -(contractedEndDate;c
PICK a,b FROM contractedStartDate~;('a' [
THEN INSERT INTO earliestDate[DateDiffer
SELECTFROM 'b' [DateDifferencePlusO

(TO MAINTAIN -(contractedEndDate;c
(MAINTAINING -(contractedEndDate;contractedEndD

```

```

NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
THEN INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
PICK a,b FROM contractedEndDate~;'a' [RentalCase]
THEN INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate)
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedStartDate~ /\
(MAINTAINING -(contractedEndDate;contractedStartDate~ /\
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;contractedStartDate)
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Triggers
(MAINTAINING -(contractedEndDate;contractedStartDate~ /\ contractedStartDate;contractedEndDate)
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMaximumDuration
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I [RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I [RentalCase]
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)

```

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(MAINAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contr
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDat
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDat
(MAINAINING -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI con

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----- Derivation ----->

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ALL of INSERT INTO dateIntervalsWithinMaxRentalDuration[Date*Date]
    SELECTFROM (contractedStartDate \/ Delta)~;contractedEndDate /\ -dateInterval

(TO MAINTAIN -(contractedStartDate~;contractedEndDate) \/ dateIntervalsWithi
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((contractedStartDate \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUse
(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
(TO MAINTAIN -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI
INSERT INTO rentalPeriod[RentalCase*Integer]
    SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestD
INSERT INTO Isn{detyp=Integer}
    SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffD

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
INSERT INTO dateIntervalCompTrigger[Date*Date]
    SELECTFROM ((contractedStartDate \/ Delta)~;rcMaxRentalDuration;rcMaxRentalDu

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
    SELECTFROM ((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDat

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;latest
INSERT INTO Isn{detyp=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRe
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRe
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Date]
        THEN INSERT INTO dateIntervalCompTrigger[Date]
            SELECTFROM 'a'[Date]*'b'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMa

```



```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((contractedStartDate \ Del
      THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rc
PICK a,b FROM dateIntervalCompTrigger~;(((contractedStartDate \
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rc
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDura
NEW x:Date;
      ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM (((contractedStartDate \ Delta)~;rcMaxRentalDurat

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMax
      INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;(contra

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMax
      (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDu
      (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDura
      (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~ /
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRe
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;co
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRe
      THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;co
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDa
NEW x:Date;
      ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;contrac

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contr
      INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'x'[Date]*((rcMaxRentalDuration;rcMaxRentalDuratio

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contr
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDa
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate /\ c
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;rcDroppedOffDate~
      THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO contractedStartDate[RentalCa
          SELECTFROM 'a'[RentalCase]*'b'[Date]

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        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
PICK a,b FROM contractedStartDate~;('a'[RentalCase]
THEN INSERT INTO earliestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
INSERT INTO earliestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO rcDroppedOffDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
PICK a,b FROM rcDroppedOffDate~;('a'[RentalCase]
THEN INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
    ALL of INSERT INTO rcDroppedOffDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSta
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate~
THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger re
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedEndDate;
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedEndDate;contractedEndDate~
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]

```

```

THEN INSERT INTO contractedStartDate[RentalCase*]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
PICK a,b FROM contractedStartDate~;'a'[RentalCase]
THEN INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedEndDate~)
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase*]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedEndDate~)
(MAINTAINING -(contractedEndDate;contractedEndDate~)
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO contractedEndDate[RentalCase*]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
PICK a,b FROM contractedEndDate~;'a'[RentalCase]
THEN INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedEndDate~)
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase*]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

(TO MAINTAIN -(contractedEndDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedEndDate~)
(MAINTAINING -(contractedEndDate;contractedEndDate~)
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate)
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;contractedStartDate)
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger pr
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)

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(MAINAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMaxRent
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contracted
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);c
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);c
(MAINAINING -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI contract

```

<-----End Derivation --

```

ON DELETE Delta FROM contractedStartDate[RentalCase*Date] EXECUTE -- (ECA rule
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedStartDate /\ -Delta);(contractedStartDate

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
    DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedStartDate /\ -Delta);(contractedStartDate

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
    DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedStartDate /\ -Delta);(contractedStartDate

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
    (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
    ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedStartDate /\ -Delta);(contractedStartDate

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
    DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedStartDate /\ -Delta);(contractedStartDate

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
    DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedStartDate /\ -Delta);(contractedStartDate

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
    ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
    SELECTFROM (-((contractedStartDate /\ -Delta);dateIntervalCompTri

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract

```

```

DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contractedEndD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contractedEndD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contractedEndD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedEndDate;-(dateIntervalCompTrigger~;(contractedEndD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;-(((contractedEndD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;-(dateIntervalCompTrigger~;(contractedEndD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;-(((contractedSta

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]

```

```

SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri,

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~;(contract

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contracte

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ r

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ r

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rc

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
ONE OF DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ c

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ c

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM contractedStartDate[RentalCase*Date]

```

```

SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(
(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ co

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contracted
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDat
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contrac
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contr

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----- Derivation ----->

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ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate~ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\ -

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Ren
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate~ /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\ -

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTrigger;

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]

```

```

SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contractedSt

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger;

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contractedSt

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger;

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contractedSt

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger;c

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger)

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedEndDate;-(dateIntervalCompTrigger~;(contractedSt

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;-((contractedStar

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedStartDate /\ -Delta);dateIntervalCompTrigger)

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;-(dateIntervalCompTrigger~;(contractedSt

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;-((contractedStartDat

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger)

```

```

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~;(contractedSt

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contractedStar

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger)

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate /\ c
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rcDrop

(TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(contr

(TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rcDrop

(TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(contr

(TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rcDrop

(TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
ONE OF DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ contra

(TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(contr

(TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ contra

(TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(contr

```

```

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate
DELETE FROM Isn{dety= RentalCase}
      SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ contrac

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate
      (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;con
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contracted

```

<-----End Derivation --

```

ON INSERT Delta IN contractedEndDate[RentalCase*Date] EXECUTE    -- (ECA rule 23
ALL of INSERT INTO dateIntervalIsWithinMaxRentalDuration[Date*Date]
      SELECTFROM (contractedStartDate~;contractedEndDate /\ -dateIntervalIsWit

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalIs
INSERT INTO Isn{dety=Date}
      SELECTFROM ((contractedEndDate \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAn

      (TO MAINTAIN  -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
      (TO MAINTAIN  -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
      (TO MAINTAIN  -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI
INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~)

      (TO MAINTAIN  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDat
INSERT INTO Isn{dety=Integer}
      SELECTFROM (rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contracte

      (TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
      (TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM (contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration

      (TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurat
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM ((contractedStartDate;earliestDate~ /\ contractedEndDate;late

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ contractedEndDate;l
INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rc

```

```

THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRentalDuration~
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Date]*'b' [Date]
      THEN INSERT INTO dateIntervalCompTrigger[Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'a' [Date]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
PICK a,b FROM dateIntervalCompTrigger~;((rcMaxRentalDuration;rcMaxRentalDuration~
THEN INSERT INTO contractedEndDate[RentalCase*Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'b' [RentalCase]*'a' [Date]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
NEW x:Date;
      ALL of INSERT INTO dateIntervalCompTrigger[Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'a' [Date]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
INSERT INTO contractedEndDate[RentalCase*Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'b' [RentalCase]*'a' [Date]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate[RentalCase*Date]
NEW x:Date;
      ALL of INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate[RentalCase*Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Date]*'b' [Date]
      THEN INSERT INTO dateIntervalCompTrigger[Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'a' [Date]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
PICK a,b FROM dateIntervalCompTrigger~;('x' [Date]*'b' [Date]
      THEN INSERT INTO contractedEndDate[RentalCase*Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'b' [RentalCase]*'a' [Date]*'b' [Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
NEW x:Date;
      ALL of INSERT INTO dateIntervalCompTrigger[Date]*'a' [Date]*'b' [Date]
      SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate[RentalCase*Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~

```



```

INSERT INTO contractedEndDate[RentalCase*
SELECTFROM ((rcMaxRentalDuration;rcMaxRe

        (TO MAINTAIN -(rcMaxRentalDuration;rcMax
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDu
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDura
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contr
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contrac
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedStartDate~;r
        THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDurati
        PICK a,b FROM dateIntervalCompTrigger~;((contractedStartDate
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDurati
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRental
NEW x:Date;
        ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM ((contractedStartDate~;rcMaxRentalDuration;rc

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;co

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRen
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRental
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurati
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rc
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
        PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rc
        THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;co

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;
        INSERT INTO dateIntervalCompTrigger[Date*Date]

```

```

SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDu

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contract
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;rcDroppedOff
      THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
      THEN INSERT INTO contractedEndDate[RentalCase]
      SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      PICK a,b FROM contractedEndDate~;'a' [RentalCase]
      THEN INSERT INTO firstDate[DateDifference]
      SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;
      NEW x:Date;
      ALL of INSERT INTO contractedEndDate[RentalCase]
      SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      INSERT INTO firstDate[DateDifference]
      SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
      THEN INSERT INTO rcDroppedOffDate[RentalCase]
      SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      PICK a,b FROM rcDroppedOffDate~;'a' [RentalCase]
      THEN INSERT INTO lastDate[DateDifference]
      SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;
      NEW x:Date;
      ALL of INSERT INTO rcDroppedOffDate[RentalCase]
      SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;
      INSERT INTO lastDate[DateDifference]
      SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;

```

```

(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate;
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger exce
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;co
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedEndDate;(contracted
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO contractedStartDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
PICK a,b FROM contractedStartDate~;('a'[RentalCase]
THEN INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
PICK a,b FROM contractedEndDate~;('a'[RentalCase]
THEN INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a'[RentalCase]
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

```

```

                                (TO MAINTAIN  -(contractedEndDate;cont
                                (MAINTAINING -(contractedEndDate;contractedEn
                                (MAINTAINING -(contractedEndDate;contractedEndD
                                (MAINTAINING -(contractedEndDate;contractedEndDate~ /\
                                (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contra
                                PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;con
                                THEN BLOCK
                                (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigg
                                (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate
                                (MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMa
                                (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
                                (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
                                (MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
                                (MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
                                (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
                                (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
                                (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
                                (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
                                (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
                                (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contr
                                (MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDat
                                (MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDat
                                (MAINTAINING -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI contrac

```

----- Derivation ----->

```

ALL of INSERT INTO dateIntervalIsWithinMaxRentalDuration[Date*Date]
      SELECTFROM (contractedStartDate~;contractedEndDate /\ -dateIntervalIsWithinMa

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithi
      INSERT INTO Isn{detyp=Date}
      SELECTFROM ((contractedEndDate /\ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer]

      (TO MAINTAIN  -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
      (TO MAINTAIN  -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
      (TO MAINTAIN  -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI cont
      INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp

      (TO MAINTAIN  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);c
      INSERT INTO Isn{detyp=Integer}
      SELECTFROM (rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndD

      (TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
      (TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
      INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM (contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;con

```

```

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
SELECTFROM ((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRentalDuration~ /\
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRentalDuration~ /\
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Date]
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a' [Date]*'b' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
PICK a,b FROM dateIntervalCompTrigger~;('a' [Date]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a' [Date]*'b' [RentalCase]*'x' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]*'x' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate]
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate]
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Date]*('a' [Date]
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a' [Date]*'b' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
PICK a,b FROM dateIntervalCompTrigger~;('x' [Date]

```

```

THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'x'[Date]*((rcMaxRentalDuration;rcMaxRentalDuration~

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contracted
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contracted
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedStartDate~;rcMaxRentalDuration~
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a'[Date]*'b'[Date]

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
PICK a,b FROM dateIntervalCompTrigger~;((contractedStartDate~;rcMaxRentalDuration~
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM ((contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate~

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRentalDuration~
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDate~
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRentalDuration~
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]

```

```

SELECTFROM 'a' [Date]*'b' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;co
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDa
NEW x:Date;
      ALL of INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;contrac

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contr
INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDuratio

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contr
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDa
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate /\ c
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;rcDroppedOffDate~
      THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Renta
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      PICK a,b FROM contractedEndDate~;('a' [RentalCase]*'b' [Date]
      THEN INSERT INTO firstDate[DateDifference*Date]
      SELECTFROM 'b' [DateDifference]*'a' [Date]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      NEW x:Date;
      ALL of INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      INSERT INTO firstDate[DateDifference*Date]
      SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa /\
      (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa /\ contra
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]*'b' [Date]
      THEN INSERT INTO rcDroppedOffDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa
      PICK a,b FROM rcDroppedOffDate~;('a' [RentalCase]*'b' [Date]
      THEN INSERT INTO lastDate[DateDifference*Date]
      SELECTFROM 'b' [DateDifference]*'a' [Date]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;contractedEndDa

```

```

(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
    ALL of INSERT INTO rcDroppedOffDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifference*Date]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
        INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'b'[DateDifference]*'a'[RentalCase*Date]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate~ /\
        THEN BLOCK
            (CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger excess period
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate~ /\
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedEndDate;(contractedEndDate~ /\
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase*Date]
            THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifference*Date]

            (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\
            PICK a,b FROM contractedStartDate~;('a'[RentalCase*Date]
            THEN INSERT INTO earliestDate[DateDifferencePlusOne*Date]
            SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase*Date]

            (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\
        NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifference*Date]

            (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\
            INSERT INTO earliestDate[DateDifferencePlusOne*Date]
            SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase*Date]

            (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase*Date]
            THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifference*Date]

            (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\
            PICK a,b FROM contractedEndDate~;('a'[RentalCase*Date]
            THEN INSERT INTO latestDate[DateDifferencePlusOne*Date]
            SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase*Date]

```



```

        (TO MAINTAIN -(contractedEndDate;contractedStartDate;contractedEndDate)
(MAINAINING -(contractedEndDate;contractedEndDate;contractedStartDate)
NEW x:Date;
    ALL of INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]
        (TO MAINTAIN -(contractedEndDate;contractedStartDate;contractedEndDate)
INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[DateDifferencePlusOne]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate;contractedEndDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate;contractedStartDate)
PICK a,b FROM (earliestDate;contractedStartDate /\ latestDate;contractedEndDate)
THEN BLOCK
    (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger pr
    (MAINTAINING -(contractedEndDate;contractedEndDate;contractedStartDate;contractedEndDate)
(MAINAINING -(contractedStartDate;contractedEndDate) /\ dateIntervalIsWithinMaxRent
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ /\ I[RentalCase]
(MAINAINING -((rcDroppedOffDate;lastDate /\ contractedEndDate;firstDate);computedN
(MAINAINING -((rcDroppedOffDate;lastDate /\ contractedEndDate;firstDate);computedN
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration /\ contractedEndDate;contractedStartDate)
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration /\ contractedEndDate;contractedStartDate)
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration /\ contractedEndDate;contractedStartDate)
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration /\ contractedEndDate;contractedStartDate)
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate /\ contractedEndDate;contractedEndDate)
(MAINAINING -(contractedEndDate;contractedEndDate /\ contractedStartDate;contractedStartDate)
(MAINAINING -((contractedStartDate;earliestDate /\ contractedEndDate;latestDate);c
(MAINAINING -((contractedStartDate;earliestDate /\ contractedEndDate;latestDate);c
(MAINAINING -(contractedEndDate;contractedEndDate) /\ I[Date] FROM UNI contractedEndDate

```

<-----End Derivation --

```

ON DELETE Delta FROM contractedEndDate[RentalCase*Date] EXECUTE -- (ECA rule 1)
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delta))

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ)
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delta))

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ)
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delta))

```

```

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM  -((contractedEndDate /\ -Delta);(contractedEndDate /\

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM  -((contractedEndDate /\ -Delta);(contractedEndDate~ /

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM Isn{dety=RentCase}
      SELECTFROM  -((contractedEndDate /\ -Delta);(contractedEndDate /\

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
      SELECTFROM  -(contractedStartDate;dateIntervalCompTrigger;(contra

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
      SELECTFROM  -((contractedEndDate /\ -Delta);dateIntervalCompTrigg

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -(contractedStartDate;dateIntervalCompTrigger;(contra

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate /\ -Delta);dateIntervalCompTrigg

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -(contractedStartDate;dateIntervalCompTrigger;(contra

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate /\ -Delta);dateIntervalCompTrigg

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM Isn{dety=RentCase}
      SELECTFROM  -(contractedStartDate;dateIntervalCompTrigger;(contra

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
(MAINAINING  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  rcMaxRentalDuration;rcMaxRentalDuration~;-((contracte

      (TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]

```

```

SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger;(contra

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (-((contractedEndDate /\ -Delta);dateIntervalCompTrigg

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedEnd

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger;(contra

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-((contractedEndDate /\ -Delta);dateIntervalCompTrigg

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger;(contra

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-((contractedEndDate /\ -Delta);dateIntervalCompTrigg

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -((contractedEndDate /\ -Delta);dateIntervalCompTrigge

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuri
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM (-(((contractedEndDate /\ -Delta);firstDate~ /\ rcDrop

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];(firstDate;(contracted

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(((contractedEndDate /\ -Delta);firstDate~ /\ rcDrop

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];(firstDate;(contracted

```

```

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEnd
DELETE FROM Isn{dety=RentaCase}
      SELECTFROM -(((contractedEndDate /\ -Delta);firstDate~ /\ rcDropp

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;co
ONE OF DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -(((contractedStartDate;earliestDate~ /\ (contractedEn

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;c

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(((contractedStartDate;earliestDate~ /\ (contractedEn

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;c

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contracted
DELETE FROM Isn{dety=RentaCase}
      SELECTFROM -(((contractedStartDate;earliestDate~ /\ (contractedEn

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contracted
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDat
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contr

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM -(((contractedEndDate /\ -Delta);(contractedEndDate /\ -Del

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM -(((contractedEndDate /\ -Delta);(contractedEndDate~ /\ -De

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
DELETE FROM Isn{dety=RentaCase}
      SELECTFROM -(((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delt

```

```

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM  -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Del

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM  -((contractedEndDate /\ -Delta);(contractedEndDate~ /\ -De

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delt

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
      SELECTFROM  -((contractedStartDate;dateIntervalCompTrigger;(contractedE

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
      SELECTFROM  -((contractedEndDate /\ -Delta);dateIntervalCompTrigger~;c

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedStartDate;dateIntervalCompTrigger;(contractedE

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate /\ -Delta);dateIntervalCompTrigger~;c

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -((contractedStartDate;dateIntervalCompTrigger;(contractedE

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate /\ -Delta);dateIntervalCompTrigger~;c

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -(contractedStartDate;dateIntervalCompTrigger;(contractedEn

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
(MAINAINING  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  rcMaxRentalDuration;rcMaxRentalDuration~; -((contractedEndD

      (TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
      SELECTFROM  contractedStartDate; -(dateIntervalCompTrigger;(contractedE

```

```

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (-(contractedEndDate /\ -Delta);dateIntervalCompTrigger~)

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedEndDate

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger;(contractedE

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate /\ -Delta);dateIntervalCompTrigger~)

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contractedEndD

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger;(contractedE

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate /\ -Delta);dateIntervalCompTrigger~)

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate /\ -Delta);dateIntervalCompTrigger~) /

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~ /
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate /\ -Delta);firstDate~ /\ rcDroppedOf

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];(firstDate;(contractedEndDa

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate /\ -Delta);firstDate~ /\ rcDroppedOf

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];(firstDate;(contractedEndDa

```

```

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM Isn{dety=RentCase}
        SELECTFROM -(((contractedEndDate /\ -Delta);firstDate~ /\ rcDroppedOff

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contract
ONE OF DELETE FROM contractedEndDate[RentalCase*Date]
        SELECTFROM -(((contractedStartDate;earliestDate~ /\ (contractedEndDate

        (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM contractedEndDate[RentalCase*Date]
        SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contra

        (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM contractedStartDate[RentalCase*Date]
        SELECTFROM -(((contractedStartDate;earliestDate~ /\ (contractedEndDate

        (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM contractedStartDate[RentalCase*Date]
        SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contra

        (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
DELETE FROM Isn{dety=RentCase}
        SELECTFROM -(((contractedStartDate;earliestDate~ /\ (contractedEndDate

        (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStart
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;con
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contracted
<-----End Derivation --

```

```

ON INSERT Delta IN contractedCarType[RentalCase*CarType] EXECUTE  -- (ECA rule
ONE OF INSERT INTO carType[Car*CarType]
        SELECTFROM rcAssignedCar~;(contractedCarType \/ Delta) /\ -carType

        (TO MAINTAIN  -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented
INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType \/ Delta)~;rcAssignedCar;carType /\ -I[Car

        (TO MAINTAIN  -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] F
INSERT INTO Isn{dety=CarType}
        SELECTFROM ((contractedCarType \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAn

```

```

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes' [YesNoAnswer];rc
INSERT INTO Isn{dety=CarType}
SELECTFROM ((contractedCarType /\ Delta)~;rcBranchRequestedQ;'Yes' [YesNo

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes' [YesNoAnswer];
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch~;(I[Re
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'b'[Car]*'a'[Branch]

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ ren
PICK a,b FROM carAvailableAt;((contractedPickupBranch~;(I[RentalCa
THEN INSERT INTO carType[Car*CarType]
SELECTFROM 'a'[Car]*'b'[CarType]

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ ren
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPro
NEW x:Car;
ALL of INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'x'[Car]*((contractedCarType~;(I[RentalCase] /\ rent

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rental
INSERT INTO carType[Car*CarType]
SELECTFROM 'x'[Car]*((contractedPickupBranch~;(I[RentalCase] /\

(TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rental
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPro
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedCarType;(contracted
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO projectedRentalPeriod[R
SELECTFROM 'a'[RentalCase]*'b'[Int

(TO MAINTAIN  -(contractedCarType;c
PICK a,b FROM projectedRentalPeriod~;('a
THEN INSERT INTO ctcNrOfDays[CompTariffe
SELECTFROM 'b'[CompTariffedCharge]

(TO MAINTAIN  -(contractedCarType;c
(MAINTAINING -(contractedCarType;contractedCarT
NEW x:Integer;
ALL of INSERT INTO projectedRentalPeriod[Rent
SELECTFROM 'a'[RentalCase]*'b'[CompTar

(TO MAINTAIN  -(contractedCarType;cont
INSERT INTO ctcNrOfDays[CompTariffedCh
SELECTFROM 'b'[CompTariffedCharge]*'a

(TO MAINTAIN  -(contractedCarType;cont
(MAINTAINING -(contractedCarType;contractedCa
(MAINTAINING -(contractedCarType;contractedCarT

```



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(MAINTEINING -(contractedCarType;contractedCarType~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO contractedCarType[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
PICK a,b FROM contractedCarType~;('a'[RentalCase]
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO rentalCase
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
PICK a,b FROM rentalCase
THEN INSERT INTO ctcDailyRate
SELECTFROM 'b'[ContractedCarType]*'a'[RentalCase]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
(MAINTEINING -(contractedCarType;contractedCarType~ /\
NEW x:Amount;
ALL of INSERT INTO rentalCase
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
INSERT INTO ctcDailyRate
SELECTFROM 'b'[ContractedCarType]*'a'[RentalCase]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
(MAINTEINING -(contractedCarType;contractedCarType~ /\
(MAINTEINING -(contractedCarType;contractedCarType~ /\
(MAINTEINING -(contractedCarType;contractedCarType~ /\
(MAINTEINING -(contractedCarType;contractedCarType~ /\
NEW x:CarType;
ALL of INSERT INTO contractedCarType[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO rentalCase
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
PICK a,b FROM rentalCase
THEN INSERT INTO ctcDailyRate
SELECTFROM 'b'[ContractedCarType]*'a'[RentalCase]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
(MAINTEINING -(contractedCarType;contractedCarType~ /\
NEW x:Amount;
ALL of INSERT INTO rentalCase
SELECTFROM 'x'[ContractedCarType]*'a'[RentalCase]

```

```

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
INSERT INTO ctcDailyAmount[Amount]
SELECTFROM 'b'[CompTariffedCharge*Amount]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
PICK a,b FROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount[Amount]
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
INSERT INTO projectedBasicCharge[Amount]
SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)

(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
INSERT INTO Isn{dety=Amount}
SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
INSERT INTO Isn{dety=CarType}
SELECTFROM ((contractedCarType /\ Delta~;contractedCarType /\ -I[CarType] FROM Rented car type in

(TO MAINTAIN -(contractedCarType~;contractedCarType) /\ I[CarType] FROM Rented car type in
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=CarType}
SELECTFROM (Delta~;Delta /\ I[CarType]) - I[CarType]

(MAINTAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type in
(MAINTAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type in
(MAINTAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type in
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projectedRentalPeriod;
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
(MAINTAINING -(contractedCarType~;contractedCarType) /\ I[CarType] FROM UNI contractedCarType;

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----- Derivation ----->

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ONE OF INSERT INTO carType[Car*CarType]
      SELECTFROM rcAssignedCar~;(contractedCarType \/ Delta) /\ -carType

      (TO MAINTAIN -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented car
      INSERT INTO Isn{dety=CarType}
      SELECTFROM (contractedCarType \/ Delta)~;rcAssignedCar;carType /\ -I[CarType]

      (TO MAINTAIN -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM R
      INSERT INTO Isn{dety=CarType}
      SELECTFROM ((contractedCarType \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer]

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
      INSERT INTO Isn{dety=CarType}
      SELECTFROM ((contractedCarType \/ Delta)~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

      (TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch~;(I[RentalC
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHa
      PICK a,b FROM carAvailableAt;((contractedPickupBranch~;(I[RentalCase] /\
      THEN INSERT INTO carType[Car*CarType]
      SELECTFROM 'a'[Car]*'b'[CarType]

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHa
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
      NEW x:Car;
      ALL of INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'x'[Car]*((contractedCarType~;(I[RentalCase] /\ rentalHas

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBe
      INSERT INTO carType[Car*CarType]
      SELECTFROM 'x'[Car]*((contractedPickupBranch~;(I[RentalCase] /\ rent

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBe
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromis
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedCarType;(contractedCarTy
      THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
      THEN INSERT INTO projectedRentalPeriod[Rental
      SELECTFROM 'a'[RentalCase]*'b'[Integer]

      (TO MAINTAIN -(contractedCarType;contra
      PICK a,b FROM projectedRentalPeriod~;('a'[Ren
      THEN INSERT INTO ctcNrOfDays[CompTariffedChar
      SELECTFROM 'b'[CompTariffedCharge]*'a'[

      (TO MAINTAIN -(contractedCarType;contra
      (MAINTAINING -(contractedCarType;contractedCarType~

```

```

NEW x:Integer;
  ALL of INSERT INTO projectedRentalPeriod[RentalCase]
    SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    INSERT INTO ctcNrOfDays[CompTariffedCharge]*
    SELECTFROM 'b'[CompTariffedCharge]*'a'[RentalCase]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType~
    (MAINTAINING -(contractedCarType;contractedCarType~ /\ proj
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
    THEN INSERT INTO contractedCarType[RentalCase]
    SELECTFROM 'a'[RentalCase]*'b'[CarType]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    PICK a,b FROM contractedCarType~;'a'[RentalCase]
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
    THEN INSERT INTO rentalTariff
    SELECTFROM 'a'[CarType]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    PICK a,b FROM rentalTariff
    THEN INSERT INTO ctcDailyAmount
    SELECTFROM 'b'[CompTariffedCharge]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType;
    NEW x:Amount;
    ALL of INSERT INTO rentalTariff
    SELECTFROM 'a'[CarType]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    INSERT INTO ctcDailyAmount
    SELECTFROM 'b'[CompTariffedCharge]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType;
    (MAINTAINING -(contractedCarType;contractedCarType~
    (MAINTAINING -(contractedCarType;contractedCarType~
    NEW x:CarType;
    ALL of INSERT INTO contractedCarType[RentalCase*CarType]
    SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

    (TO MAINTAIN -(contractedCarType;contractedCarType;
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN INSERT INTO rentalTariff
    SELECTFROM 'a'[CarType]

```

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        (TO MAINTAIN -(contract
PICK a,b FROM rentalTariffPer
THEN INSERT INTO ctcDailyAmou
        SELECTFROM 'b'[CompTari

        (TO MAINTAIN -(contract
(MAINTAINING -(contractedCarType;con
NEW x:Amount;
        ALL of INSERT INTO rentalTariffPer
        SELECTFROM 'x'[CarType]*'a

        (TO MAINTAIN -(contractedC
INSERT INTO ctcDailyAmount[
        SELECTFROM 'b'[CompTariffe

        (TO MAINTAIN -(contractedC
        (MAINTAINING -(contractedCarType;c
        (MAINTAINING -(contractedCarType;con
        (MAINTAINING -(contractedCarType;contracted
        (MAINTAINING -(contractedCarType;contractedCarType~
        (MAINTAINING -(contractedCarType;contractedCarType~ /\ proj
        (MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRe
PICK a,b FROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount;ren
THEN BLOCK
        (CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger proje
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;p
INSERT INTO projectedBasicCharge[RentalCase*Amount]
        SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa

(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
INSERT INTO Isn{detyp=Amount}
        SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ cont

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
INSERT INTO Isn{detyp=CarType}
        SELECTFROM ((contractedCarType \/ Delta)~;contractedCarType /\ -I[CarType])\

(TO MAINTAIN -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI c
INSERT INTO Isn{detyp=RentalCase}
        SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{detyp=CarType}
        SELECTFROM (Delta~;Delta /\ I[CarType]) - I[CarType]

(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]

```

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(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr
(MAINAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projecte
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI contracte

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<-----End Derivation --

```

ON DELETE Delta FROM contractedCarType[RentalCase*CarType] EXECUTE -- (ECA ru
ALL of DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM -((contractedCarType /\ -Delta);carType~) /\ rcAssignedCar

(TO MAINTAIN -rcAssignedCar \/ contractedCarType;carType~ FROM Rented ca
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM ((-contractedCarType /\ rcAssignedCar;carType) \/ (Del

(TO MAINTAIN -(rcAssignedCar;carType) \/ contractedCarType FROM R
DELETE FROM carType[Car*CarType]
    SELECTFROM rcAssignedCar~;((-contractedCarType /\ rcAssignedCar;c

(TO MAINTAIN -(rcAssignedCar;carType) \/ contractedCarType FROM R
(MAINAINING -(rcAssignedCar;carType) \/ contractedCarType FROM Rented ca
ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ

```

```

(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ (contractedC

      (TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;proje

      (TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ (contractedC

      (TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;proje

      (TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ (contractedCa

      (TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
      (MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPer
(MAINAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;pro

```

----- Derivation ----->

```

ALL of DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -((contractedCarType /\ -Delta);carType~) /\ rcAssignedCar

      (TO MAINTAIN -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car typ
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM ((-contractedCarType /\ rcAssignedCar;carType) \/ (Delta /\

      (TO MAINTAIN -(rcAssignedCar;carType) \/ contractedCarType FROM Rented
DELETE FROM carType[Car*CarType]
      SELECTFROM rcAssignedCar~;((-contractedCarType /\ rcAssignedCar;carTyp

      (TO MAINTAIN -(rcAssignedCar;carType) \/ contractedCarType FROM Rented
(MAINAINING -(rcAssignedCar;carType) \/ contractedCarType FROM Rented car typ
ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\ -Del

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]

```

```

SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\ -Delta)

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ -Delta)
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\ -Delta)

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ -Delta)
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\ -Delta)

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ -Delta)
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\ -Delta)

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ -Delta)
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType~ /\ -Delta)

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ -Delta)
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ (contractedCarType~ /\ -Delta)

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod)
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRentalPeriod)

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod)
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ (contractedCarType~ /\ -Delta)

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod)
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRentalPeriod)

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod)
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ (contractedCarType~ /\ -Delta)

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;p
(MAINTAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projecte

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<-----End Derivation --


```

ON INSERT Delta IN contractedPickupBranch[RentalCase*Branch] EXECUTE    -- (ECA
ALL of INSERT INTO Isn{dety=Branch}
    SELECTFROM ((contractedPickupBranch \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer]
    (TO MAINTAIN  -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer]
    (TO MAINTAIN  -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer]
    (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
    (TO MAINTAIN  -(contractedPickupBranch~;contractedPickupBranch) \/ I[Branch]
INSERT INTO rcMaxRentalDuration[RentalCase*Integer]
    SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxRentalDuration)
    (TO MAINTAIN  -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDuration)
INSERT INTO Isn{dety=Integer}
    SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDuration)
    (TO MAINTAIN  -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDuration)
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]
        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ carAvailableAt[Car*Branch])
    PICK a,b FROM carAvailableAt;((contractedPickupBranch \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer]
    THEN INSERT INTO carType[Car*CarType]
        SELECTFROM 'a'[Car]*'b'[CarType]
        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ carType[Car*CarType])
    (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised)
NEW x:Car;
    ALL of INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'x'[Car]*((contractedCarType~;(I[RentalCase] /\ carAvailableAt[Car*Branch])
        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ carAvailableAt[Car*Branch])
    INSERT INTO carType[Car*CarType]
        SELECTFROM 'x'[Car]*((contractedPickupBranch \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer]
        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ carType[Car*CarType])
        (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised)
        (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised)
        (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised)
        (MAINTAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
        (MAINTAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
        (MAINTAINING  -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDuration)
        (MAINTAINING  -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDuration)
        (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
        (MAINTAINING  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
        (MAINTAINING  -(contractedPickupBranch~;contractedPickupBranch) \/ I[Branch] FROM

```

----- Derivation ----->

```

ALL of INSERT INTO Isn{dety=Branch}
    SELECTFROM ((contractedPickupBranch /\ Delta)~;rcUserRequestedQ;'Yes'[YesNoAn

    (TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
    (TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
    (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'
    (TO MAINTAIN -(contractedPickupBranch~;contractedPickupBranch) /\ I[Branch] F
    INSERT INTO rcMaxRentalDuration[RentalCase*Integer]
    SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxRental

    (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) /\ rcMaxRen
    INSERT INTO Isn{dety=Integer}
    SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDur

    (TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
    INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch /\ D
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ r
    PICK a,b FROM carAvailableAt;((contractedPickupBranch /\ Delta)~
    THEN INSERT INTO carType[Car*CarType]
        SELECTFROM 'a'[Car]*'b'[CarType]

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ r
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
    NEW x:Car;
    ALL of INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'x'[Car]*((contractedCarType~;(I[RentalCase] /\ ren

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rent
    INSERT INTO carType[Car*CarType]
        SELECTFROM 'x'[Car]*((contractedPickupBranch /\ Delta)~;(I[Re

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rent
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBee
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
    (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
    (MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) /\ rcMaxRentalDurat
    (MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) /\ rcMaxRentalDurat
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr
    (MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques

```

(MAINTAINING -(contractedPickupBranch~;contractedPickupBranch) /\ I[Branch] FROM UNI

<-----End Derivation --

```

ON DELETE Delta FROM contractedPickupBranch[RentalCase*Branch] EXECUTE    -- (EC
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickup
    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickup
    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedPickupBranch /\ -Delta);(contractedPickup
    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickup
    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickup
    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((contractedPickupBranch /\ -Delta);(contractedPickup
    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF DELETE FROM Isn{dety=RentalCase}
    SELECTFROM ((-contractedPickupBranch /\ (I[RentalCase] /\ rcBranch
    (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAn
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM ((-contractedPickupBranch /\ (I[RentalCase] /\ rcBranch
    (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAn
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM sessionNewBranchRC~;'_SESSION'[SESSION];sessionBranch;
    (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAn
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM '_SESSION'[SESSION];sessionBranch;((-contractedPickupB
    (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAn
DELETE FROM sessionBranch[SESSION*Branch]

```

```

SELECTFROM '_SESSION' [SESSION];sessionNewBranchRC;(I[RentalCase]
      (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAns
(MAINAINING  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rc
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickupBranch

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickupBranch

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedPickupBranch /\ -Delta);(contractedPickupBranch

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickupBranch

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedPickupBranch /\ -Delta);(contractedPickupBranch

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedPickupBranch /\ -Delta);(contractedPickupBranch

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF DELETE FROM Isn{dety=RentalCase}
      SELECTFROM ((-contractedPickupBranch /\ (I[RentalCase] /\ rcBranchRequ

      (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-contractedPickupBranch /\ (I[RentalCase] /\ rcBranchRequ

      (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM sessionNewBranchRC~;'_SESSION' [SESSION];sessionBranch;((-co

      (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]

```

```

DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM '_SESSION'[SESSION];sessionBranch;((-contractedPickupBranch

(TO MAINTAIN -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
DELETE FROM sessionBranch[SESSION*Branch]
SELECTFROM '_SESSION'[SESSION];sessionNewBranchRC;(I[RentalCase] /\ rc

(TO MAINTAIN -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
(MAINTAINING -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques

```

<-----End Derivation --

```

ON INSERT Delta IN contractedDropoffBranch[RentalCase*Branch] EXECUTE -- (ECA
ALL of INSERT INTO Isn{dety=Branch}
SELECTFROM ((contractedDropoffBranch /\ Delta)~;rcUserRequestedQ;'Yes'[Y

(TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnsw
(TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNoAn
(TO MAINTAIN -(contractedDropoffBranch~;contractedDropoffBranch) /\ I[Br
INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;d

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffBranch;dis
THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amo
SELECTFROM 'a'[RentalCase]*'b'[Amount]

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ cont
PICK a,b FROM rentalLocationPenaltyCharge~;((rcDroppedOffBr
THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetw
SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ cont
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
NEW x:Amount;
ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount
SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contracte

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      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contract
INSERT INTO computedLocationPenaltyCharge[DistanceBetween
      SELECTFROM ((distbranch;rcDroppedOffBranch~ /\ distbranch

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contract
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropo
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -(contractedDropoffBranch~;contractedDropoffBranch) \/ I[Branch] FR

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----- Derivation ----->

```

ALL of INSERT INTO Isn{detyp=Branch}
      SELECTFROM ((contractedDropoffBranch \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoA

      (TO MAINTAIN  -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];r
      (TO MAINTAIN  -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer]
      (TO MAINTAIN  -(contractedDropoffBranch~;contractedDropoffBranch) \/ I[Branch]
INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dis
INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ c

      (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /
INSERT INTO Isn{detyp=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffBranch;distbran
      THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM 'a'[RentalCase]*'b'[Amount]

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contracte
      PICK a,b FROM rentalLocationPenaltyCharge~;((rcDroppedOffBranch;
      THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLo
      SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contracte
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
      NEW x:Amount;
      ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDrop

```

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        (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDr
INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocat
        SELECTFROM ((distbranch;rcDroppedOffBranch~ /\ distbranch;con

        (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDr
        (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
        (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
        (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -(contractedDropoffBranch~;contractedDropoffBranch) \/ I[Branch] FROM UN

```

<-----End Derivation --

```

ON DELETE Delta FROM contractedDropoffBranch[RentalCase*Branch] EXECUTE  -- (E
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropo

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropo

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
DELETE FROM Isn{dety=RentalCase}
        SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropo

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropo

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropo

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
DELETE FROM Isn{dety=RentalCase}
        SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropo

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBra

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBra

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC

```

<-----End Derivation --

```

ON INSERT Delta IN rcRenter[RentalCase*Person] EXECUTE    -- (ECA rule 31)
ONE OF INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter /\ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcU

      (TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter /\ Delta)~;rcBranchRequestedQ;'Yes'[YesNoAnswer];r

      (TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter /\ Delta)~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rc

      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHand
INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter /\ Delta)~;rcDriver;rcDriver~;rcRenter /\ (rcRente

```



```

      (TO MAINTAIN  -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchRequestedQ;rcBranchRequestedQ~ /\ I[Person])
      INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \/ Delta)~;rcRenter /\ -I[Person]) \/ ((rcRenter \/ Delta)~;rcRenter /\ I[Person])

      (TO MAINTAIN  -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase
      INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

      INSERT INTO Isn{dety=Person}
      SELECTFROM (Delta~;Delta /\ I[Person]) - I[Person]

      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase])
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Person])
      (MAINTAINING -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase*Person)

```

----- Derivation ----->

```

ONE OF INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \/ Delta)~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Person])

      (TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Person])
      INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \/ Delta)~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Person])

      (TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Person])
      INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \/ Delta)~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Person])

      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Person])
      INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \/ Delta)~;rcDriver;rcDriver~;rcRenter /\ (rcRenter \/ Delta)~;rcRenter /\ I[Person])

      (TO MAINTAIN  -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchRequestedQ;rcBranchRequestedQ~ /\ I[Person])
      INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \/ Delta)~;rcRenter /\ -I[Person]) \/ ((rcRenter \/ Delta)~;rcRenter /\ I[Person])

      (TO MAINTAIN  -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase
      INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

      INSERT INTO Isn{dety=Person}
      SELECTFROM (Delta~;Delta /\ I[Person]) - I[Person]

      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase])

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(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase]
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINAINING -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase*Person)

```

<-----End Derivation --

```

ON DELETE Delta FROM rcRenter[RentalCase*Person] EXECUTE      -- (ECA rule 32)
ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUserReque

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ 
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcUserRequ

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ 
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUserReques

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ 
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchReq

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ 
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcBranchRe

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ 
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchRequ

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ 
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHande

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ 
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcKeysHand

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ 
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHanded

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ 
DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcDriver;rc

      (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]

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```

DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcDriver;r

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcDriver;rcD

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcDriver;r

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcDriver;rcD

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra

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----- Derivation ----->

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ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUserRequestedQ

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Ren
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcUserRequested

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Ren
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUserRequestedQ;

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Ren
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchRequeste

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcBranchRequest

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchRequested

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I

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DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHandedOverQ

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[R
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta)) /\ rcKeysHandedOverQ

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[R
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHandedOverQ

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[R
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcDriver;rcDrive

(TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta)) /\ rcDriver;rcDrive

(TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcDriver;rcDrive

(TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter~ /\ -Delta)) /\ rcDriver;rcDrive

(TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM (-(rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcDriver;rcDriver

(TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rc
(MAINTAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINTAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe

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<-----End Derivation --

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ON INSERT Delta IN rcDriver[RentalCase*Person] EXECUTE    -- (ECA rule 33)
ALL of INSERT INTO Isn{detyp=Person}
SELECTFROM ((rcDriver \/ Delta)~;rcDriver /\ -I[Person]) \/ ((rcDriver /\

(TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;
(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHand

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(TO MAINTAIN  -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRenter
(TO MAINTAIN  -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase
INSERT INTO Isn{detyp=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver /\ -(rcDriver
  THEN INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
PICK a,b FROM rcDriver~;((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense
THEN ALL of INSERT INTO Isn{detyp=Person}
  SELECTFROM 'a'[Person]*'b'[Person]

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcDriver~;((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense
  THEN INSERT INTO validDrivingLicense
    SELECTFROM 'a'[Person]*'b'[Person]

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
PICK a,b FROM validDrivingLicense
THEN INSERT INTO validDrivingLicense
  SELECTFROM 'b'[Person]*'a'[Person]

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
NEW x:DrivingLicense;
  ALL of INSERT INTO validDrivingLicense
    SELECTFROM 'a'[Person]*'b'[Person]

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
INSERT INTO validDrivingLicense
  SELECTFROM 'b'[Person]*'a'[Person]

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
NEW x:Person;
  ALL of INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM ((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
INSERT INTO Isn{detyp=Person}
  SELECTFROM 'x'[Person]*((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense

    (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Person] /\ validDrivingLicense

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```

THEN INSERT INTO validDrivingLicense[Person]
SELECTFROM 'a'[Person]*'b'[DrivingLic

        (TO MAINTAIN -rcDriver \/ rcDriver;(I
PICK a,b FROM validDrivingLicense~;'x'[Per
THEN INSERT INTO validDrivingLicense[Person]
SELECTFROM 'b'[Person]*'a'[DrivingLic

        (TO MAINTAIN -rcDriver \/ rcDriver;(I
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ v
NEW x:DrivingLicense;
INSERT INTO validDrivingLicense[Person*DrivingLic
SELECTFROM 'x'[Person]*'x'[DrivingLicense] \/ (

        (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ v
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDri
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLic
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicen
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;valid
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver \/ Delta)~;r
        THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'a'[Person]*'b'[DrivingLicense]

        (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ v
PICK a,b FROM validDrivingLicense~;(((rcDriver \/ Delta)~;r
        THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'b'[Person]*'a'[DrivingLicense]

        (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ v
(MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLic
NEW x:DrivingLicense;
INSERT INTO validDrivingLicense[Person*DrivingLicense]
SELECTFROM (((rcDriver \/ Delta)~;rcDriver /\ -I[Person])) \/ ((

        (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDriving
        (MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLi
        (MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;v
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver;rcDriver \/
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequeste
PICK a,b FROM rcRenter~;((rcDriver;rcDriver \/ Delta)~ /\
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequeste
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesN
NEW x:Person;

```

```

INSERT INTO rcRenter[RentalCase*Person]
  SELECTFROM ((rcDriver;(rcDriver \/ Delta)~ /\ rcBranchRequestedQ;'Yes' [YesNoAnswer]
    (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes' [YesNoAnswer]
      (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes' [YesNoAnswer]
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
        (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
        (MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
        (MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase]
        (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
        (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
        (MAINTAINING -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person)

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----- Derivation ----->

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ALL of INSERT INTO Isn{detyp=Person}
  SELECTFROM ((rcDriver \/ Delta)~;rcDriver /\ -I[Person]) \/ ((rcDriver \/ Delta)~;rcDriver /\ -I[Person])

(TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase]
(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(TO MAINTAIN -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person)
INSERT INTO Isn{detyp=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
  THEN INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM 'a' [RentalCase]*'b' [Person]

    (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
    PICK a,b FROM rcDriver~;((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
    THEN ALL of INSERT INTO Isn{detyp=Person}
      SELECTFROM 'a' [Person]*'b' [Person]

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Person]*'b' [Person]
      THEN INSERT INTO validDrivingLicense[Person]
        SELECTFROM 'a' [Person]*'b' [Person]

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;validDrivingLicense)
      PICK a,b FROM validDrivingLicense~;('a' [Person]*'b' [Person]
      THEN INSERT INTO validDrivingLicense[Person]
        SELECTFROM 'b' [Person]*'a' [Person]

```

```

        (TO MAINTAIN -rcDriver \/ rcDriver
(MAINAINING -rcDriver \/ rcDriver;(I[Person]
NEW x:DrivingLicense;
        ALL of INSERT INTO validDrivingLicense[Person]
        SELECTFROM 'a' [Person]*'b' [Person]*

        (TO MAINTAIN -rcDriver \/ rcDriver;
INSERT INTO validDrivingLicense[Person]
        SELECTFROM 'b' [Person]*'a' [Person]*

        (TO MAINTAIN -rcDriver \/ rcDriver;
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person]
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person]
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;va
NEW x:Person;
        ALL of INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM ((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense;
        (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
INSERT INTO Isn{detyp=Person}
        SELECTFROM 'x' [Person]*((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivingLicense;
        (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Person]*
        THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'a' [Person]*'b' [DrivingLicense]

        (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person]
        PICK a,b FROM validDrivingLicense~;'x' [Person]*
        THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'b' [Person]*'a' [DrivingLicense]

        (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person]
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
NEW x:DrivingLicense;
        INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'x' [Person]*'x' [DrivingLicense] \/ ((rcDriver /\ validDrivingLicense;
        (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;va
        (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((rcDriver \/ Delta)~;rcDriver /\ validDrivingLicense;
        THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'a' [Person]*'b' [DrivingLicense]

```



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        (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validD
PICK a,b FROM validDrivingLicense~;(((rcDriver \/ Delta)~;rcDriv
THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'b'[Person]*'a'[DrivingLicense]

        (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validD
(MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense
NEW x:DrivingLicense;
        INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM (((rcDriver \/ Delta)~;rcDriver /\ -I[Person]) \/ ((rcDri

        (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLice
        (MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense
(MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;validD
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver;(rcDriver \/ Delta
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Y
PICK a,b FROM rcRenter~;((rcDriver;(rcDriver \/ Delta)~ /\ rcBra
THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Y
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnsw
NEW x:Person;
        INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM ((rcDriver;(rcDriver \/ Delta)~ /\ rcBranchRequestedQ;'Ye

        (TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoA
        (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnsw
        (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINTAINING -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person)

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<-----End Derivation --

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ON DELETE Delta FROM rcDriver[RentalCase*Person] EXECUTE      -- (ECA rule 34)
ALL of DELETE FROM rcDriver[RentalCase*Person]
        SELECTFROM -((rcDriver /\ -Delta);(I[Person] /\ validDrivingLicense;vali

        (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;val

```

```

ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUser

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*YesNoAnswer])
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcUser

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*YesNoAnswer])
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUser

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*YesNoAnswer])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*YesNoAnswer])
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBranch

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*YesNoAnswer])
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcBranch

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*YesNoAnswer])
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBranch

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*YesNoAnswer])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*YesNoAnswer])
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKeys

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*YesNoAnswer])
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM (-(rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcKeys

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*YesNoAnswer])
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKeys

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*YesNoAnswer])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*YesNoAnswer])
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*YesNoAnswer])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*YesNoAnswer])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*YesNoAnswer])

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----- Derivation ----->

```

ALL of DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM -(rcDriver /\ -Delta);(I[Person] /\ validDrivingLicense;validDrivingLicense)

```

```

(TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDri
ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUserReq

(TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcUserRe

(TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
DELETE FROM Isn{dety=RentCase}
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUserRequ

(TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBranchR

(TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcBranch

(TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
DELETE FROM Isn{dety=RentCase}
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBranchRe

(TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequested
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKeysHan

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM (-((rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcKeysHa

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM Isn{dety=RentCase}
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKeysHand

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas

```

<-----End Derivation --

```

ON INSERT Delta IN validDrivingLicense[Person*DrivingLicense] EXECUTE    -- (ECA
ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM (Delta;Delta~ /\ I[Person]) - I[Person]

      INSERT INTO Isn{dety=DrivingLicense}
      SELECTFROM (Delta~;Delta /\ I[DrivingLicense]) - I[DrivingLicense]

```

----- Derivation ----->

```

ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM (Delta;Delta~ /\ I[Person]) - I[Person]

      INSERT INTO Isn{dety=DrivingLicense}
      SELECTFROM (Delta~;Delta /\ I[DrivingLicense]) - I[DrivingLicense]

```

<-----End Derivation --

```

ON DELETE Delta FROM validDrivingLicense[Person*DrivingLicense] EXECUTE    -- (E
ALL of DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM -(rcDriver;(I[Person] /\ (validDrivingLicense /\ -Delta));(val

      (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;val
ONE OF DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-((va

      (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingL
DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-((va

      (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingL
      (MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;v
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDriv
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDriv

```

----- Derivation ----->

```

ALL of DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM -(rcDriver;(I[Person] /\ (validDrivingLicense /\ -Delta));(validDri

      (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDri
ONE OF DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-((validDr

```

```

      (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense)
      DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-(validDrivingLicense)))

      (TO MAINTAIN  -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense)
      (MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;validDrivingLicense)
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)

```

<-----End Derivation --

```

ON INSERT Delta IN rcAssignedCar[RentalCase*Car] EXECUTE      -- (ECA rule 37)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcAssignedCar /\ -(contractedCarType))
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      PICK a,b FROM contractedCarType~;((rcAssignedCar /\ -(contractedCarType))
      THEN INSERT INTO carType[Car*CarType]
      SELECTFROM 'b'[Car]*'a'[CarType]

      (TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      (MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      NEW x:CarType;
      ALL of INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM ((rcAssignedCar /\ -(contractedCarType;carType~)) \/

      (TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      INSERT INTO carType[Car*CarType]
      SELECTFROM ((rcAssignedCar~ /\ -(carType;contractedCarType~)) /\

      (TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      (MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      (MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car
      INSERT INTO carType[Car*CarType]
      SELECTFROM (rcAssignedCar~;contractedCarType /\ -carType) \/ (Delta~;contractedCarType)

      (TO MAINTAIN  -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented car
      INSERT INTO Isn{dety=CarType}
      SELECTFROM (contractedCarType~;rcAssignedCar;carType /\ -I[CarType]) \/

      (TO MAINTAIN  -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM Rented car
      INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM (rcAssignedCar;carType /\ -contractedCarType) \/ (Delta;carType)

      (TO MAINTAIN  -(rcAssignedCar;carType) \/ contractedCarType FROM Rented car
      INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ r

```

```

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
INSERT INTO Isn{dety=Car}
SELECTFROM (rcAssignedCar \ / Delta)~;rcDroppedOffCar /\ -I[Car]

(TO MAINTAIN  -(rcAssignedCar~;rcDroppedOffCar) \ / I[Car] FROM Dropped-of:
INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTar

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTar
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar

(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ex

(TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcAssignedCar;(rcAssignedCar
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO rentalPeriod[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        PICK a,b FROM rentalPeriod~;('a'[RentalCase]
        THEN INSERT INTO ctcNrOfDays[CompTariffedCharge]
            SELECTFROM 'b'[CompTariffedCharge]

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        NEW x:Integer;
        ALL of INSERT INTO rentalPeriod[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        INSERT INTO ctcNrOfDays[CompTariffedCharge]
            SELECTFROM 'b'[CompTariffedCharge]*'a'[RentalCase]

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rcAssignedCar
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO rcAssignedCar[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

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      (TO MAINTAIN  -(rcAssignedCar;rcAss
PICK a,b FROM rcAssignedCar~;('a'[Rental
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
      THEN INSERT INTO carT
      SELECTFROM 'a'[

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      (TO MAINTAIN  -(
PICK a,b FROM carType
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(MAINTAINING -(rcAssignedCar
NEW x:CarType;
ALL of INSERT INTO carType
SELECTFROM 'a'[Car

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ONE OF ONE NONEMPTY
THEN

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THEN

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NEW x:Amount
ALL of INS

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(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\
NEW x:Car;
ALL of INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'a'[RentalCase]*'b'[CompTa
(TO MAINTAIN -(rcAssignedCar;rcAssign
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO carType
SELECTFROM 'a'[Car
(TO MAINTAIN -(rcA
PICK a,b FROM carType~;(
THEN ONE OF ONE NONEMPTY
THEN
PICK
THEN
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NEW x:Amount
ALL of INS.
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(MAINAINING -(rcAssignedCar;rc
NEW x:CarType;

```



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ALL of INSERT INTO carType[Car]
SELECTFROM 'x'[Car]*'

(TO MAINTAIN -(rcAssi
ONE OF ONE NONEMPTY AL
THEN INS
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PICK a,b
THEN INS
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NEW x:Amount;
ALL of INSERT
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(MAINTAINING -(rcAssignedCar;rcAssignedCar;rc
(MAINTAINING -(rcAssignedCar;rcAssignedCar;rcAssigned
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalP
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;r
PICK a,b FROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalT
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger :
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{dety=Branch}
SELECTFROM (rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));

(TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO rcDroppedOffDate[RentalCase*Date]
SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~

```

```

INSERT INTO Isn{dety=Date}
  SELECTFROM (rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
INSERT INTO Isn{dety=Car}
  SELECTFROM ((rcAssignedCar \/ Delta)~;rcAssignedCar /\ -I[Car]) \/ ((rcA

(TO MAINTAIN -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssign
INSERT INTO Isn{dety=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=Car}
  SELECTFROM (Delta~;Delta /\ I[Car]) - I[Car]

(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi
(MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integri
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[R
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssignedCar::R

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcAssignedCar /\ -(contractedCarTy
  THEN INSERT INTO contractedCarType[RentalCase*CarType]
    SELECTFROM 'a'[RentalCase]*'b'[CarType]

    (TO MAINTAIN -rcAssignedCar \/ contractedCarType;carType~ FROM Re
  PICK a,b FROM contractedCarType~;((rcAssignedCar /\ -(contractedCarType
  THEN INSERT INTO carType[Car*CarType]
    SELECTFROM 'b'[Car]*'a'[CarType]

    (TO MAINTAIN -rcAssignedCar \/ contractedCarType;carType~ FROM Re
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type
NEW x:CarType;
  ALL of INSERT INTO contractedCarType[RentalCase*CarType]
    SELECTFROM ((rcAssignedCar /\ -(contractedCarType;carType~)) \/ (Del

```

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        (TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rente
INSERT INTO carType[Car*CarType]
        SELECTFROM ((rcAssignedCar~ /\ -(carType;contractedCarType~)) \/ (De

        (TO MAINTAIN  -rcAssignedCar \/ contractedCarType;carType~ FROM Rente
        (MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car ty
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type
INSERT INTO carType[Car*CarType]
        SELECTFROM (rcAssignedCar~;contractedCarType /\ -carType) \/ (Delta~;contract

(TO MAINTAIN  -(contractedCarType~;rcAssignedCar) \/ carType~ FROM Rented car
INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType~;rcAssignedCar;carType /\ -I[CarType]) \/ (cont

(TO MAINTAIN  -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM R
INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM (rcAssignedCar;carType /\ -contractedCarType) \/ (Delta;carType /\

(TO MAINTAIN  -(rcAssignedCar;carType) \/ contractedCarType FROM Rented car ty
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
        SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcA
INSERT INTO Isn{dety=Car}
        SELECTFROM (rcAssignedCar \/ Delta)~;rcDroppedOffCar /\ -I[Car]

(TO MAINTAIN  -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off car
INSERT INTO rentalBasicCharge[RentalCase*Amount]
        SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTari
INSERT INTO Isn{dety=Amount}
        SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;ca

(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
        SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT

(TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exce
INSERT INTO Isn{dety=Amount}
        SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssign

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcAssignedCar;(rcAssignedCar \/ De
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
                THEN INSERT INTO rentalPeriod[RentalCase*Inte
                        SELECTFROM 'a'[RentalCase]*'b'[Integer]

        (TO MAINTAIN  -(rcAssignedCar;rcAssigned

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```

PICK a,b FROM rentalPeriod~;('a'[RentalCase]*
THEN INSERT INTO ctcNrOfDays[CompTariffedChar
SELECTFROM 'b'[CompTariffedCharge]*'a'[

(TO MAINTAIN -(rcAssignedCar;rcAssigned
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
NEW x:Integer;
ALL of INSERT INTO rentalPeriod[RentalCase*Integer
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar
INSERT INTO ctcNrOfDays[CompTariffedCharge*
SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ ren
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO rcAssignedCar[RentalCase*Car
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -(rcAssignedCar;rcAssigned
PICK a,b FROM rcAssignedCar~;('a'[RentalCase]
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO carType[C
SELECTFROM 'a'[Car]*

(TO MAINTAIN -(rcAss
PICK a,b FROM carType~;('a
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(MAINAINING -(rcAssignedCar;rcAs
NEW x:CarType;
ALL of INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

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(MAINAINING -(rcAssignedCar;rcAs
(MAINAINING -(rcAssignedCar;rcAssignedC
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
NEW x:Car;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rcAssign
PICK a,b FROM carType~;'x'[C
THEN ONE OF ONE NONEMPTY ALTE
THEN INSE
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                                PICK a,b F
                                THEN INSE
                                SELE

                                (TO M
                                (MAINTAINING -(rc
                                NEW x:Amount;
                                ALL of INSERT I
                                SELECTF

                                (TO MAIN
                                INSERT I
                                SELECTF

                                (TO MAIN
                                (MAINTAINING -(
                                (MAINTAINING -(rc
                                (MAINTAINING -(rcAssigne
                                (MAINTAINING -(rcAssignedCar;rcAssig
                                NEW x:CarType;
                                ALL of INSERT INTO carType[Car*Car
                                SELECTFROM 'x'[Car]*'a'[Re

                                (TO MAINTAIN -(rcAssignedC
                                ONE OF ONE NONEMPTY ALTERNA
                                THEN INSERT I
                                SELECTF

                                (TO MAIN
                                PICK a,b FROM
                                THEN INSERT I
                                SELECTF

                                (TO MAIN
                                (MAINTAINING -(rcAss
                                NEW x:Amount;
                                ALL of INSERT INTO
                                SELECTFROM

                                (TO MAINTAI
                                INSERT INTO
                                SELECTFROM

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                                (MAINTAINING -(rcA
                                (MAINTAINING -(rcAss
                                (MAINTAINING -(rcAssignedCa
                                (MAINTAINING -(rcAssignedCar;rcAss

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(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Car])
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Car])
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Car])
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Car])
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Car])
PICK a,b FROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPerDay)
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger regular)
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Car])
INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
INSERT INTO Isn{detyp=Branch}
SELECTFROM (rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
INSERT INTO rcDroppedOffDate[RentalCase*Date]
SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
INSERT INTO Isn{detyp=Date}
SELECTFROM (rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
INSERT INTO Isn{detyp=Car}
SELECTFROM ((rcAssignedCar /\ Delta)~;rcAssignedCar /\ -I[Car]) /\ ((rcAssignedCar /\ Delta)~;rcAssignedCar /\ -I[Car])
(TO MAINTAIN -(rcAssignedCar~;rcAssignedCar) /\ I[Car] FROM UNI rcAssignedCar
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{detyp=Car}
SELECTFROM (Delta~;Delta /\ I[Car]) - I[Car]

(MAINAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integrity)
(MAINAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integrity)
(MAINAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integrity)
(MAINAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integrity)
(MAINAINING -rcAssignedCar /\ contractedCarType;carType~ FROM Rented car type integrity)
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssignedCar)
(MAINAINING -rcDroppedOffCar /\ rcAssignedCar FROM Dropped-off car type integrity)
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff)
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff)
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
(MAINAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet

```

```

(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssignedCar::Rental

```

<-----End Derivation --

```

ON DELETE Delta FROM rcAssignedCar[RentalCase*Car] EXECUTE      -- (ECA rule 38)
ALL of DELETE FROM Isn{dety=Car}
    SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -((rcAssignedCar /\ -Del

(TO MAINTAIN  -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
DELETE FROM rcDroppedOffCar[RentalCase*Car]
    SELECTFROM (-rcAssignedCar /\ rcDroppedOffCar) \/ (Delta /\ rcDroppedOff

(TO MAINTAIN  -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -Del

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
DELETE FROM rentalPeriod[RentalCase*Integer]
    SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -Del

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
DELETE FROM rentalPeriod[RentalCase*Integer]
    SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -Del

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
(MAINTEINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
    SELECTFROM (-((rentalExcessPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\

(TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase*Integer]
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
    SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcessPeriod~

(TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase*Integer]
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\

(TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase*Integer]

```



```

(MAINTEINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ (rcAssign

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturned
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ se

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ se

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
(MAINTEINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(rcAssignedC

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionRetu

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'a'[Car]*'b'[Branch]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'b'[Car]*'a'[Branch]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -
NEW x:Branch;
INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionR

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAva
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(ca

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedC

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned

```

```

      (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'a'[Car]*'b'[Branch]

      (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'[SESSION]
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'[SESSION]
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu

      (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'[SESSION];sessionR
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rental
(MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integri
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[R
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rent
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA

```

----- Derivation ----->

```

ALL of DELETE FROM Isn{dety=Car}
      SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -((rcAssignedCar /\ -Delta)~;

      (TO MAINTAIN  -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(ren
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM (-rcAssignedCar /\ rcDroppedOffCar) \/ (Delta /\ rcDroppedOffCar)

      (TO MAINTAIN  -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type inte
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -Delta);

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeri
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeri

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeri
DELETE FROM rentalPeriod[RentalCase*Integer]

```

```

SELECTFROM -(rentalPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -Delta);

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeri
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeri

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeri
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(rentalPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -Delta);c

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeri
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -(rentalExcessPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -D

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExce

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(rentalExcessPeriod;ctcNrOfDays~ /\ (rcAssignedCar /\ -De

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (re
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ (rcAssignedCa

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ session

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ session

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar) \/
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(rcAssignedCar /\

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturnedC

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'a'[Car]*'b'[Branch]

```

```

        (TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar;(I[C
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION' [SES
THEN INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM 'b' [Car]*'a' [Branch]

        (TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar;(I[C
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carA
NEW x:Branch;
        INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM (sessionReturnedCar~;'_SESSION' [SESSION];(-(sessionReturn

        (TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(c
        (MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carA
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
ONE OF DELETE FROM sessionReturnedCar [SESSION*Car]
        SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvai

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturned
DELETE FROM sessionReturnedCar [SESSION*Car]
        SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;(-(rcAssignedCar /\

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturned
DELETE FROM Isn{dety=Car}
        SELECTFROM sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar;

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturned
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION
        THEN INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM 'a' [Car]*'b' [Branch]

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION' [SESSION];ses
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION' [SES
THEN INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM 'b' [Car]*'a' [Branch]

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION' [SESSION];ses
(MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedC
NEW x:Branch;
        INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM (sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedC

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturn
        (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedC
(MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar;(I[C
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rentalHasBe
(MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase)) \/ (rentalExc
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[Car]
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[Car]

```

```

(MAINAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

```

<-----End Derivation --

```

ON INSERT Delta IN rentalHasBeenPromised[RentalCase*RentalCase] EXECUTE -- (E
ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ r

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\
    INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;De

    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch
        THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase]
        PICK a,b FROM carAvailableAt;((contractedPickupBranch~;(I[R
        THEN INSERT INTO carType[Car*CarType]
        SELECTFROM 'a'[Car]*'b'[CarType]

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase]
    (MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHas
    NEW x:Car;
    ALL of INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'x'[Car]*((contractedCarType~;(I[RentalCase]

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\
        INSERT INTO carType[Car*CarType]
        SELECTFROM 'x'[Car]*((contractedPickupBranch~;(I[RentalC

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\
        (MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalH
        (MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHas
        (MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
    (MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi
    (MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);

```

----- Derivation ----->

```

ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcA
    INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;Delta /

```

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch~;(I[
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ r
PICK a,b FROM carAvailableAt;((contractedPickupBranch~;(I[Rental
THEN INSERT INTO carType[Car*CarType]
    SELECTFROM 'a'[Car]*'b'[CarType]

    (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ r
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
NEW x:Car;
    ALL of INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'x'[Car]*((contractedCarType~;(I[RentalCase] /\ re

        (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rent
INSERT INTO carType[Car*CarType]
    SELECTFROM 'x'[Car]*((contractedPickupBranch~;(I[RentalCase]

    (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rent
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBee
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssignedC
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr

```

<-----End Derivation --

```

ON INSERT Delta IN rcUserRequestedQ[RentalCase*YesNoAnswer] EXECUTE -- (ECA r
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoA
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
PICK a,b FROM contractedPickupBranch~;((rcUserRequestedQ;'Yes'[Yes
THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Branch;
    INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM ((rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRequestedQ /\ I

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{detyp=Branch}

```

```

SELECTFROM (contractedPickupBranch~;rcUserRequestedQ;'Yes' [YesNoAnswer]);

(TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes' [YesNoAnswer]
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedDropoffBranch~;((rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Branch}
SELECTFROM (contractedDropoffBranch~;rcUserRequestedQ;'Yes' [YesNoAnswer]

(TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes' [YesNoAnswer]
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedStartDate~;((rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Date;
INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM ((rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ /\ I

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Date}
SELECTFROM (contractedStartDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];(rc

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedEndDate~;((rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I

```

```

INSERT INTO Isn{dety=Date}
  SELECTFROM (contractedEndDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ~;rcUserRequestedQ~ /\ I
  ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
    THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'a' [RentalCase]*'b' [CarType]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      PICK a,b FROM contractedCarType~;((rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b' [RentalCase]*'a' [CarType]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      NEW x:CarType;
      INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM ((rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ /\ I

      (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType~;rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ /\ I

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
        THEN INSERT INTO rcDriver[RentalCase*Person]
          SELECTFROM 'a' [RentalCase]*'b' [Person]

          (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
          PICK a,b FROM rcDriver~;((rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ~ /\ I
          THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b' [RentalCase]*'a' [Person]

            (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
            (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
            NEW x:Person;
            INSERT INTO rcDriver[RentalCase*Person]
              SELECTFROM ((rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ /\ I

            (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
            (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
            INSERT INTO Isn{dety=Person}
              SELECTFROM (rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];(rcUserRequestedQ /\ I

            (TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
            ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
              THEN INSERT INTO rcRenter[RentalCase*Person]
                SELECTFROM 'a' [RentalCase]*'b' [Person]

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[illegible]

----- Derivation ----->

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedPickupBranch~;((rcUserRequestedQ;'Yes'[YesNoAns
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Branch;

```

```

INSERT INTO contractedPickupBranch[RentalCase*Branch]
  SELECTFROM ((rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ \ / Delta

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{detyp=Branch}
  SELECTFROM (contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUs

(TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer]
  THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedDropoffBranch~;((rcUserRequestedQ;'Yes'[YesNoAn
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
  SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{detyp=Branch}
  SELECTFROM (contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcU

(TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];r
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer]
  THEN INSERT INTO contractedStartDate[RentalCase*Date]
    SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedStartDate~;((rcUserRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedStartDate[RentalCase*Date]
  SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Date;
  INSERT INTO contractedStartDate[RentalCase*Date]
    SELECTFROM ((rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ \ / Delta

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{detyp=Date}
  SELECTFROM (contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserR

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUse
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer]
  THEN INSERT INTO contractedEndDate[RentalCase*Date]
    SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste

```

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        PICK a,b FROM contractedEndDate~;((rcUserRequestedQ;'Yes'[YesNoAnswer];
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=Date}
        SELECTFROM (contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserReq

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer]
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
        PICK a,b FROM contractedCarType~;((rcUserRequestedQ;'Yes'[YesNoAnswer];
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM ((rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRequestedQ /\ Delta

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserReq

(TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer]
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
        PICK a,b FROM rcDriver~;((rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRe
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM ((rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRequestedQ /\ Delta

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=Person}
        SELECTFROM (rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRequestedQ \

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(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
      PICK a,b FROM rcRenter~;((rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRe
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=Person}
      SELECTFROM (rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];(rcUserRequestedQ \

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ
INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=YesNoAnswer}
      SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]

<-----End Derivation --

ON DELETE Delta FROM rcUserRequestedQ[RentalCase*YesNoAnswer] EXECUTE  -- (ECA
ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]
      SELECTFROM '_SESSION'[SESSION];(-(sessionNewUserRC;(rcUserRequestedQ /\

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionNewUserRC) \ / sessionNewUserRC
ONE OF DELETE FROM sessionNewUserRC[SESSION*RentalCase]

```

```

SELECTFROM '_SESSION' [SESSION];sessionNewUserRC;(-(V[RentalCase*Y
(TO MAINTAIN -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUs
DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM '_SESSION' [SESSION];sessionNewUserRC;(-(rcUserRequest
(TO MAINTAIN -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUs
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUserR
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUserR

```

----- Derivation ----->

```

ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM '_SESSION' [SESSION];(-(sessionNewUserRC;(rcUserRequestedQ /\ -Delt
(TO MAINTAIN -('_SESSION' [SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUs
ONE OF DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM '_SESSION' [SESSION];sessionNewUserRC;(-(V[RentalCase*YesNoA
(TO MAINTAIN -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC)
DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM '_SESSION' [SESSION];sessionNewUserRC;(-(rcUserRequestedQ /
(TO MAINTAIN -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC)
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC) \ rcUs
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUserReques
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUserReques

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<-----End Derivation --

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ON INSERT Delta IN rcBranchRequestedQ[RentalCase*YesNoAnswer] EXECUTE -- (ECA
ALL of INSERT INTO Isn{dety=Branch}
SELECTFROM (contractedPickupBranch~;rcBranchRequestedQ;'Yes' [YesNoAnswer]
(TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes' [YesNoAns
(TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes' [YesNoAn
(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequest
INSERT INTO Isn{dety=Date}
SELECTFROM (contractedStartDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];(
(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer]
(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];
INSERT INTO Isn{dety=CarType}
SELECTFROM (contractedCarType~;rcBranchRequestedQ;'Yes' [YesNoAnswer];(rc
(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes' [YesNoAnswer];

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INSERT INTO Isn{dety=Person}
  SELECTFROM (rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchReq

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranch
INSERT INTO contractedPickupBranch[RentalCase*Branch]
  SELECTFROM ((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcB

(TO MAINTAIN -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];r
INSERT INTO Isn{dety=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=YesNoAnswer}
  SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
  THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
  PICK a,b FROM contractedPickupBranch~;((rcBranchRequestedQ;
  THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReq
NEW x:Branch;
  INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchReq

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
  THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
  PICK a,b FROM contractedDropoffBranch~;((rcBranchRequestedQ;
  THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
NEW x:Branch;
  INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchReq

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe

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        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
        PICK a,b FROM contractedStartDate~;((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
NEW x:Date;
        INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchRequestedQ~
        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
        PICK a,b FROM contractedEndDate~;((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchRequestedQ~
        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
        PICK a,b FROM contractedCarType~;((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
NEW x:CarType;

```

```

INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchReq

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
    THEN INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
    PICK a,b FROM rcDriver~;((rcBranchRequestedQ;'Yes'[YesNoAns
    THEN INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM 'b'[RentalCase]*'a'[Person]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
NEW x:Person;
    INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchReq

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'
    THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
    PICK a,b FROM rcRenter~;((rcBranchRequestedQ;'Yes'[YesNoAns
    THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'b'[RentalCase]*'a'[Person]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
NEW x:Person;
    INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchReq

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReque
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver;rcDriver~ /\
    THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequeste
    PICK a,b FROM rcRenter~;((rcDriver;rcDriver~ /\ rcBranchReq
    THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'b'[RentalCase]*'a'[Person]

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```

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(TO MAINTAIN  -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq
INSERT INTO contractedPickupBranch[RentalCase*Branch]
  SELECTFROM ((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranch

(TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
INSERT INTO Isn{detyp=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{detyp=YesNoAnswer}
  SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[Ye
  THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
  PICK a,b FROM contractedPickupBranch~;((rcBranchRequestedQ;'Yes'
  THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
NEW x:Branch;
  INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchRequeste

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequest
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[Ye
  THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
  PICK a,b FROM contractedDropoffBranch~;((rcBranchRequestedQ;'Yes'
  THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
NEW x:Branch;
  INSERT INTO contractedDropoffBranch[RentalCase*Branch]
    SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchRequeste

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequest
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[

```



```

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequest
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[Ye
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
        PICK a,b FROM rcDriver~;((rcBranchRequestedQ;'Yes'[YesNoAnswer];
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchRequeste

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequest
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[Ye
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
        PICK a,b FROM rcRenter~;((rcBranchRequestedQ;'Yes'[YesNoAnswer];
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
NEW x:Person;
        INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNoAnswer];(rcBranchRequeste

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequest
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver;rcDriver~ /\ rcBra
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Y
        PICK a,b FROM rcRenter~;((rcDriver;rcDriver~ /\ rcBranchRequeste
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Y

```

```

(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM ((rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]

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<-----End Derivation --

```

ON DELETE Delta FROM rcBranchRequestedQ[RentalCase*YesNoAnswer] EXECUTE -- (E
ALL of DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM '_SESSION'[SESSION];(-(sessionNewBranchRC;(rcBranchRequestedQ

(TO MAINTAIN -('_SESSION'[SESSION];sessionNewBranchRC) \/ sessionNewBranchRC
ONE OF DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM '_SESSION'[SESSION];sessionNewBranchRC;(-(V[RentalCase]

(TO MAINTAIN -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM '_SESSION'[SESSION];sessionNewBranchRC;(-(rcBranchRequestedQ

(TO MAINTAIN -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC
(MAINAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC
(MAINAINING -('_SESSION'[SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranchRequestedQ~ /\ I[RentalCase]
(MAINAINING -('_SESSION'[SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranchRequestedQ~ /\ I[RentalCase]

```

----- Derivation ----->

```

ALL of DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
      SELECTFROM '_SESSION'[SESSION];(-(sessionNewBranchRC;(rcBranchRequestedQ /\ -

      (TO MAINTAIN -('_SESSION'[SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;
ONE OF DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
      SELECTFROM '_SESSION'[SESSION];sessionNewBranchRC;(-(V[RentalCase*YesM

      (TO MAINTAIN -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
      SELECTFROM '_SESSION'[SESSION];sessionNewBranchRC;(-(rcBranchRequeste

      (TO MAINTAIN -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC
      (MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC) \/
(MAINTAINING -('_SESSION'[SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranch
(MAINTAINING -('_SESSION'[SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranch

```

<-----End Derivation --

```

ON INSERT Delta IN rentalHasBeenStarted[RentalCase*RentalCase] EXECUTE -- (EC
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDropped

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDrop
INSERT INTO Isn{detyP=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;De

      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr

```

----- Derivation ----->

```

ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOf
INSERT INTO Isn{detyP=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;Delta /

      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalHasBeenStarted[RentalCase*RentalCase] EXECUTE -- (
ALL of DELETE FROM Isn{detyP=Car}
      SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar~;(rental

```

```

(TO MAINTAIN -I[Car] \/\ carAvailableAt;carAvailableAt~ \/\ rcAssignedCar~
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[Yes]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Ye

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[Yes]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Ye

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
      SELECTFROM (-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesN

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
DELETE FROM Isn{detypr=RentalCase}
      SELECTFROM (-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesN

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ rcAssign

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \/\ sessionReturned
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ se

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ se

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;rcAssignedCar

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
DELETE FROM Isn{detypr=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionRetu

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
      THEN INSERT INTO carAvailableAt[Car*Branch]

```

```

SELECTFROM 'a'[Car]*'b'[Branch]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'b'[Car]*'a'[Branch]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -
NEW x:Branch;
INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionR

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAva
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedCar

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturne

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'a'[Car]*'b'[Branch]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'b'[Car]*'a'[Branch]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:Branch;
INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionR
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rental
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[

```



```
(MAINTAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]
(MAINTAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]
```

----- Derivation ----->

```
ALL of DELETE FROM Isn{dety=Car}
    SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]

(TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
    SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
    SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
    SELECTFROM (-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM (-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssignedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]
DELETE FROM sessionReturnedCar[SESSION*Car]
    SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ rcAssignedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]

(TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar) /\ sessionReturnedCar~
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
    SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ sessionReturnedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar~
DELETE FROM sessionReturnedCar[SESSION*Car]
    SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ sessionReturnedCar~;(rentalHasBeenPromised[RentalCase*RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar~
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar) /\ sessionReturnedCar~
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
```

```

SELECTFROM '_SESSION' [SESSION]; (- (sessionReturnedCar; rcAssignedCar~; (r

(TO MAINTAIN -('_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (car
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~; '_SESSION' [SESSION]; (- (sessionReturnedC

(TO MAINTAIN -('_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (car
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~; '_SESSION'
THEN INSERT INTO carAvailableAt [Car*Branch]
SELECTFROM 'a' [Car]*'b' [Branch]

(TO MAINTAIN -('_SESSION' [SESSION]; sessionReturnedCar; (I[C
PICK a,b FROM carAvailableAt~; sessionReturnedCar~; '_SESSION' [SES
THEN INSERT INTO carAvailableAt [Car*Branch]
SELECTFROM 'b' [Car]*'a' [Branch]

(TO MAINTAIN -('_SESSION' [SESSION]; sessionReturnedCar; (I[C
(MAINTAINING -('_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (carA
NEW x:Branch;
INSERT INTO carAvailableAt [Car*Branch]
SELECTFROM (sessionReturnedCar~; '_SESSION' [SESSION]; (- (sessionReturn

(TO MAINTAIN -('_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (c
(MAINTAINING -('_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (carA
(MAINTAINING -('_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (carAvailabl
ONE OF DELETE FROM sessionReturnedCar [SESSION*Car]
SELECTFROM '_SESSION' [SESSION]; sessionReturnedCar; (I[Car] /\ - (carAvai

(TO MAINTAIN - (sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturned
DELETE FROM sessionReturnedCar [SESSION*Car]
SELECTFROM '_SESSION' [SESSION]; sessionReturnedCar; (- (rcAssignedCar~; (r

(TO MAINTAIN - (sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturned
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturnedCar;

(TO MAINTAIN - (sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturned
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~; '_SESSION'
THEN INSERT INTO carAvailableAt [Car*Branch]
SELECTFROM 'a' [Car]*'b' [Branch]

(TO MAINTAIN - (sessionReturnedCar~; '_SESSION' [SESSION]; ses
PICK a,b FROM carAvailableAt~; sessionReturnedCar~; '_SESSION' [SES
THEN INSERT INTO carAvailableAt [Car*Branch]
SELECTFROM 'b' [Car]*'a' [Branch]

(TO MAINTAIN - (sessionReturnedCar~; '_SESSION' [SESSION]; ses
(MAINTAINING - (sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturnedC
NEW x:Branch;
INSERT INTO carAvailableAt [Car*Branch]

```

```

SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC

      (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturn
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;(I[C
(MAINTAINING -I[Car] \ / carAvailableAt;carAvailableAt~ \ / rcAssignedCar~;(rentalHasBe
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssignedC
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[Car]
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[Car]
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

```

<-----End Derivation --

```

ON INSERT Delta IN rcKeysHandedOverQ[RentalCase*YesNoAnswer] EXECUTE      -- (ECA :
ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];(rcKeysHandedOverQ \ / D

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /
INSERT INTO Isn{dety=Person}
      SELECTFROM (rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];(rcKeysHandedOv

      (TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHand
      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHand
INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=YesNoAnswer}
      SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcKeysHandedOverQ;'Yes
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];r
PICK a,b FROM rcDriver~;((rcKeysHandedOverQ;'Yes'[YesNoAnsw
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];r
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOv
NEW x:Person;
      INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM ((rcKeysHandedOverQ;'Yes'[YesNoAnswer];(rcKeysHandedOv

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHande
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOv
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcKeysHandedOverQ;'Yes'
    THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a' [RentalCase]*'b' [Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];r
PICK a,b FROM rcRenter~;((rcKeysHandedOverQ;'Yes' [YesNoAnsw
    THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b' [RentalCase]*'a' [Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];r
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv
NEW x:Person;
    INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM ((rcKeysHandedOverQ;'Yes' [YesNoAnswer];(rcKeysHandedOv

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv
    (MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv
    (MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent

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----- Derivation ----->

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ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM (rcKeysHandedOverQ;'Yes' [YesNoAnswer];(rcKeysHandedOverQ /\ Delta)

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ rcA
INSERT INTO Isn{detyp=Person}
    SELECTFROM (rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];(rcKeysHandedOverQ~

    (TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv
    (TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv
INSERT INTO Isn{detyp=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{detyp=YesNoAnswer}
    SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcKeysHandedOverQ;'Yes' [Yes'
    THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a' [RentalCase]*'b' [Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeys
PICK a,b FROM rcDriver~;((rcKeysHandedOverQ;'Yes' [YesNoAnswer];(
    THEN INSERT INTO rcDriver[RentalCase*Person]

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SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeys
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM ((rcKeysHandedOverQ;'Yes'[YesNoAnswer];(rcKeysHandedOverQ~

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOver
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcKeysHandedOverQ;'Yes'[Yes
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a'[RentalCase]*'b'[Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeys
PICK a,b FROM rcRenter~;((rcKeysHandedOverQ;'Yes'[YesNoAnswer];(
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeys
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM ((rcKeysHandedOverQ;'Yes'[YesNoAnswer];(rcKeysHandedOverQ~

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOver
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssignedC
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas

<-----End Derivation --

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ON INSERT Delta IN rentalHasBeenEnded[RentalCase*RentalCase] EXECUTE -- (ECA :
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;Delta /\

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----- Derivation ----->

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INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;Delta /\ I[Ren

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<-----End Derivation --

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ON DELETE Delta FROM rentalHasBeenEnded[RentalCase*RentalCase] EXECUTE    -- (EC
ALL of DELETE FROM Isn{dety=Car}
      SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar~;(rental

(TO MAINTAIN  -I[Car]  \/ carAvailableAt;carAvailableAt~  \/ rcAssignedCar~
ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnsw

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDropp
DELETE FROM sessionReturnedCar[SESSION*Car]

```

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SELECTFROM '_SESSION' [SESSION];(-(sessionReturnedCar;(I[Car] /\ rcAssign

(TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturned
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;((-I[Car] /\ se

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;((-I[Car] /\ se

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionRet
(MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION' [SESSION];(-(sessionReturnedCar;rcAssignedCar

      (TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION' [SESSION];(-(sessionRetu

      (TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
      THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

        (TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar
        PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
        THEN INSERT INTO carAvailableAt[Car*Branch]
          SELECTFROM 'b'[Car]*'a'[Branch]

          (TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (sessionReturnedCar~;'_SESSION' [SESSION];(-(sessionR

        (TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAva
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(car

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;(-(rcAssignedCar

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionRet
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION' [SESSION];sessionReturned

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionRet

```

```

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:Branch;
    INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionR
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
(MAINTAINING -I[Car] \ / carAvailableAt;carAvailableAt~ \ / rcAssignedCar~;(rental
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA

```

```

ALL of DELETE FROM In{dety=Car}
      SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar~;(rentalHasBe

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(ren
ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnswer];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnswer];

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnswer];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnswer];

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rcDroppedOffDate[RentalCase*Date]

```



```

SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnswer];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnswer];

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rcDroppedOffCar[RentalCase*Car]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnswer];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rcDroppedOffCar[RentalCase*Car]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNoAnswer];

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnswer];re

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
DELETE FROM Isn{dety=RentCase}
SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNoAnswer];re

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDr
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOff
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ rcAssignedCar

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ session

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ session

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar) \/
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;rcAssignedCar~;(r

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
DELETE FROM Isn{dety=Car}
SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturnedC

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'a'[Car]*'b'[Branch]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[C

```

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PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION'[SESSION]
THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturn

      (TO MAINTAIN -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(c
      (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvai

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedCar~;(r

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION'
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'a'[Car]*'b'[Branch]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION'[SESSION]
THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturn
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;(I[C
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rentalHasBe
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[Car]
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[Car]
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

```

<-----End Derivation --

```

ON INSERT Delta IN rcDroppedOffCar[RentalCase*Car] EXECUTE    -- (ECA rule 51)
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffCar

    (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffCar)
INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM (rcDroppedOffCar /\ -rcAssignedCar) \/ (Delta /\ -rcAssignedCar)

    (TO MAINTAIN  -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
INSERT INTO Isn{dety=Car}
    SELECTFROM (rcAssignedCar~;rcDroppedOffCar /\ -I[Car]) \/ (rcAssignedCar~;rcDroppedOffCar)

    (TO MAINTAIN  -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off car type integrity)
    (TO MAINTAIN  -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar)
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

    (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffCar)
    (MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
    (MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
    (MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar)

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----- Derivation ----->

```

ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffCar

    (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffCar)
INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM (rcDroppedOffCar /\ -rcAssignedCar) \/ (Delta /\ -rcAssignedCar)

    (TO MAINTAIN  -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
INSERT INTO Isn{dety=Car}
    SELECTFROM (rcAssignedCar~;rcDroppedOffCar /\ -I[Car]) \/ (rcAssignedCar~;rcDroppedOffCar)

    (TO MAINTAIN  -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off car type integrity)
    (TO MAINTAIN  -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar)
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

    (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;
    (MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
    (MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
    (MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar::

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<-----End Derivation --

```

ON INSERT Delta IN rcDroppedOffDate[RentalCase*Date] EXECUTE -- (ECA rule 53)
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
INSERT INTO rentalPeriod[RentalCase*Integer]
    SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
INSERT INTO Isn{dety=Integer}
    SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
INSERT INTO rentalExcessPeriod[RentalCase*Integer]
    SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
INSERT INTO Isn{dety=Date}
    SELECTFROM ((rcDroppedOffDate /\ Delta)~;rcAssignedCar;(I[Car] /\ -(carAvailable))

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable))
(TO MAINTAIN -(rcDroppedOffDate~;rcDroppedOffDate) /\ I[Date] FROM UNI r
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;(rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
        PICK a,b FROM contractedStartDate~;('a'[RentalCase]
        THEN INSERT INTO earliestDate[DateDifferencePlusOne]
            SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
        NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
        INSERT INTO earliestDate[DateDifferencePlusOne]
            SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~ /\ rentalPeriod)

```

```

(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO rcDroppedOffDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
PICK a,b FROM rcDroppedOffDate~;('a'[RentalCase]
THEN INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Triggers
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;rcDroppedOffDate~ /\ c
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
PICK a,b FROM contractedEndDate~;('a'[RentalCase]
THEN INSERT INTO firstDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
INSERT INTO firstDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ c

```

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(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
THEN INSERT INTO rcDroppedOffDate[RentalCase*Integer]
SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
PICK a,b FROM rcDroppedOffDate~;('a' [RentalCase]
THEN INSERT INTO lastDate[DateDifference]
SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCase*Integer]
SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
INSERT INTO lastDate[DateDifference*Integer]
SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate)
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger exception
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffDate)
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contracte
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
(MAINAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDroppedOffDate)

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----- Derivation ----->

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ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffDate)

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffDate)
INSERT INTO rentalPeriod[RentalCase*Integer]

```

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SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate
(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestD
INSERT INTO Isn{detyp=Integer}
SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffD

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
INSERT INTO rentalExcessPeriod[RentalCase*Integer]
SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);c
INSERT INTO Isn{detyp=Date}
SELECTFROM ((rcDroppedOffDate \ / Delta)~;rcAssignedCar;(I[Car] /\ -(carAvaila

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
(TO MAINTAIN -(rcDroppedOffDate~;rcDroppedOffDate) \ / I[Date] FROM UNI rcDrop
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;(rcDroppedOffDate
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO contractedStartDate[RentalCa
            SELECTFROM 'a'[RentalCase]*'b'[Date]

            (TO MAINTAIN -(rcDroppedOffDate;rcDropp
PICK a,b FROM contractedStartDate~;('a'[Renta
    THEN INSERT INTO earliestDate[DateDifferencePlus
        SELECTFROM 'b'[DateDifferencePlusOne]*'

            (TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*
        SELECTFROM 'a'[RentalCase]*'b'[DateDiffere

            (TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
INSERT INTO earliestDate[DateDifferencePlus
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

            (TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
    THEN INSERT INTO rcDroppedOffDate[RentalCase*
        SELECTFROM 'a'[RentalCase]*'b'[Date]

            (TO MAINTAIN -(rcDroppedOffDate;rcDropp
PICK a,b FROM rcDroppedOffDate~;('a'[RentalCa

```

```

THEN INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]*'a'

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]*'a'

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate~ /\
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger re
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedEndDate~ /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffDate;rcDroppedOffDate~ /\
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]*'a'

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
PICK a,b FROM contractedEndDate~;('a'[RentalCase]
THEN INSERT INTO firstDate[DateDifference*Date]
SELECTFROM 'b'[DateDifference]*'a'[RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]*'a'

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
INSERT INTO firstDate[DateDifference*Date]
SELECTFROM 'b'[DateDifference]*'a'[RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO rcDroppedOffDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]*'a'

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        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\
PICK a,b FROM rcDroppedOffDate~;('a'[RentalCase*DateDifference*Date]
THEN INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'b'[DateDifference]*'a'[DateDifference]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
        ALL of INSERT INTO rcDroppedOffDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifference]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\
INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'b'[DateDifference]*'a'[RentalCase]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate]
THEN BLOCK
        (CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger excess pe
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedStart
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDroppedOffDate]

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<-----End Derivation --

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ON DELETE Delta FROM rcDroppedOffDate[RentalCase*Date] EXECUTE  -- (ECA rule 5)
ALL of ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
        SELECTFROM (-((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate;latestDate~)

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
DELETE FROM rcDroppedOffDate[RentalCase*Date]
        SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedStartDate)

        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
DELETE FROM contractedStartDate[RentalCase*Date]
        SELECTFROM (-((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate;latestDate~)

```

```

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifferencePlusOne];(earliestDate;c

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
DELETE FROM Isn{dety=RentatCase}
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ (rcDroppedOffD

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSt
(MAINTAINING  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate;firstDate~ /\ (rcDroppedOffDate

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifference];(firstDate;contractedE

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate;firstDate~ /\ (rcDroppedOffDate

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifference];(firstDate;contractedE

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
DELETE FROM Isn{dety=RentatCase}
      SELECTFROM  -((contractedEndDate;firstDate~ /\ (rcDroppedOffDate /

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
(MAINTAINING  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;co
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM  ((-rcDroppedOffDate /\ rcAssignedCar;(I[Car] /\ -(carA

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvail
DELETE FROM Isn{dety=Car}
      SELECTFROM  rcAssignedCar~;((-rcDroppedOffDate /\ rcAssignedCar;(I

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvail
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcAssignedCar~;((-rcDrop
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM  'a'[Car]*'b'[Branch]

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvail
PICK a,b FROM carAvailableAt~;rcAssignedCar~;((-rcDroppedOff
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM  'b'[Car]*'a'[Branch]

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvail
(MAINTAINING  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvaila

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NEW x:Branch;
INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM (rcAssignedCar~;(-rcDroppedOffDate /\ rcAssignedCar;

      (TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAva
(MAINAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAva
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM sessionToday;((-rcDroppedOffDate~ /\ sessionToday~;ses

      (TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAva
DELETE FROM sessionToday[SESSION*Date]
SELECTFROM sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAva

      (TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAva
(MAINAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~)
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contrac
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
(MAINAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi

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----- Derivation ----->

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ALL of ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM (-((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contra

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contra

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate /\

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDa
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM (-((contractedEndDate;firstDate~ /\ (rcDroppedOffDate /\ -D

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDa
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDa

```

```

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;firstDate~ /\ (rcDroppedOffDate /\ -D

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDat

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(contractedEndDate;firstDate~ /\ (rcDroppedOffDate /\ -De

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contrac
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM ((-rcDroppedOffDate /\ rcAssignedCar;(I[Car] /\ -(carAvaila

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableA
DELETE FROM Isn{dety=Car}
SELECTFROM rcAssignedCar~;((-rcDroppedOffDate /\ rcAssignedCar;(I[Car]

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableA
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcAssignedCar~;((-rcDroppedOf
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'a'[Car]*'b'[Branch]

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;c
PICK a,b FROM carAvailableAt~;rcAssignedCar~;((-rcDroppedOffDate
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'b'[Car]*'a'[Branch]

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;c
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt
NEW x:Branch;
INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM (rcAssignedCar~;(-rcDroppedOffDate /\ rcAssignedCar;(I[Ca

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailabl
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM sessionToday;((-rcDroppedOffDate~ /\ sessionToday~;sessionR

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableA
DELETE FROM sessionToday[SESSION*Date]
SELECTFROM sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailable

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableA
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));ses
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt

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(MAINTEINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet

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<-----End Derivation --

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ON INSERT Delta IN rcDroppedOffBranch[RentalCase*Branch] EXECUTE -- (ECA rule
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDropped

    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDrop
INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;d

    (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
INSERT INTO Isn{dety=Amount}
    SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~

    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
INSERT INTO Isn{dety=Branch}
    SELECTFROM ((rcDroppedOffBranch \/ Delta)~;rcAssignedCar;(I[Car] /\ -(ca

    (TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailab
    (TO MAINTAIN -(rcDroppedOffBranch~;rcDroppedOffBranch) \/ I[Branch] FROM
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffBranch;dis
    THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ cont
PICK a,b FROM rentalLocationPenaltyCharge~;((rcDroppedOffBr
    THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetween
        SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ cont
(MAINTEINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
NEW x:Amount;
    ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
        SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contracte

        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contrac
INSERT INTO computedLocationPenaltyCharge[DistanceBetween
        SELECTFROM ((distbranch;rcDroppedOffBranch~ /\ distbranch

        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contrac
(MAINTEINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropo
(MAINTEINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff

```

```

      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(rcDroppedOffBranch~;rcDroppedOffBranch) \/ I[Branch] FROM UNI rcD

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----- Derivation ----->

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ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOf
INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr

      (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dis
INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ c

      (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /
INSERT INTO Isn{detyp=Branch}
      SELECTFROM ((rcDroppedOffBranch \/ Delta)~;rcAssignedCar;(I[Car] /\ -(carAvai

      (TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;
      (TO MAINTAIN -(rcDroppedOffBranch~;rcDroppedOffBranch) \/ I[Branch] FROM UNI
INSERT INTO Isn{detyp=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffBranch;distbran
      THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[Amount]

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contracte
PICK a,b FROM rentalLocationPenaltyCharge~;((rcDroppedOffBranch;
      THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLo
            SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contracte
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
NEW x:Amount;
      ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
            SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDrop

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDr
INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocat
      SELECTFROM ((distbranch;rcDroppedOffBranch~ /\ distbranch;con

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        (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDr
        (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
        (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
        (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;
        (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
        (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
        (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
        (MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
        (MAINTAINING -(rcDroppedOffBranch~;rcDroppedOffBranch) \/ I[Branch] FROM UNI rcDrope

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<-----End Derivation --

```

ON DELETE Delta FROM rcDroppedOffBranch[RentalCase*Branch] EXECUTE      -- (ECA ru
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM ((-rcDroppedOffBranch /\ rcAssignedCar;(I[Car] /\ -(carAvaila

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
DELETE FROM Isn{dety=Car}
      SELECTFROM rcAssignedCar~;((-rcDroppedOffBranch /\ rcAssignedCar;(I[Car]

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcAssignedCar~;((-rcDroppedOffB
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'a'[Car]*'b'[Branch]

            (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;car
PICK a,b FROM carAvailableAt~;rcAssignedCar~;((-rcDroppedOffBranch
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'b'[Car]*'a'[Branch]

            (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~)
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM (rcAssignedCar~;(-rcDroppedOffBranch /\ rcAssignedCar;(I[Ca

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableA
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~)
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM sessionBranch;((-rcDroppedOffBranch~ /\ sessionBranch~;sessio

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
DELETE FROM sessionBranch[SESSION*Branch]
      SELECTFROM sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt

      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi

```

----- Derivation ----->

```

ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM ((-rcDroppedOffBranch /\ rcAssignedCar;(I[Car] /\ -(carAvailableAt
      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
DELETE FROM Isn{detyP=Car}
      SELECTFROM rcAssignedCar~;((-rcDroppedOffBranch /\ rcAssignedCar;(I[Car] /\ -
      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcAssignedCar~;((-rcDroppedOffBranch
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'a'[Car]*'b'[Branch]
            (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvail
PICK a,b FROM carAvailableAt~;rcAssignedCar~;((-rcDroppedOffBranch /\ r
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'b'[Car]*'a'[Branch]
            (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvail
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));ses
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM (rcAssignedCar~;(-rcDroppedOffBranch /\ rcAssignedCar;(I[Car] /\
      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));ses
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM sessionBranch;((-rcDroppedOffBranch~ /\ sessionBranch~;sessionRetu
      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
DELETE FROM sessionBranch[SESSION*Branch]
      SELECTFROM sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));r
      (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet

```

<-----End Derivation --

```

ON INSERT Delta IN rentalIsPaidQ[RentalCase*YesNoAnswer] EXECUTE      -- (ECA rule
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];(rentalIsPaidQ /\ Delta)~ /\
      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDrop
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalIsPaidQ;'Yes'[Ye
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[Amount]

```



```

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
PICK a,b FROM rentalCharge~;((rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'b'[RentalCase]*'a'[Amount]

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
NEW x:Amount;
        INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM ((rentalIsPaidQ;'Yes'[YesNoAnswer];(rentalIsPaidQ /\
        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
INSERT INTO Isn{dety=Amount}
        SELECTFROM (rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];(rentalIsPaidQ /\
        (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
INSERT INTO Isn{dety=RentalCase}
        SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=YesNoAnswer}
        SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])

```

----- Derivation ----->

```

ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
        SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];(rentalIsPaidQ /\ Delta)~ /\ rcDroppedOffBr

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
PICK a,b FROM rentalCharge~;((rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'b'[RentalCase]*'a'[Amount]

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
NEW x:Amount;
        INSERT INTO rentalCharge[RentalCase*Amount]

```

```

SELECTFROM ((rentalIsPaidQ;'Yes'[YesNoAnswer];(rentalIsPaidQ /\ Delta

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[
      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[Ren
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];(rentalIsPaidQ /\

(TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

INSERT INTO Isn{dety=YesNoAnswer}
SELECTFROM (Delta~;Delta /\ I[YesNoAnswer]) - I[YesNoAnswer]

(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]) /\ r
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]) /\ r

<-----End Derivation --

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```

ON DELETE Delta FROM rentalIsPaidQ[RentalCase*YesNoAnswer] EXECUTE      -- (ECA ru
ALL of ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;rcAssignedCar

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionRetu

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'a'[Car]*'b'[Branch]

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionR

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAva

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```

ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(ca

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedCar

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'a'[Car]*'b'[Branch]

            (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION]
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'b'[Car]*'a'[Branch]

            (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION]
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionR
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA

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----- Derivation ----->

```

ALL of ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;rcAssignedCar~;(r

      (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturnedC

      (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'a'[Car]*'b'[Branch]

            (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[C

```

```

        PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION'[SESSION]
        THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
        (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
        NEW x:Branch;
        INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturn

        (TO MAINTAIN -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(c
        (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
        (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
        ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
        SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvai

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
        DELETE FROM sessionReturnedCar[SESSION*Car]
        SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedCar~;(r

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
        DELETE FROM Isn{dety=Car}
        SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION'
        THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
        PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION'[SESSION]
        THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
        NEW x:Branch;
        INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturn
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;(I[C
        (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
        (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

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<-----End Derivation --

```

ON INSERT Delta IN rentalPeriod[RentalCase*Integer] EXECUTE      -- (ECA rule 59)
ALL of INSERT INTO Isn{dety=Integer}
    SELECTFROM ((rentalPeriod \/ Delta)~;(contractedStartDate;earliestDate~

(TO MAINTAIN  -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDrop
(TO MAINTAIN  -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rental
INSERT INTO rentalBasicCharge[RentalCase*Amount]
    SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTar

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rental
INSERT INTO Isn{dety=Amount}
    SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedC

(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssign
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcAssignedCar;rcAssignedCar~
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[R
        THEN INSERT INTO rentalPeriod[RentalCase]
            SELECTFROM 'a'[RentalCase]*'b'[Int

            (TO MAINTAIN  -(rcAssignedCar;rcAss
PICK a,b FROM rentalPeriod~;('a'[RentalC
THEN INSERT INTO ctcNrOfDays[CompTariffe
    SELECTFROM 'b'[CompTariffedCharge]

        (TO MAINTAIN  -(rcAssignedCar;rcAss
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
NEW x:Integer;
    ALL of INSERT INTO rentalPeriod[RentalCase*In
        SELECTFROM 'a'[RentalCase]*'b'[CompTar

        (TO MAINTAIN  -(rcAssignedCar;rcAssign
INSERT INTO ctcNrOfDays[CompTariffedCh
    SELECTFROM 'b'[CompTariffedCharge]*'a

        (TO MAINTAIN  -(rcAssignedCar;rcAssign
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalP
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[R
    THEN INSERT INTO rcAssignedCar[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[Car

        (TO MAINTAIN  -(rcAssignedCar;rcAss
PICK a,b FROM rcAssignedCar~;('a'[Rental
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
    THEN INSERT INTO carT
        SELECTFROM 'a'[

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      (TO MAINTAIN -(
PICK a,b FROM carType
THEN ONE OF ONE NONEM
TH

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PI
TH

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(MAINTAIN
NEW x:Amo
ALL of

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(MAINTA
(MAINTAIN
(MAINTAINING -(r
(MAINTAINING -(rcAssignedCar
NEW x:CarType;
ALL of INSERT INTO carType
SELECTFROM 'a'[Car

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(TO MAINTAIN -(rcA
ONE OF ONE NONEMPTY
THEN

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PICK
THEN

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(MAINTAINING
NEW x:Amount
ALL of INS
SE

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(TO
INS
SE

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(TO
(MAINAINI
(MAINAINING
(MAINAINING -(rcAs
(MAINAINING -(rcAssignedCar
(MAINAINING -(rcAssignedCar
(MAINAINING -(rcAssignedCar;rcAssi
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\
NEW x:Car;
ALL of INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'a'[RentalCase]*'b'[CompTa

(TO MAINTAIN -(rcAssignedCar;rcAssign
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO carType
SELECTFROM 'a'[Car

(TO MAINTAIN -(rcA
PICK a,b FROM carType~;(
THEN ONE OF ONE NONEMPTY
THEN

PICK
THEN

(MAINAINING
NEW x:Amount
ALL of INS
SE

(TO
INS
SE

(TO
(MAINAINI
(MAINAINING
(MAINAINING -(rcAs
(MAINAINING -(rcAssignedCar;rc
NEW x:CarType;
ALL of INSERT INTO carType[Ca
SELECTFROM 'x'[Car]*'

(TO MAINTAIN -(rcAssi
ONE OF ONE NONEMPTY AL

```



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(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTari
INSERT INTO Isn{detyp=Amount}
SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;ca

```

```

(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

```

```

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcAssignedCar;rcAssignedCar~ /\ re
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO rentalPeriod[RentalCase*Inte
SELECTFROM 'a'[RentalCase]*'b'[Integer]

```

```

(TO MAINTAIN  -(rcAssignedCar;rcAssigned
PICK a,b FROM rentalPeriod~;('a'[RentalCase]*
THEN INSERT INTO ctcNrOfDays[CompTariffedChar
SELECTFROM 'b'[CompTariffedCharge]*'a'[

```

```

(TO MAINTAIN  -(rcAssignedCar;rcAssigned
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
NEW x:Integer;

```

```

ALL of INSERT INTO rentalPeriod[RentalCase*Integer
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

```

```

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar
INSERT INTO ctcNrOfDays[CompTariffedCharge*
SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

```

```

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ ren
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO rcAssignedCar[RentalCase*Car
SELECTFROM 'a'[RentalCase]*'b'[Car]

```

```

(TO MAINTAIN  -(rcAssignedCar;rcAssigned
PICK a,b FROM rcAssignedCar~;('a'[RentalCase]
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO carType[C
SELECTFROM 'a'[Car]*

```

```

(TO MAINTAIN  -(rcAss
PICK a,b FROM carType~;('a
THEN ONE OF ONE NONEMPTY A
THEN IN
S

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(T

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```

PICK a,
THEN IN
S

(T
(MAINTAINING -
NEW x:Amount;
ALL of INSE
SELE

(TO M
INSE
SELE

(TO M
(MAINTAINING
(MAINTAINING -
(MAINTAINING -(rcAssi
(MAINTAINING -(rcAssignedCar;rcAs
NEW x:CarType;
ALL of INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rcAssign
ONE OF ONE NONEMPTY ALTE
THEN INSE
SELE

(TO M
PICK a,b F
THEN INSE
SELE

(TO M
(MAINTAINING -(rc
NEW x:Amount;
ALL of INSERT I
SELECTF

(TO MAIN
INSERT I
SELECTF

(TO MAIN
(MAINTAINING -(
(MAINTAINING -(rc
(MAINTAINING -(rcAssigne
(MAINTAINING -(rcAssignedCar;rc
(MAINTAINING -(rcAssignedCar;rcAs
(MAINTAINING -(rcAssignedCar;rcAssignedC

```

```

(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
NEW x:Car;
  ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

    (TO MAINTAIN -(rcAssignedCar;rcAssignedCar
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
      THEN INSERT INTO carType[Car*
        SELECTFROM 'a'[Car]*'b'

        (TO MAINTAIN -(rcAssign
        PICK a,b FROM carType~;'x'[C
        THEN ONE OF ONE NONEMPTY ALTE
          THEN INSER
            SELE

            (TO M
            PICK a,b F
            THEN INSER
              SELE

              (TO M
              (MAINTAINING -(rc
              NEW x:Amount;
              ALL of INSERT I
                SELECTF

                (TO MAIN
                INSERT I
                SELECTF

                (TO MAIN
                (MAINTAINING -(
                (MAINTAINING -(rc
                (MAINTAINING -(rcAssigne
                (MAINTAINING -(rcAssignedCar;rcAssign
                NEW x:CarType;
                ALL of INSERT INTO carType[Car*Car
                  SELECTFROM 'x'[Car]*'a'[Re

                  (TO MAINTAIN -(rcAssignedC
                  ONE OF ONE NONEMPTY ALTERNA
                    THEN INSERT I
                      SELECTF

                      (TO MAIN
                      PICK a,b FROM
                      THEN INSERT I
                        SELECTF

```



```

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
      SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate;latestDate;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      DELETE FROM Isn{detypr=RentalCase}
      SELECTFROM -(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])
      (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Car])

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM ((-rentalPeriod /\ (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])
      DELETE FROM earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM computedRentalPeriod;((-rentalPeriod~ /\ computedRentalPeriod;earliestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])
      DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM ((-rentalPeriod /\ (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])
      DELETE FROM latestDate[DateDifferencePlusOne*Date]
      SELECTFROM computedRentalPeriod;((-rentalPeriod~ /\ computedRentalPeriod;latestDate~ /\ rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Date])

```

```

        (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
        SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate;

        (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
        SELECTFROM (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssignedCar;

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod;
DELETE FROM rcAssignedCar[RentalCase*Car]
        SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rentalPeriod;

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod;
DELETE FROM rentalPeriod[RentalCase*Integer]
        SELECTFROM (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssignedCar;

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod;
DELETE FROM rentalPeriod[RentalCase*Integer]
        SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rentalPeriod;

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod;
DELETE FROM Isn{dety=RentalCase}
        SELECTFROM -(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssignedCar;

        (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod;
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase]
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase]

```

<-----End Derivation --

```

ON INSERT Delta IN rentalBasicCharge[RentalCase*Amount] EXECUTE  -- (ECA rule
ALL of INSERT INTO Isn{dety=Amount}
        SELECTFROM ((rentalBasicCharge \/ Delta)~;(rentalPeriod;ctcNrOfDays~ /\ I[RentalCase]

        (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;
        (TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
        (TO MAINTAIN  -(rentalBasicCharge~;rentalBasicCharge) \/ I[Amount] FROM U
INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ I[RentalCase]

        (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ I[RentalCase]
INSERT INTO Isn{dety=RentalCase}
        SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]

```



```

        (TO MAINTAIN -(rentalLocationPenaltyCharge
PICK a,b FROM rentalBasicCharge~;('a'[RentalC
THEN INSERT INTO arg1[CompRentalCharge*Amount
        SELECTFROM 'b'[CompRentalCharge]*'a'[Am

        (TO MAINTAIN -(rentalLocationPenaltyCha
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
        ALL of INSERT INTO rentalBasicCharge[RentalCase*Am
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

        (TO MAINTAIN -(rentalLocationPenaltyCharge
INSERT INTO arg1[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalL
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rentalPenaltyCharge[RentalCa
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalLocationPenaltyCha
PICK a,b FROM rentalPenaltyCharge~;('a'[Renta
        THEN INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Am

        (TO MAINTAIN -(rentalLocationPenaltyCha
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
        ALL of INSERT INTO rentalPenaltyCharge[RentalCase*
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

        (TO MAINTAIN -(rentalLocationPenaltyCharge
INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalL
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rentalLocationPenaltyCharge[
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalLocationPenaltyCha
PICK a,b FROM rentalLocationPenaltyCharge~;('
        THEN INSERT INTO arg3[CompRentalCharge*Amount

```

```

SELECTFROM 'b'[CompRentalCharge]*'a'[Am

(TO MAINTAIN -(rentalLocationPenaltyCharge
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
ALL of INSERT INTO rentalLocationPenaltyCharge[Ren
SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

(TO MAINTAIN -(rentalLocationPenaltyCharge
INSERT INTO arg3[CompRentalCharge*Amount]
SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

(TO MAINTAIN -(rentalLocationPenaltyCharge
(MAINTAINING -(rentalLocationPenaltyCharge;rentalL
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCh
PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\
THEN BLOCK
(CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger rental
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
(MAINTAINING -(rentalBasicCharge;rentalBasicCharge) \/ I[Amount] FROM UNI rentalBasi

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<-----End Derivation --

```

ON DELETE Delta FROM rentalBasicCharge[RentalCase*Amount] EXECUTE -- (ECA rule
ALL of ONE OF DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ comput

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;((-rentalBasicCharge /\ (rentalPeriod;c

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;((-rentalBasicCharge /\ (renta

```

```

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
      SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ computedTariffedCharge)

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
      SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffP

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge;rentalLoca

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge;rentalLoca

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge;rentalLoca

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalTariffP

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

```

```

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ computedTar

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\ rcAss

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;((-rentalBasicCharge /\ (rentalPeriod;ctcNrO

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;((-rentalBasicCharge /\ (rentalPeri

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ computedTar

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPe

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ren
(MAINTAINING  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariff
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCha

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge~

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCha

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge~

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCha

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge~

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge

```

```

DELETE FROM Isn{dety=RentCase}
SELECTFROM -((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyChar

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena

<-----End Derivation --

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```

ON INSERT Delta IN rentalExcessPeriod[RentalCase*Integer] EXECUTE -- (ECA rule
ALL of INSERT INTO Isn{dety=Integer}
      SELECTFROM ((rentalExcessPeriod \/ Delta)~;(rcDroppedOffDate;lastDate~ /\

      (TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
      (TO MAINTAIN -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ex

      (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
INSERT INTO Isn{dety=Amount}
      SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcA

      (TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalExcessPeriod;(rentalExce
      THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[R
      THEN INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM 'a'[RentalCase]*'b'[Integer]

      (TO MAINTAIN -(rentalExcessPeriod;
      PICK a,b FROM rentalExcessPeriod~;('a'[RentalCase]
      THEN INSERT INTO ctcNrOfDays[CompTariffedCharge]
      SELECTFROM 'b'[CompTariffedCharge]

      (TO MAINTAIN -(rentalExcessPeriod;
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod)
NEW x:Integer;
      ALL of INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod)
INSERT INTO ctcNrOfDays[CompTariffedCharge]
      SELECTFROM 'b'[CompTariffedCharge]*'a'[RentalCase]

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod)

```

```

        (MAINTAINING -(rentalExcessPeriod;rentalExcessP
        (MAINTAINING -(rentalExcessPeriod;rentalExcessP
        (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
        THEN INSERT INTO rcAssignedCar[RentalCase
        SELECTFROM 'a'[RentalCase]*'b'[Car

```

```

        (TO MAINTAIN -(rentalExcessPeriod;
        PICK a,b FROM rcAssignedCar~;('a'[Rental
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
        THEN INSERT INTO carT
        SELECTFROM 'a'[

```

```

        (TO MAINTAIN -(
        PICK a,b FROM carType
        THEN ONE OF ONE NONEM
        TH

```

```

        PI
        TH

```

```

        (MAINTAIN
        NEW x:Amo
        ALL of

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```

        (MAINTA
        (MAINTAIN
        (MAINTAINING -(r
        (MAINTAINING -(rentalExcessP
        NEW x:CarType;
        ALL of INSERT INTO carType
        SELECTFROM 'a'[Car

```

```

        (TO MAINTAIN -(ren
        ONE OF ONE NONEMPTY
        THEN

```

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        PICK

```

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THEN

(MAINAINING
NEW x:Amount
ALL of INS
SE

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(TO
(MAINAINI
(MAINAINING
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(MAINAINING -(rentalExces
(MAINAINING -(rentalExcessP
(MAINAINING -(rentalExcessPeriod;r
(MAINAINING -(rentalExcessPeriod;rentalExcessP
NEW x:Car;
ALL of INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'a'[RentalCase]*'b'[CompTa

(TO MAINTAIN -(rentalExcessPeriod;ren
ONE OF ONE NONEMPTY ALTERNATIVE OF PIC
THEN INSERT INTO carType
SELECTFROM 'a'[Car

(TO MAINTAIN -(ren
PICK a,b FROM carType~;(
THEN ONE OF ONE NONEMPTY
THEN

PICK
THEN

(MAINAINING
NEW x:Amount
ALL of INS
SE

(TO
INS
SE

```


----- Derivation ----->

```

ALL of INSERT INTO Isn{detyp=Integer}
    SELECTFROM ((rentalExcessPeriod \/ Delta)~;(rcDroppedOffDate;lastDate~ /\ con

    (TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
    (TO MAINTAIN -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM UNI
    INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
    SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT

    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exce
    INSERT INTO Isn{detyp=Amount}
    SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssign

    (TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
    INSERT INTO Isn{detyp=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalExcessPeriod;(rentalExcessPe
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rentalExcessPeriod[RentalCas
            SELECTFROM 'a'[RentalCase]*'b'[Integer]

            (TO MAINTAIN -(rentalExcessPeriod;renta
            PICK a,b FROM rentalExcessPeriod~;('a'[Rental
            THEN INSERT INTO ctcNrOfDays[CompTariffedChar
                SELECTFROM 'b'[CompTariffedCharge]*'a'[

                (TO MAINTAIN -(rentalExcessPeriod;renta
                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod
                NEW x:Integer;
                ALL of INSERT INTO rentalExcessPeriod[RentalCase*I
                    SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

                    (TO MAINTAIN -(rentalExcessPeriod;rentalEx
                    INSERT INTO ctcNrOfDays[CompTariffedCharge*
                    SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

                    (TO MAINTAIN -(rentalExcessPeriod;rentalEx
                    (MAINTAINING -(rentalExcessPeriod;rentalExcessPeri
                    (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod
                    (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[
                    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
                        THEN INSERT INTO rcAssignedCar[RentalCase*Car
                            SELECTFROM 'a'[RentalCase]*'b'[Car]

                            (TO MAINTAIN -(rentalExcessPeriod;renta
                            PICK a,b FROM rcAssignedCar~;('a'[RentalCase]
                            THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK

```

```

THEN INSERT INTO carType[C
    SELECTFROM 'a'[Car]*

    (TO MAINTAIN -(renta
PICK a,b FROM carType~;('a
THEN ONE OF ONE NONEMPTY A
    THEN IN
    S

    (T
    PICK a,
    THEN IN
    S

    (T
    (MAINTAINING -
    NEW x:Amount;
    ALL of INSERT
    SELE

    (TO M
    INSERT
    SELE

    (TO M
    (MAINTAINING
    (MAINTAINING -
    (MAINTAINING -(rental
(MAINTAINING -(rentalExcessPeriod
NEW x:CarType;
    ALL of INSERT INTO carType[Car*
    SELECTFROM 'a'[Car]*'b'

    (TO MAINTAIN -(rentalEx
    ONE OF ONE NONEMPTY ALTE
    THEN INSERT
    SELE

    (TO M
    PICK a,b F
    THEN INSERT
    SELE

    (TO M
    (MAINTAINING -(re
    NEW x:Amount;
    ALL of INSERT I
    SELECTF

    (TO MAIN

```

```

INSERT I
SELECTF

(TO MAIN
(MAINAINING -(
(MAINAINING -(re
(MAINAINING -(rentalExc
(MAINAINING -(rentalExcessPeri
(MAINAINING -(rentalExcessPeriod
(MAINAINING -(rentalExcessPeriod;rental
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod
NEW x:Car;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

(TO MAINTAIN -(rentalExcessPeriod;rentalEx
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rentalEx
PICK a,b FROM carType~;'x'[C
THEN ONE OF ONE NONEMPTY ALTE
THEN INSE
SELE

(TO M
PICK a,b F
THEN INSE
SELE

(TO M
(MAINAINING -(re
NEW x:Amount;
ALL of INSERT I
SELECTF

(TO MAIN
INSERT I
SELECTF

(TO MAIN
(MAINAINING -(
(MAINAINING -(re
(MAINAINING -(rentalExc
(MAINAINING -(rentalExcessPeriod;re
NEW x:CarType;
ALL of INSERT INTO carType[Car*Car
SELECTFROM 'x'[Car]*'a'[Re

```

```

                                (TO MAINTAIN -(rentalExces
                                ONE OF ONE NONEMPTY ALTERN
                                THEN INSERT I
                                SELECTF

                                (TO MAIN
                                PICK a,b FROM
                                THEN INSERT I
                                SELECTF

                                (TO MAIN
                                (MAINTAINING -(renta
                                NEW x:Amount;
                                ALL of INSERT INTO
                                SELECTFROM

                                (TO MAINTAI
                                INSERT INTO
                                SELECTFROM

                                (TO MAINTAI
                                (MAINTAINING -(ren
                                (MAINTAINING -(renta
                                (MAINTAINING -(rentalExcess
                                (MAINTAINING -(rentalExcessPeriod;
                                (MAINTAINING -(rentalExcessPeriod;re
                                (MAINTAINING -(rentalExcessPeriod;rentalExc
                                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod
                                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[
                                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalC
                                PICK a,b FROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excess
                                THEN BLOCK
                                (CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger exces
                                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (re
                                (MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
                                (MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
                                (MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
                                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (rentalExc
                                (MAINTAINING -(rentalExcessPeriod~;rentalExcessPeriod) /\ I[Integer] FROM UNI rentalE

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalExcessPeriod[RentalCase*Integer] EXECUTE -- (ECA r
ALL of ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalExcessPeriod /\ (rcDroppedOffDate;lastDate~ /\

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;f

```

```

DELETE FROM lastDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;((-rentalExcessPeriod~ /\ compu

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;f
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM ((-rentalExcessPeriod /\ (rcDroppedOffDate;lastDate~ /\

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;f
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;((-rentalExcessPeriod~ /\ compu

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;f
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (lastDate;rcDroppedOffDate~ /\ firstDate;contractedEnd

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;f
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (-(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcA

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Rental
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rent

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Rental
DELETE FROM Isn{detyP=RentalCase}
SELECTFROM -(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcAs

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Rental
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/\ (rent

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalExcessPeriod /\ (rcDroppedOffDate;lastDate~ /\ con

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstD
DELETE FROM lastDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;((-rentalExcessPeriod~ /\ computedNr

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM ((-rentalExcessPeriod /\ (rcDroppedOffDate;lastDate~ /\ con

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstD
DELETE FROM firstDate[DateDifference*Date]

```

```

SELECTFROM computedNrOfExcessDays;((-rentalExcessPeriod~ /\ computedNr

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstD
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstD
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);co
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (-(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssign

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rentalExc

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcAssigne

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(re
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(rentalExc

```

<-----End Derivation --

```

ON INSERT Delta IN rentalPenaltyCharge[RentalCase*Amount] EXECUTE -- (ECA rul
ALL of INSERT INTO Isn{dety=Amount}
SELECTFROM ((rentalPenaltyCharge \/(Delta)~;(rentalExcessPeriod;ctcNrOfD

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ :
(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
(TO MAINTAIN -(rentalPenaltyCharge~;rentalPenaltyCharge) \/(I[Amount] FR
INSERT INTO rentalCharge[RentalCase*Amount]
SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ ren

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ :
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalLocationPenaltyCharge;r
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[R
THEN INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM 'a'[RentalCase]*'b'[Amount]

(TO MAINTAIN -(rentalLocationPenaltyCharge~;('a'[RentalCase]*'b'[Amount]
PICK a,b FROM rentalBasicCharge~;('a'[RentalCase]*'b'[Amount]
THEN INSERT INTO arg1[CompRentalCharge*Amount]

```

```

SELECTFROM 'b' [CompRentalCharge]*'.

(TO MAINTAIN -(rentalLocationPenal
(MAINTAINING -(rentalLocationPenaltyCharge;rent
NEW x:Amount;
ALL of INSERT INTO rentalBasicCharge[RentalCa
SELECTFROM 'a' [RentalCase]*'b' [CompRe

(TO MAINTAIN -(rentalLocationPenaltyC
INSERT INTO arg1[CompRentalCharge*Amou
SELECTFROM 'b' [CompRentalCharge]*'a' [

(TO MAINTAIN -(rentalLocationPenaltyC
(MAINTAINING -(rentalLocationPenaltyCharge;re
(MAINTAINING -(rentalLocationPenaltyCharge;rent
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocat
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
THEN INSERT INTO rentalPenaltyCharge[Rent
SELECTFROM 'a' [RentalCase]*'b' [Amo

(TO MAINTAIN -(rentalLocationPenal
PICK a,b FROM rentalPenaltyCharge~;('a' [
THEN INSERT INTO arg2[CompRentalCharge*Am
SELECTFROM 'b' [CompRentalCharge]*'.

(TO MAINTAIN -(rentalLocationPenal
(MAINTAINING -(rentalLocationPenaltyCharge;rent
NEW x:Amount;
ALL of INSERT INTO rentalPenaltyCharge[Rental
SELECTFROM 'a' [RentalCase]*'b' [CompRe

(TO MAINTAIN -(rentalLocationPenaltyC
INSERT INTO arg2[CompRentalCharge*Amou
SELECTFROM 'b' [CompRentalCharge]*'a' [

(TO MAINTAIN -(rentalLocationPenaltyC
(MAINTAINING -(rentalLocationPenaltyCharge;re
(MAINTAINING -(rentalLocationPenaltyCharge;rent
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocat
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
THEN INSERT INTO rentalLocationPenaltyCh
SELECTFROM 'a' [RentalCase]*'b' [Amo

(TO MAINTAIN -(rentalLocationPenal
PICK a,b FROM rentalLocationPenaltyCharg
THEN INSERT INTO arg3[CompRentalCharge*Am
SELECTFROM 'b' [CompRentalCharge]*'.

(TO MAINTAIN -(rentalLocationPenal
(MAINTAINING -(rentalLocationPenaltyCharge;rent

```

```

NEW x:Amount;
ALL of INSERT INTO rentalLocationPenaltyCharge
    SELECTFROM 'a' [RentalCase]*'b' [CompRentalCharge*Amount]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    INSERT INTO arg3[CompRentalCharge*Amount]
    SELECTFROM 'b' [CompRentalCharge]*'a' [RentalCase]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge) \ I[Amount] FROM UNI r
    THEN BLOCK
    (CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger re
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessPeriod) \ I[Amount] FROM UNI r
    (MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (MAINTAINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \ I[Amount] FROM UNI r

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----- Derivation ----->

```

ALL of INSERT INTO Isn{dety=Amount}
    SELECTFROM ((rentalPenaltyCharge /\ Delta)~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessPeriod) \ I[Amount] FROM UNI r
    (TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessPeriod) \ I[Amount] FROM UNI r
    (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (TO MAINTAIN -(rentalPenaltyCharge~;rentalPenaltyCharge) \ I[Amount] FROM UNI r
    INSERT INTO rentalCharge[RentalCase*Amount]
    SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]*'b' [CompRentalCharge*Amount]) \ I[Amount] FROM UNI r
    THEN INSERT INTO rentalBasicCharge[RentalCase*Amount]
    SELECTFROM 'a' [RentalCase]*'b' [Amount]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) \ I[Amount] FROM UNI r
    PICK a,b FROM rentalBasicCharge~;'a' [RentalCase]*'b' [CompRentalCharge*Amount] \ I[Amount] FROM UNI r
    THEN INSERT INTO arg1[CompRentalCharge*Amount]
    SELECTFROM 'b' [CompRentalCharge]*'a' [Amount]

```



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        (TO MAINTAIN -(rentalLocationPenaltyCharge
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
    ALL of INSERT INTO rentalBasicCharge[RentalCase*Am
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

        (TO MAINTAIN -(rentalLocationPenaltyCharge
INSERT INTO arg1[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalL
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
    THEN INSERT INTO rentalPenaltyCharge[RentalCa
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalLocationPenaltyCha
        PICK a,b FROM rentalPenaltyCharge~;('a'[Renta
    THEN INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Am

        (TO MAINTAIN -(rentalLocationPenaltyCha
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
    ALL of INSERT INTO rentalPenaltyCharge[RentalCase*
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

        (TO MAINTAIN -(rentalLocationPenaltyCharge
INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalL
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
    THEN INSERT INTO rentalLocationPenaltyCharge[
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalLocationPenaltyCha
        PICK a,b FROM rentalLocationPenaltyCharge~;('
    THEN INSERT INTO arg3[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Am

        (TO MAINTAIN -(rentalLocationPenaltyCha
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
    ALL of INSERT INTO rentalLocationPenaltyCharge[Ren

```

```

SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

(TO MAINTAIN -(rentalLocationPenaltyCharge
INSERT INTO arg3[CompRentalCharge*Amount]
SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

(TO MAINTAIN -(rentalLocationPenaltyCharge
(MAINTAINING -(rentalLocationPenaltyCharge;rentalL
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCh
PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\
THEN BLOCK
(CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger rental
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
(MAINTAINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UNI rental

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalPenaltyCharge[RentalCase*Amount] EXECUTE -- (ECA r
ALL of ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfD

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;((-rentalPenaltyCharge~ /\ comp

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfD

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;((-rentalPenaltyCharge /\ (rentalExcess

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;((-rentalPenaltyCharge /\ (ren

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;((-rentalPenaltyCharge~ /\ comp

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;

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```

DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessT

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;
(MAINTAINING  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge;

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge;

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge;

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINTAINING  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM  ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
      SELECTFROM  computedTariffedCharge;((-rentalPenaltyCharge~ /\ computedT

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;
DELETE FROM rcAssignedCar[RentalCase*Car]

```

```

SELECTFROM ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carTy
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;((-rentalPenaltyCharge /\ (rentalExcessPerio

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carTy
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;((-rentalPenaltyCharge /\ (rentalEx

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carTy
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;((-rentalPenaltyCharge~ /\ computedT

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carTy
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessTa

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carTy
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exces
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ -Del

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ -Del

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ -Del

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ -Delt

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff

```

```

(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge)
<-----End Derivation --

ON INSERT Delta IN computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
ONE OF INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM ((computedLocationPenaltyCharge \/ Delta)~;computedLocationPenaltyCharge)
      (TO MAINTAIN -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge)
      INSERT INTO Isn{detyp=DistanceBetweenLocations}
      SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBetweenLocations]
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
(MAINAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ Delta)
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLocationPenaltyCharge)

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM ((computedLocationPenaltyCharge \/ Delta)~;computedLocationPenaltyCharge)
      (TO MAINTAIN -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge)
      INSERT INTO Isn{detyp=DistanceBetweenLocations}
      SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBetweenLocations]
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

```

```

(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ I[Amo
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLo

```

<-----End Derivation --

```

ON DELETE Delta FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amou
ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM -(rentalLocationPenaltyCharge;(computedLocationPenaltyCharge

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM -((computedLocationPenaltyCharge /\ -Delta);rentalLocationPe

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM -(rentalLocationPenaltyCharge;(computedLocationPenaltyCharge

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM -((computedLocationPenaltyCharge /\ -Delta);rentalLocationPe

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM Isn{dety=DistanceBetweenLocations}
      SELECTFROM -((computedLocationPenaltyCharge /\ -Delta);(computedLocation

      (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyChar
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;compu

```

----- Derivation ----->

```

ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM -(rentalLocationPenaltyCharge;(computedLocationPenaltyCharge /\ -

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dist
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM -((computedLocationPenaltyCharge /\ -Delta);rentalLocationPenalty

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dist
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM -(rentalLocationPenaltyCharge;(computedLocationPenaltyCharge /\ -

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dist

```

```

DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM -((computedLocationPenaltyCharge /\ -Delta);rentalLocationPenaltyCharge;

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
DELETE FROM Isn{dety=DistanceBetweenLocations}
SELECTFROM -((computedLocationPenaltyCharge /\ -Delta);(computedLocationPenaltyCharge;

(TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;I[DistanceBetweenLocations]
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~)
(MAINTAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ I[Amount]
(MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLocationPenaltyCharge;

<-----End Derivation --

```

```

ON INSERT Delta IN rentalLocationPenaltyCharge[RentalCase*Amount] EXECUTE --
ALL of INSERT INTO Isn{dety=Amount}
SELECTFROM ((rentalLocationPenaltyCharge \/ Delta)~;(rcDroppedOffBranch;distbranch~)

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~)
(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~)
(TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge)
INSERT INTO rentalCharge[RentalCase*Amount]
SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge)

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge)
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
THEN INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM 'a'[RentalCase]*'b'[Amount]

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~)
PICK a,b FROM rentalBasicCharge~;('a'[RentalCase]
THEN INSERT INTO arg1[CompRentalCharge*Amount]
SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~)
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
NEW x:Amount;
ALL of INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM 'a'[RentalCase]*'b'[CompRentalCharge]

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~)
INSERT INTO arg1[CompRentalCharge*Amount]
SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

```



```

        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /
PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\
THEN BLOCK
        (CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger re
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINTAINING -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I[Am

```

----- Derivation ----->

```

ALL of INSERT INTO Isn{dety=Amount}
    SELECTFROM ((rentalLocationPenaltyCharge \/ Delta)~;(rcDroppedOffBranch;distbranch~ /\
    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
    (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
    (TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I
    INSERT INTO rentalCharge[RentalCase*Amount]
    SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
    (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ renta
    INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]
    ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalLocationPenaltyCharge;(renta
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalC
    THEN INSERT INTO rentalBasicCharge[RentalCase*Amount]
    SELECTFROM 'a'[RentalCase]*'b'[Amount]
    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
    PICK a,b FROM rentalBasicCharge~;'a'[RentalCase]*'b'[Amount]
    THEN INSERT INTO arg1[CompRentalCharge*Amount]
    SELECTFROM 'b'[CompRentalCharge]*'a'[RentalCase]*'b'[Amount]
    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
    NEW x:Amount;
    ALL of INSERT INTO rentalBasicCharge[RentalCase*Amount]
    SELECTFROM 'a'[RentalCase]*'b'[CompRentalCharge*Amount]
    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
    INSERT INTO arg1[CompRentalCharge*Amount]
    SELECTFROM 'b'[CompRentalCharge]*'a'[RentalCase]*'b'[Amount]
    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\

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(MAINTEINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTEINING -(rentalLocationPenaltyCharge;rentalLocationPe
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
    THEN INSERT INTO rentalPenaltyCharge[RentalCa
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalLocationPenaltyCha
PICK a,b FROM rentalPenaltyCharge~;('a'[Renta
    THEN INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Am

        (TO MAINTAIN -(rentalLocationPenaltyCha
(MAINTEINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
    ALL of INSERT INTO rentalPenaltyCharge[RentalCase*
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

        (TO MAINTAIN -(rentalLocationPenaltyCharge
    INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
        (MAINTAINING -(rentalLocationPenaltyCharge;rentall
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINTEINING -(rentalLocationPenaltyCharge;rentalLocationPe
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
    THEN INSERT INTO rentalLocationPenaltyCharge[
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalLocationPenaltyCha
PICK a,b FROM rentalLocationPenaltyCharge~;('
    THEN INSERT INTO arg3[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Am

        (TO MAINTAIN -(rentalLocationPenaltyCha
(MAINTEINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
    ALL of INSERT INTO rentalLocationPenaltyCharge[Ren
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalC

        (TO MAINTAIN -(rentalLocationPenaltyCharge
    INSERT INTO arg3[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
        (MAINTAINING -(rentalLocationPenaltyCharge;rentall
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLoc
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPe
(MAINTEINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCh
PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\

```

```

        THEN BLOCK
            (CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger rental
            (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
            (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
            (MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
            (MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
            (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
            (MAINTAINING -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I[Amount]

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalLocationPenaltyCharge[RentalCase*Amount] EXECUTE
ALL of ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
    SELECTFROM ((-rentalLocationPenaltyCharge /\ (rcDroppedOffBranch;
        (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropo
        DELETE FROM distbranch[DistanceBetweenLocations*Branch]
        SELECTFROM computedLocationPenaltyCharge;((-rentalLocationPenalty
        (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropo
        DELETE FROM contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM ((-rentalLocationPenaltyCharge /\ (rcDroppedOffBranch;
        (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropo
        DELETE FROM distbranch[DistanceBetweenLocations*Branch]
        SELECTFROM computedLocationPenaltyCharge;((-rentalLocationPenalty
        (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropo
        DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations
        SELECTFROM (distbranch;rcDroppedOffBranch~ /\ distbranch;contract
        (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropo
        (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
        ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
        SELECTFROM (-((rentalLocationPenaltyCharge /\ -Delta);computedLoc
        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropof
        DELETE FROM distbranch[DistanceBetweenLocations*Branch]
        SELECTFROM -(computedLocationPenaltyCharge;(rentalLocationPenalt
        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropof
        DELETE FROM contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM (-((rentalLocationPenaltyCharge /\ -Delta);computedLoc
        (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropof
        DELETE FROM distbranch[DistanceBetweenLocations*Branch]
        SELECTFROM -(computedLocationPenaltyCharge;(rentalLocationPenalt

```

```

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINAINING  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  (- (V[RentalCase*CompRentalCharge]; (arg1;rentalBasicCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  (- (V[RentalCase*CompRentalCharge]; (arg1;rentalBasicCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  (- (V[RentalCase*CompRentalCharge]; (arg1;rentalBasicCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
(MAINAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
(MAINAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM  ((-rentalLocationPenaltyCharge /\ (rcDroppedOffBranch;distbranch~ /\

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM  computedLocationPenaltyCharge;((-rentalLocationPenaltyCharge /\

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM  ((-rentalLocationPenaltyCharge /\ (rcDroppedOffBranch;distbranch~ /\

```

```

(TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;((-rentalLocationPenaltyCharge

(TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amou
SELECTFROM (distbranch;rcDroppedOffBranch~ /\ distbranch;contractedDro

(TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM (-((rentalLocationPenaltyCharge /\ -Delta);computedLocation

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM -(computedLocationPenaltyCharge;(rentalLocationPenaltyChar

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM (-((rentalLocationPenaltyCharge /\ -Delta);computedLocation

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM -(computedLocationPenaltyCharge;(rentalLocationPenaltyChar

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~

```

```

        (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
DELETE FROM Isn{dety=RentCase}
        SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

        (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
        (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena

```

<-----End Derivation --

```

ON INSERT Delta IN rentalCharge[RentalCase*Amount] EXECUTE      -- (ECA rule 71)
ALL of INSERT INTO Isn{dety=Amount}
        SELECTFROM  ((rentalCharge /\ Delta)~;rentalIsPaidQ;'Yes'[YesNoAnswer];re

        (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
        (TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
        (TO MAINTAIN  -(rentalCharge~;rentalCharge) /\ I[Amount] FROM UNI rentalC
INSERT INTO Isn{dety=RentalCase}
        SELECTFROM  (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

        (MAINTAINING  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
        (MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
        (MAINTAINING  -(rentalCharge~;rentalCharge) /\ I[Amount] FROM UNI rentalCharge::R

```

----- Derivation ----->

```

ALL of INSERT INTO Isn{dety=Amount}
        SELECTFROM  ((rentalCharge /\ Delta)~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalI

        (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
        (TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
        (TO MAINTAIN  -(rentalCharge~;rentalCharge) /\ I[Amount] FROM UNI rentalCharge
INSERT INTO Isn{dety=RentalCase}
        SELECTFROM  (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

        (MAINTAINING  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]) /\ r
        (MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
        (MAINTAINING  -(rentalCharge~;rentalCharge) /\ I[Amount] FROM UNI rentalCharge::Rental

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalCharge[RentalCase*Amount] EXECUTE      -- (ECA rule 72)
ALL of ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]

```

```

SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~)

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge~ /\ -Delta)~)

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~)

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[Rental
ONE OF DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalP

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;((-rentalCharge~ /\ computedRental

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalP

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;((-rentalCharge~ /\ computedRental

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalP

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;((-rentalCharge~ /\ computedRental

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;ar
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ r
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~) /\ r

```

```

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[Re
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM  (-((rentalCharge /\ -Delta);(rentalCharge~ /\ -Delta~)) /\

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[Re
DELETE FROM Isn{dety=Rentalcas}
      SELECTFROM  -((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~) /\ re

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[Re
(MAINTAINING  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase
ONE OF DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalPenalt

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
DELETE FROM arg1[CompRentalCharge*Amount]
      SELECTFROM  computedRentalCharge;((-rentalCharge~ /\ computedRentalChar

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalPenalt

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
DELETE FROM arg2[CompRentalCharge*Amount]
      SELECTFROM  computedRentalCharge;((-rentalCharge~ /\ computedRentalChar

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalPenalt

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
DELETE FROM arg3[CompRentalCharge*Amount]
      SELECTFROM  computedRentalCharge;((-rentalCharge~ /\ computedRentalChar

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM  (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\ ar

      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /
(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rental
(MAINTAINING  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]) \ / r
(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio

```

<-----End Derivation --

```

ON INSERT Delta IN rcMaxRentalDuration[RentalCase*Integer] EXECUTE  -- (ECA ru
ALL of INSERT INTO Isn{dety=Integer}
      SELECTFROM  ((rcMaxRentalDuration \ / Delta)~;contractedPickupBranch;branch

```



```

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
(TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[Integer] F
INSERT INTO dateIntervalCompTrigger[Date*Date]
  SELECTFROM (contractedStartDate~;rcMaxRentalDuration;(rcMaxRentalDuration
(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurat
INSERT INTO Isn{detyP=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;(r
  THEN INSERT INTO contractedStartDate[RentalCase*Date]
    SELECTFROM 'a'[RentalCase]*'b'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
  PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;(r
  THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
    THEN INSERT INTO dateIntervalCompTrigger
      SELECTFROM 'a'[Date]*'b'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration
    PICK a,b FROM dateIntervalCompTrigger~;(
    THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDurat
    NEW x:Date;
    ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM 'a'[Date]*'b'[RentalCase]*'c'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
    INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]*'c'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contrac
    NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration \/ I[Integer] F

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Date]
      THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration

```

```

        PICK a,b FROM dateIntervalCompTrigger~;('x'
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration)
        NEW x:Date;
        ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
            SELECTFROM 'x'[Date]*((rcMaxRentalDuration;rcMaxRentalDuration)

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration)
        INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM ((rcMaxRentalDuration \ Del

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contr
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contrac
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedStartDate~;rc
        THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
            SELECTFROM 'a'[Date]*'b'[Date]

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration)
        PICK a,b FROM dateIntervalCompTrigger~;((contractedStartDate~;rcMaxRentalDuration)
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration)
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
        NEW x:Date;
        ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
            SELECTFROM ((contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
        INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM ((rcMaxRentalDuration \ Delta);rcMaxRentalDuration)

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration)
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRentalDuration)
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration)
        PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRentalDuration)

```

```

THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
    SELECTFROM 'a'[Date]*'b'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;(rcMaxRentalDuration \ /

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;
    INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'x'[Date]*((rcMaxRentalDuration;(rcMaxRentalD

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contract
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
    (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRental
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \ / I[Integer] FROM UNI

```

----- Derivation ----->

```

ALL of INSERT INTO Isn{detyp=Integer}
    SELECTFROM ((rcMaxRentalDuration \ / Delta)~;contractedPickupBranch;branchOf;m

    (TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
    (TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \ / I[Integer] FROM U
    INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM (contractedStartDate~;rcMaxRentalDuration;(rcMaxRentalDuration \ /

    (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;
    INSERT INTO Isn{detyp=RentalCase}
        SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;(rcMaxR
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

            (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
    PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;(rcMaxR
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Date]
        THEN INSERT INTO dateIntervalCompTrigger[Date
            SELECTFROM 'a'[Date]*'b'[Date]

```

```

        (TO MAINTAIN -(rcMaxRentalDuration;rcMa
PICK a,b FROM dateIntervalCompTrigger~;('a' [D
THEN INSERT INTO contractedEndDate[RentalCase
        SELECTFROM 'b' [RentalCase]*'a' [Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMa
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDura
NEW x:Date;
        ALL of INSERT INTO dateIntervalCompTrigger [Date*Da
        SELECTFROM 'a' [Date]*'b' [RentalCase]*'x' [D

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRe
INSERT INTO contractedEndDate[RentalCase*Da
        SELECTFROM 'b' [RentalCase]*'a' [Date]*'x' [D

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRe
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDura
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDura
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEn
NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration /\ Delt

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ co
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Date]*((
        THEN INSERT INTO dateIntervalCompTrigger [Date*Da
        SELECTFROM 'a' [Date]*'b' [Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRe
PICK a,b FROM dateIntervalCompTrigger~;('x' [Date]
THEN INSERT INTO contractedEndDate[RentalCase*Da
        SELECTFROM 'b' [RentalCase]*'a' [Date]

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRe
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
NEW x:Date;
        ALL of INSERT INTO dateIntervalCompTrigger [Date*Date]
        SELECTFROM 'x' [Date]*((rcMaxRentalDuration;(r

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRenta
INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration /\ Delta);r

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRenta
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDura
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ con
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contracted
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEn

```

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(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedStartDate~;rcMaxR
      THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rc
      PICK a,b FROM dateIntervalCompTrigger~;((contractedStartDate~;rc
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rc
(MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDura
NEW x:Date;
      ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM ((contractedStartDate~;rcMaxRentalDuration;(rcMaxR

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMax
      INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration /\ Delta);rcMaxRentalDura

      (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMax
      (MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDu
      (MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDura
      (MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~ /
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;(rcMaxR
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;co
      PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;(rcMaxR
      THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;co
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDa
NEW x:Date;
      ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;(rcMaxRentalDuration /\ Delt

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contr
      INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'x'[Date]*((rcMaxRentalDuration;(rcMaxRentalDura

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contr
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDa
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate /\ c
(MAINAINING -(contractedPickupBranch;branchOf;maxRentalDuration) /\ rcMaxRentalDurat
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract

```

```

(MAINTEINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTEINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTEINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[Integer] FROM UNI rcMax

```

<-----End Derivation --

```

ON DELETE Delta FROM rcMaxRentalDuration[RentalCase*Integer] EXECUTE    -- (ECA
ONE OF DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM ((-rcMaxRentalDuration /\ contractedPickupBranch;branchOf;maxR

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcM
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM contractedPickupBranch~;((-rcMaxRentalDuration /\ contractedP

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcM
DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
      SELECTFROM branchOf~;contractedPickupBranch~;((-rcMaxRentalDuration /\ c

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcM
(MAINTEINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRental

```

----- Derivation ----->

```

ONE OF DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM ((-rcMaxRentalDuration /\ contractedPickupBranch;branchOf;maxRenta

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRen
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM contractedPickupBranch~;((-rcMaxRentalDuration /\ contractedPickup

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRen
DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
      SELECTFROM branchOf~;contractedPickupBranch~;((-rcMaxRentalDuration /\ contra

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRen
(MAINTEINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat

```

<-----End Derivation --

```

ON INSERT Delta IN dateIntervalCompTrigger[Date*Date] EXECUTE    -- (ECA rule 75
INSERT INTO Isn{detyp=Date}
      SELECTFROM (Delta;Delta~ /\ I[Date]) - I[Date] \/ (Delta~;Delta /\ I[Date]) - I

```

----- Derivation ----->

```

INSERT INTO Isn{dety=Date}
  SELECTFROM (Delta;Delta~ /\ I[Date]) - I[Date] \/ (Delta~;Delta /\ I[Date]) - I[Date]

```

<-----End Derivation --

```

ON DELETE Delta FROM dateIntervalCompTrigger[Date*Date] EXECUTE    -- (ECA rule '
ALL of ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
  SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
  SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
  SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
  SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedStartDate[RentalCase*Date]
  SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedStartDate[RentalCase*Date]
  SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM Isn{dety=RentalCase}
  SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Del

  (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
  SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;-(contracted

  (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
  SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -Del

  (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
  SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

```

```

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedEndD

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -De

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contracted

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -De

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delt

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurati
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;contractedSta

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;contractedEndDate

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.

```



```

DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;contractedStartDa

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;contractedEnd

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;contractedSta

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contr

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurati
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Del

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~ /\ -Del

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;(-(contracted

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]

```

```

SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~ /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedStar
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~ /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contracted
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEnd
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);
(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]

```

```

SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~));

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Delta));

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~));

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);c

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;(-(contractedEndDa

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -Delta));

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~))

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedEndDate;(

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -Delta);

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~))

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contractedEndDa

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -Delta);

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~))

```

```

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~))

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~ /
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate;

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contracted

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;contractedStartDat

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;contractedEndDate;((-d

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contracted

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;contractedStartDate;((

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;contractedEndDate;

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contracted

```

```

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;contractedStartDat

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contracted

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contracte

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
(MAINTAINING  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;c
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM  (- (contractedStartDate;(dateIntervalCompTrigger /\ -Delta))

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedEndDate;(-((dateIntervalCompTrigger~ /\ -Delta~);

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;(-(contractedStart

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM  (- (contractedStartDate;(dateIntervalCompTrigger /\ -Delta))

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-((dateIntervalCompTrigger~ /\ -Delta~);

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedStartDate

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM  (- (contractedStartDate;(dateIntervalCompTrigger /\ -Delta))

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-((dateIntervalCompTrigger~ /\ -Delta~);

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contractedStart

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD

```

```

DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Delta))

      (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate /\ c
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract

<-----End Derivation --

ON INSERT Delta IN arg1[CompRentalCharge*Amount] EXECUTE -- (ECA rule 77)
ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalBasicCharge;(arg1 \/ Delta)~ /\ rentalPenaltyCharge;arg1~

      (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;(arg1 \/ Delta)~ /\ rentalPenaltyCharge;arg2~

      (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (arg3;arg3~ /\ arg2;arg2~ /\ arg1;(arg1 \/ Delta)~ /\ -I[CompRentalCharge]

      (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((arg1 \/ Delta)~;arg1 /\ -I[Amount]) \/ ((arg1 \/ Delta)~;Delta)

      (TO MAINTAIN -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FR
(MAINTAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount)

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalBasicCharge;(arg1 \/ Delta)~ /\ rentalPenaltyCharge;arg2~ /\

      (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ renta

```

```

INSERT INTO Isn{dety=Amount}
  SELECTFROM rentalCharge~;(rentalBasicCharge;(arg1 \/ Delta)~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
INSERT INTO Isn{dety=CompRentalCharge}
  SELECTFROM (arg3;arg3~ /\ arg2;arg2~ /\ arg1;(arg1 \/ Delta)~ /\ -I[CompRentalCharge]

(TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{dety=Amount}
  SELECTFROM ((arg1 \/ Delta)~;arg1 /\ -I[Amount]) \/ ((arg1 \/ Delta)~;Delta /\ I[Amount])

(TO MAINTAIN -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount
INSERT INTO Isn{dety=CompRentalCharge}
  SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{dety=Amount}
  SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;
(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM UNI arg1::CompRentalCharge*Amount
(MAINTAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount
(MAINTAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount

```

<-----End Derivation --

```

ON DELETE Delta FROM arg1[CompRentalCharge*Amount] EXECUTE -- (ECA rule 78)
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
  SELECTFROM (-((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
  SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
  SELECTFROM (-((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
  SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~
DELETE FROM rentalBasicCharge[RentalCase*Amount]
  SELECTFROM (-((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~
DELETE FROM rentalBasicCharge[RentalCase*Amount]

```

```

SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBas

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM Isn{detyp=CompRentalCharge}
SELECTFROM -((arg1 /\ -Delta);(arg1 /\ -Delta)~) /\ I[CompRentalCharge]

(TO MAINTAIN -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1:
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINTAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*

```

----- Derivation ----->

```

ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCha

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCha

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCha

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{detyp=CompRentalCharge}
SELECTFROM -((arg1 /\ -Delta);(arg1 /\ -Delta)~) /\ I[CompRentalCharge]

```



```

      (TO MAINTAIN  -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1::Comp
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPen
(MAINAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount

```

<-----End Derivation --

```

ON INSERT Delta IN arg2[CompRentalCharge*Amount] EXECUTE      -- (ECA rule 79)
ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 \/ Delta)~ /\
      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
      (TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (arg3;arg3~ /\ arg2;(arg2 \/ Delta)~ /\ arg1;arg1~ /\ -I[CompRentalCharge]
      (TO MAINTAIN  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((arg2 \/ Delta)~;arg2 /\ -I[Amount]) \/ ((arg2 \/ Delta)~;Delta)
      (TO MAINTAIN  -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]
      INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]
      (MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM
(MAINAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*Amount

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 \/ Delta)~ /\
      (TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
INSERT INTO Isn{dety=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2~ /\
      (TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=CompRentalCharge}

```

```

SELECTFROM (arg3;arg3~ /\ arg2;(arg2 \/ Delta)~ /\ arg1;arg1~ /\ -I[CompRentalCharge]
(TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{detyp=Amount}
SELECTFROM ((arg2 \/ Delta)~;arg2 /\ -I[Amount]) \/ ((arg2 \/ Delta)~;Delta /\ -I[Amount])

(TO MAINTAIN -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
INSERT INTO Isn{detyp=CompRentalCharge}
SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{detyp=Amount}
SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge)
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge)
(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*Amount)

<-----End Derivation --

```

```

ON DELETE Delta FROM arg2[CompRentalCharge*Amount] EXECUTE -- (ECA rule 80)
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -I[CompRentalCharge])
(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ I[CompRentalCharge]
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ I[CompRentalCharge])

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ I[CompRentalCharge]
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -I[CompRentalCharge])

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ I[CompRentalCharge]
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ I[CompRentalCharge])

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ I[CompRentalCharge]
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -I[CompRentalCharge])

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ I[CompRentalCharge]
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ I[CompRentalCharge])

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ I[CompRentalCharge]
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -I[CompRentalCharge])

```

```

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM Isn{dety=CompRentalCharge}
      SELECTFROM  -((arg2 /\ -Delta);(arg2 /\ -Delta)~) /\ I[CompRentalCharge]

      (TO MAINTAIN  -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UNI arg2:
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINTAINING  -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTAINING  -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*

```

----- Derivation ----->

```

ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ (arg

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ (arg

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ (arg

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{dety=CompRentalCharge}
      SELECTFROM  -((arg2 /\ -Delta);(arg2 /\ -Delta)~) /\ I[CompRentalCharge]

      (TO MAINTAIN  -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UNI arg2::Comp
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
(MAINTAINING  -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTAINING  -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*Amoun

```

<-----End Derivation --

```

ON INSERT Delta IN arg3[CompRentalCharge*Amount] EXECUTE    -- (ECA rule 81)
ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
    SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc

    (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc
INSERT INTO Isn{dety=Amount}
    SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc

    (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc
INSERT INTO Isn{dety=CompRentalCharge}
    SELECTFROM (arg3;(arg3 \/ Delta)~ /\ arg2;arg2~ /\ arg1;arg1~ /\ -I[CompRentalCharge]

    (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{dety=Amount}
    SELECTFROM ((arg3 \/ Delta)~;arg3 /\ -I[Amount]) \/ ((arg3 \/ Delta)~;Delta /\ -I[Amount])

    (TO MAINTAIN -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
INSERT INTO Isn{dety=CompRentalCharge}
    SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{dety=Amount}
    SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc
(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTAINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*Amount)

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
    SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc

    (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc
INSERT INTO Isn{dety=Amount}
    SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc

    (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc
INSERT INTO Isn{dety=CompRentalCharge}
    SELECTFROM (arg3;(arg3 \/ Delta)~ /\ arg2;arg2~ /\ arg1;arg1~ /\ -I[CompRentalCharge]

    (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{dety=Amount}
    SELECTFROM ((arg3 \/ Delta)~;arg3 /\ -I[Amount]) \/ ((arg3 \/ Delta)~;Delta /\ -I[Amount])

    (TO MAINTAIN -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)

```

```

INSERT INTO Isn{dety=CompRentalCharge}
SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{dety=Amount}
SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTEINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTEINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTEINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM Un
(MAINTEINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*Amount

<-----End Derivation --

```

```

ON DELETE Delta FROM arg3[CompRentalCharge*Amount] EXECUTE -- (ECA rule 82)
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ r

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ r

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ r

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ re

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM Isn{dety=CompRentalCharge}
SELECTFROM -((arg3 /\ -Delta);(arg3 /\ -Delta)~) /\ I[CompRentalCharge]

(TO MAINTAIN -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UNI arg3:
(MAINTEINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental

```

```
(MAINTAINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*
```

----- Derivation ----->

```
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rental

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ arg2

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rental

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ arg2

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (-(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rental

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (-(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\ arg2

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM (-(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalL

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{detyp=CompRentalCharge}
      SELECTFROM -(arg3 /\ -Delta);(arg3 /\ -Delta)~) /\ I[CompRentalCharge]

      (TO MAINTAIN -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UNI arg3::Comp
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
(MAINTAINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*Amoun
```

<-----End Derivation --

```
ON INSERT Delta IN computedRentalCharge[CompRentalCharge*Amount] EXECUTE -- (
ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ ren
```

```

(TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=Amount}
      SELECTFROM (rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN  -((rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((computedRentalCharge \ / Delta)~;computedRentalCharge /\ -I[Amount]

(TO MAINTAIN  -((computedRentalCharge~;I[CompRentalCharge];computedRentalCharge~;I[CompRentalCharge]
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocation;
(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocation;
(MAINTAINING  -I[CompRentalCharge] \ / computedRentalCharge;computedRentalCharge~ FROM
(MAINTAINING  -(computedRentalCharge~;computedRentalCharge) \ / I[Amount] FROM UNI comp

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocation;

(TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocation;
INSERT INTO Isn{dety=Amount}
      SELECTFROM (rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN  -((rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((computedRentalCharge \ / Delta)~;computedRentalCharge /\ -I[Amount]

(TO MAINTAIN  -((computedRentalCharge~;I[CompRentalCharge];computedRentalCharge~;I[CompRentalCharge]
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (Delta;Delta~ /\ I[CompRentalCharge]) - I[CompRentalCharge]

INSERT INTO Isn{dety=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocation;
(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocation;
(MAINTAINING  -I[CompRentalCharge] \ / computedRentalCharge;computedRentalCharge~ FROM
(MAINTAINING  -(computedRentalCharge~;computedRentalCharge) \ / I[Amount] FROM UNI comp

```

<-----End Derivation --

```

ON DELETE Delta FROM computedRentalCharge[CompRentalCharge*Amount] EXECUTE  --
DELETE FROM Isn{dety=CompRentalCharge}
SELECTFROM -((computedRentalCharge /\ -Delta);(computedRentalCharge /\ -Delta)~

(TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~

----- Derivation ----->

```

```

DELETE FROM Isn{dety=CompRentalCharge}
SELECTFROM -((computedRentalCharge /\ -Delta);(computedRentalCharge /\ -Delta)~) /\

(TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM

<-----End Derivation --

```

```

ON INSERT Delta IN earliestDate[DateDifferencePlusOne*Date] EXECUTE  -- (ECA r
ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;(earliestDate \/ Delta)~ /\ rcDroppedOffDate;la

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;la
INSERT INTO Isn{dety=Integer}
SELECTFROM rentalPeriod~;(contractedStartDate;(earliestDate \/ Delta)~ /\

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDrope
INSERT INTO Isn{dety=DateDifferencePlusOne}
SELECTFROM (earliestDate;(earliestDate \/ Delta)~ /\ latestDate;latestDate~

(TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;(earliestDate \/ Delta)~ /\ contractedEndDa

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;l
INSERT INTO Isn{dety=Integer}
SELECTFROM projectedRentalPeriod~;(contractedStartDate;(earliestDate \/

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
INSERT INTO Isn{dety=Date}
SELECTFROM ((earliestDate \/ Delta)~;earliestDate /\ -I[Date]) \/ ((earl

(TO MAINTAIN -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestD
INSERT INTO Isn{dety=DateDifferencePlusOne}
SELECTFROM (Delta;Delta~ /\ I[DateDifferencePlusOne]) - I[DateDifference]

INSERT INTO Isn{dety=Date}
SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate

```



```

(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);
(MAINAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferen
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);
(MAINAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDiff
(MAINAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earliestDate

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
    SELECTFROM (contractedStartDate;(earliestDate \/ Delta)~ /\ rcDroppedOffDate;latestDate~);

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);
INSERT INTO Isn{detyp=Integer}
    SELECTFROM rentalPeriod~;(contractedStartDate;(earliestDate \/ Delta)~ /\ rcDroppedOffDate;latestDate~);

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);
INSERT INTO Isn{detyp=DateDifferencePlusOne}
    SELECTFROM (earliestDate;(earliestDate \/ Delta)~ /\ latestDate;latestDate~);

(TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
    SELECTFROM (contractedStartDate;(earliestDate \/ Delta)~ /\ contractedEndDate;latestDate~);

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);
INSERT INTO Isn{detyp=Integer}
    SELECTFROM projectedRentalPeriod~;(contractedStartDate;(earliestDate \/ Delta)~ /\ contractedEndDate;latestDate~);

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((earliestDate \/ Delta)~;earliestDate /\ -I[Date]) \/ ((earliestDate;earliestDate~);

(TO MAINTAIN -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDifferencePlusOne
INSERT INTO Isn{detyp=DateDifferencePlusOne}
    SELECTFROM (Delta;Delta~ /\ I[DateDifferencePlusOne]) - I[DateDifferencePlusOne];

INSERT INTO Isn{detyp=Date}
    SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date];

(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifference
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);c
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);c
(MAINAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDiff
(MAINAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earliestDate

```

<-----End Derivation --

```

ON DELETE Delta FROM earliestDate[DateDifferencePlusOne*Date] EXECUTE -- (ECA
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ contractedStartDate[RentalCase*Date])
      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta)~ /\ contractedStartDate[RentalCase*Date])
      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ contractedStartDate[RentalCase*Date])
      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ contractedStartDate[RentalCase*Date])
      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate[RentalCase*Date])
DELETE FROM Isn{dety=DateDifferencePlusOne}
      SELECTFROM -((earliestDate /\ -Delta);(earliestDate /\ -Delta)~) /\ I[DateDifferencePlusOne]
      (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate;I[DateDifferencePlusOne]
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
(MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::Date
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earliestDate;earliestDate~

```

----- Derivation ----->

```

ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      /\ rcDroppedOffDate[RentalCase*Date])

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta);contractedStartDate))

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      /\ rcDroppedOffDate[RentalCase*Date])

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta);contractedStartDate))

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate[RentalCase*Date])
      /\ rcDroppedOffDate[RentalCase*Date])

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ contractedEndDate[RentalCase*Date])
      /\ contractedEndDate[RentalCase*Date])

      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta);contractedStartDate))

      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ contractedEndDate[RentalCase*Date])
      /\ contractedEndDate[RentalCase*Date])

      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta);contractedStartDate))

      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ contractedEndDate[RentalCase*Date])
      /\ contractedEndDate[RentalCase*Date])

      (TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
      DELETE FROM Isn{detyp=DateDifferencePlusOne}
      SELECTFROM -((earliestDate /\ -Delta);(earliestDate /\ -Delta)~) /\ I[DateDifferencePlusOne]

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate)
      (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
      (MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDifferencePlusOne)

```

```

(MAINAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earliestDate;latestDate)

<-----End Derivation --

ON INSERT Delta IN latestDate[DateDifferencePlusOne*Date] EXECUTE -- (ECA rule)
ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
    SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(latestDate;latestDate)
    (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
    INSERT INTO Isn{detyp=Integer}
    SELECTFROM rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
    (TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
    INSERT INTO Isn{detyp=DateDifferencePlusOne}
    SELECTFROM (earliestDate;earliestDate~ /\ latestDate;(latestDate \/ Delta;latestDate)
    (TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
    INSERT INTO projectedRentalPeriod[RentalCase*Integer]
    SELECTFROM (contractedStartDate;earliestDate~ /\ contractedEndDate;(latestDate;latestDate)
    (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)
    INSERT INTO Isn{detyp=Integer}
    SELECTFROM projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)
    (TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)
    INSERT INTO Isn{detyp=Date}
    SELECTFROM ((latestDate \/ Delta)~;latestDate /\ -I[Date]) \/ ((latestDate;latestDate)
    (TO MAINTAIN -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifferencePlusOne
    INSERT INTO Isn{detyp=DateDifferencePlusOne}
    SELECTFROM (Delta;Delta~ /\ I[DateDifferencePlusOne]) - I[DateDifferencePlusOne]
    INSERT INTO Isn{detyp=Date}
    SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]
    (MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;latestDate)
    (MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;latestDate)
    (MAINAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
    (MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate;latestDate)
    (MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate;latestDate)
    (MAINAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifferencePlusOne
    (MAINAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate;latestDate)

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
    SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(latestDate;latestDate)

```



```

SELECTFROM -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(lat

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contract

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(lat

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -((contractedStartDate;earliestDate~ /\ contractedEndDate;(l

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDa
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contract

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDa
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -((contractedStartDate;earliestDate~ /\ contractedEndDate;(l

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDa
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contract

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDa
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedStartDate;earliestDate~ /\ contractedEndDate;(la

(TO MAINTAIN -(contractedEndDate;contractedEndDate~ /\ contractedStartDa
DELETE FROM Isn{dety=DateDifferencePlusOne}
SELECTFROM -((latestDate /\ -Delta);(latestDate /\ -Delta)~) /\ I[DateDi

(TO MAINTAIN -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contr
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDiffe
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latest

```

----- Derivation ----->

```

ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(latestD

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedSta

```

```

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(latestD

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedSta

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(latestDa

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ contractedEndDate;(latest

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;co
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedSta

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;co
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ contractedEndDate;(latest

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;co
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedSta

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;co
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ contractedEndDate;(latestD

      (TO MAINTAIN  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;co
DELETE FROM Isn{detyp=DateDifferencePlusOne}
      SELECTFROM  -((latestDate /\ -Delta);(latestDate /\ -Delta)~) /\ I[DateDiffere

      (TO MAINTAIN  -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~ FROM
(MAINAINING  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINAINING  -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contracted
(MAINAINING  -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifference
(MAINAINING  -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate:

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<-----End Derivation --

```

ON INSERT Delta IN computedRentalPeriod[DateDifferencePlusOne*Integer] EXECUTE
ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
      SELECTFROM  ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;lates

```

```

      (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~
INSERT INTO Isn{detyp=Integer}
      SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~

      (TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~
INSERT INTO Isn{detyp=Integer}
      SELECTFROM ((computedRentalPeriod \/ Delta)~;computedRentalPeriod /\ -I[Integer]

      (TO MAINTAIN -(computedRentalPeriod~;I[DateDifferencePlusOne];computedRentalPeriod;latestDate~
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM ((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~

      (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~
INSERT INTO Isn{detyp=Integer}
      SELECTFROM (projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~

      (TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~
INSERT INTO Isn{detyp=DateDifferencePlusOne}
      SELECTFROM (Delta;Delta~ /\ I[DateDifferencePlusOne]) - I[DateDifferencePlusOne]

      INSERT INTO Isn{detyp=Integer}
      SELECTFROM (Delta~;Delta /\ I[Integer]) - I[Integer]

      (MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~
      (MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod;latestDate~
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~
      (MAINTAINING -(computedRentalPeriod~;computedRentalPeriod) \/ I[Integer] FROM UN

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
      SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~

      (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~
INSERT INTO Isn{detyp=Integer}
      SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~

      (TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~
INSERT INTO Isn{detyp=Integer}
      SELECTFROM ((computedRentalPeriod \/ Delta)~;computedRentalPeriod /\ -I[Integer]

      (TO MAINTAIN -(computedRentalPeriod~;I[DateDifferencePlusOne];computedRentalPeriod;latestDate~
INSERT INTO projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM ((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~

```



```

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~) /\
      INSERT INTO Isn{detyp=Integer}
      SELECTFROM (projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~) /\
      (TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~) /\
      INSERT INTO Isn{detyp=DateDifferencePlusOne}
      SELECTFROM (Delta;Delta~ /\ I[DateDifferencePlusOne]) - I[DateDifferencePlusOne]

      INSERT INTO Isn{detyp=Integer}
      SELECTFROM (Delta~;Delta /\ I[Integer]) - I[Integer]

      (MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);computedRentalPeriod~) /\
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);computedRentalPeriod~) /\
      (MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~) /\
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);computedRentalPeriod~) /\
      (MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);computedRentalPeriod~) /\
      (MAINTAINING -(computedRentalPeriod~;computedRentalPeriod) \/ I[Integer] FROM UNI com

<-----End Derivation --

      ON DELETE Delta FROM computedRentalPeriod[DateDifferencePlusOne*Integer] EXECUTE
      DELETE FROM Isn{detyp=DateDifferencePlusOne}
      SELECTFROM -((computedRentalPeriod /\ -Delta);(computedRentalPeriod /\ -Delta)~) /\

      (TO MAINTAIN  -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~)

----- Derivation ----->

      DELETE FROM Isn{detyp=DateDifferencePlusOne}
      SELECTFROM -((computedRentalPeriod /\ -Delta);(computedRentalPeriod /\ -Delta)~) /\

      (TO MAINTAIN  -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~)

<-----End Derivation --

      ON INSERT Delta IN ctcNrOfDays[CompTariffedCharge*Integer] EXECUTE      -- (ECA rule)
      ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;(ctcNrOfDays \/ Delta)~ /\ rcAssignedCar;carType;rentalPeriod) /\

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalPeriod) /\
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalBasicCharge~;(rentalPeriod;(ctcNrOfDays \/ Delta)~ /\ rcAssignedCar;carType;rentalPeriod) /\

      (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalPeriod) /\
      INSERT INTO rentalPenaltyCharge[RentalCase*Amount]

```

```

SELECTFROM (rentalExcessPeriod;(ctcNrOfDays \ / Delta)~ /\ rcAssignedCar;

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
INSERT INTO Isn{dety=Amount}
SELECTFROM rentalPenaltyCharge~;(rentalExcessPeriod;(ctcNrOfDays \ / Delt

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
INSERT INTO Isn{dety=CompTariffedCharge}
SELECTFROM (ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;(ctcNrOfDays \

(TO MAINTAIN -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays
INSERT INTO projectedBasicCharge[RentalCase*Amount]
SELECTFROM (projectedRentalPeriod;(ctcNrOfDays \ / Delta)~ /\ contractedC

(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;
INSERT INTO Isn{dety=Amount}
SELECTFROM projectedBasicCharge~;(projectedRentalPeriod;(ctcNrOfDays \ /

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
INSERT INTO Isn{dety=Integer}
SELECTFROM ((ctcNrOfDays \ / Delta)~;ctcNrOfDays /\ -I[Integer]) \ / ((ctc

(TO MAINTAIN -(ctcNrOfDays~;ctcNrOfDays) \ / I[Integer] FROM UNI ctcNrOfD
INSERT INTO Isn{dety=CompTariffedCharge}
SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharg

INSERT INTO Isn{dety=Integer}
SELECTFROM (Delta~;Delta /\ I[Integer]) - I[Integer]

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \ / I[
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINTAINING -(ctcNrOfDays~;ctcNrOfDays) \ / I[Integer] FROM UNI ctcNrOfDays::Comp
(MAINTAINING -I[CompTariffedCharge] \ / ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOf

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM (rentalPeriod;(ctcNrOfDays \ / Delta)~ /\ rcAssignedCar;carType;ren

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTari
INSERT INTO Isn{dety=Amount}
SELECTFROM rentalBasicCharge~;(rentalPeriod;(ctcNrOfDays \ / Delta)~ /\ rcAssi

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```

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (rentalExcessPeriod;(ctcNrOfDays \/ Delta)~ /\ rcAssignedCar;carTy

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exce
INSERT INTO Isn{detyp=Amount}
SELECTFROM rentalPenaltyCharge~;(rentalExcessPeriod;(ctcNrOfDays \/ Delta)~ /

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
INSERT INTO Isn{detyp=CompTariffedCharge}
SELECTFROM (ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;(ctcNrOfDays \/ Del

(TO MAINTAIN -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/
INSERT INTO projectedBasicCharge[RentalCase*Amount]
SELECTFROM (projectedRentalPeriod;(ctcNrOfDays \/ Delta)~ /\ contractedCarTyp

(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
INSERT INTO Isn{detyp=Amount}
SELECTFROM projectedBasicCharge~;(projectedRentalPeriod;(ctcNrOfDays \/ Delta

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
INSERT INTO Isn{detyp=Integer}
SELECTFROM ((ctcNrOfDays \/ Delta)~;ctcNrOfDays /\ -I[Integer]) \/ ((ctcNrOfD

(TO MAINTAIN -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::
INSERT INTO Isn{detyp=CompTariffedCharge}
SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharge]

INSERT INTO Isn{detyp=Integer}
SELECTFROM (Delta~;Delta /\ I[Integer]) - I[Integer]

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[CompT
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINTAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTari
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays:

<-----End Derivation --

ON DELETE Delta FROM ctcNrOfDays[CompTariffedCharge*Integer] EXECUTE -- (ECA :
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM (-((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;car

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod

```

```

DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta));

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;car

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta));

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;car

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -((rentalExcessPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedC

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta));

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalExcessPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedC

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -((projectedRentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ contrac

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta));

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -((projectedRentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ contrac

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta));

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((projectedRentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ contrac

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPe
DELETE FROM Isn{dety=CompTariffedCharge}
SELECTFROM -((ctcNrOfDays /\ -Delta);(ctcNrOfDays /\ -Delta)~) /\ I[Comp

```

```

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays
(MAINAINING  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[R
(MAINAINING  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])) \/ (rent
(MAINAINING  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;pro
(MAINAINING  -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI  ctcNrOfDays::Comp
(MAINAINING  -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT  ctcNrOf

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----- Derivation ----->

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ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM  -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;carType

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);renta

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;carType

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);renta

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM  -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;carType;

      (TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM  -((rentalExcessPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;c

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])) \/ (r
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);renta

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])) \/ (r
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM  -((rentalExcessPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcAssignedCar;ca

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])) \/ (r
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM  -((projectedRentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ contractedCa

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);proje

```

```

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM  -((projectedRentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ contractedCar

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);proje

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM Isn{dety=RentCase}
      SELECTFROM  -((projectedRentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ contractedCar

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM Isn{dety=CompTariffedCharge}
      SELECTFROM  -((ctcNrOfDays /\ -Delta);(ctcNrOfDays /\ -Delta)~) /\ I[CompTariff

      (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays~ FR
(MAINAINING  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINAINING  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExc
(MAINAINING  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projecte
(MAINAINING  -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTari
(MAINAINING  -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays:

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<-----End Derivation --

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ON INSERT Delta IN ctcDailyAmount[CompTariffedCharge*Amount] EXECUTE      -- (ECA :
ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  (rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTar

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rental
INSERT INTO Isn{dety=Amount}
      SELECTFROM  rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar

      (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssign
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  (rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exc

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
INSERT INTO Isn{dety=Amount}
      SELECTFROM  rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAs

      (TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ :
INSERT INTO Isn{dety=CompTariffedCharge}
      SELECTFROM  (ctcDailyAmount;(ctcDailyAmount \/ Delta)~ /\ ctcNrOfDays;ctc

      (TO MAINTAIN  -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays
INSERT INTO projectedBasicCharge[RentalCase*Amount]

```

```

SELECTFROM (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
INSERT INTO Isn{dety=Amount}
SELECTFROM projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
INSERT INTO Isn{dety=Amount}
SELECTFROM ((ctcDailyAmount /\ Delta)~;ctcDailyAmount /\ -I[Amount]) /\ contractedCarType;rentalTariffP

(TO MAINTAIN -(ctcDailyAmount~;ctcDailyAmount) /\ I[Amount] FROM UNI ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
INSERT INTO Isn{dety=CompTariffedCharge}
SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharge] FROM UNI ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP

INSERT INTO Isn{dety=Amount}
SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount] FROM UNI ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffP
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffP
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) /\ I[Amount] FROM UNI ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINTAINING -(ctcDailyAmount~;ctcDailyAmount) /\ I[Amount] FROM UNI ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINTAINING -I[CompTariffedCharge] /\ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP

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----- Derivation ----->

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ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
INSERT INTO Isn{dety=Amount}
SELECTFROM rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffP

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffP
INSERT INTO Isn{dety=Amount}
SELECTFROM rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffP

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffP
INSERT INTO Isn{dety=CompTariffedCharge}
SELECTFROM (ctcDailyAmount;(ctcDailyAmount /\ Delta)~ /\ ctcNrOfDays;ctcNrOfDays~) /\ I[Amount] FROM UNI ctcDailyAmount;ctcNrOfDays~ /\ contractedCarType;rentalTariffP

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(TO MAINTAIN  -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/
INSERT INTO projectedBasicCharge[RentalCase*Amount]
SELECTFROM (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)

(TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
INSERT INTO Isn{dety=Amount}
SELECTFROM projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)

(TO MAINTAIN  -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
INSERT INTO Isn{dety=Amount}
SELECTFROM ((ctcDailyAmount \/ Delta)~;ctcDailyAmount /\ -I[Amount]) \/ ((ctcDailyAmount - Delta) /\ I[Amount])

(TO MAINTAIN  -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount
INSERT INTO Isn{dety=CompTariffedCharge}
SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharge]

INSERT INTO Isn{dety=Amount}
SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffPerDay)
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffPerDay)
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[CompTariffedCharge]
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(MAINTAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount::
(MAINTAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDailyAmount

```

<-----End Derivation --

```

ON DELETE Delta FROM ctcDailyAmount[CompTariffedCharge*Amount] EXECUTE  -- (EC)
ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod)
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod)

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod)
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay)

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod)
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod)

(TO MAINTAIN  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod)

```



```

DELETE FROM Isn{dety=RentCase}
SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalT

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcess

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{dety=RentCase}
SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;e

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;r

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPer
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRen

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPer
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;r

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPer
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRen

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPer
DELETE FROM Isn{dety=RentCase}
SELECTFROM -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;re

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPer
DELETE FROM Isn{dety=CompTariffedCharge}
SELECTFROM -((ctcDailyAmount /\ -Delta);(ctcDailyAmount /\ -Delta)~) /\

(TO MAINTAIN -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDaily
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[R
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rent
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;pro
(MAINTAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmo
(MAINTAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT c

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----- Derivation ----->

```

ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM (-(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariff

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM (-(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~ /\

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM (-(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariff

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM (-(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod~ /\

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM (-(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariff

(TO MAINTAIN -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exces

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (r
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalExcessPerio

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (r
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM (-(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excess

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (r
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM (-(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rental

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM (-(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRentalPe

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM (-(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rental

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM (-(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;projectedRentalPe

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM (-(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalT

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        (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;
DELETE FROM Isn{dety=CompTariffedCharge}
        SELECTFROM  -((ctcDailyAmount /\ -Delta);(ctcDailyAmount /\ -Delta)~) /\ I[Com

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDailyAmount
(MAINTAINING  -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINTAINING  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExc
(MAINTAINING  -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projecte
(MAINTAINING  -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount::
(MAINTAINING  -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDai

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<-----End Derivation --

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ON INSERT Delta IN computedTariffedCharge[CompTariffedCharge*Amount] EXECUTE
ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
        SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTa

        (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rental
INSERT INTO Isn{dety=Amount}
        SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedC

        (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssign
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
        SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;ex

        (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType
INSERT INTO Isn{dety=Amount}
        SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcA

        (TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
INSERT INTO Isn{dety=Amount}
        SELECTFROM ((computedTariffedCharge \/ Delta)~;computedTariffedCharge /\

        (TO MAINTAIN  -(computedTariffedCharge~;I[CompTariffedCharge];computedTar
INSERT INTO projectedBasicCharge[RentalCase*Amount]
        SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;ren

        (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;
INSERT INTO Isn{dety=Amount}
        SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\

        (TO MAINTAIN  -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
INSERT INTO Isn{dety=CompTariffedCharge}
        SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharg

INSERT INTO Isn{dety=Amount}
        SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

```

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(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCh
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINAINING -(computedTariffedCharge~;computedTariffedCharge) \/ I[Amount] FROM

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----- Derivation ----->

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ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP

      (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTari
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;ca

      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
      INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT

      (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;exce
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssign

      (TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM ((computedTariffedCharge \/ Delta)~;computedTariffedCharge /\ -I[A

      (TO MAINTAIN -(computedTariffedCharge~;I[CompTariffedCharge];computedTariffed
      INSERT INTO projectedBasicCharge[RentalCase*Amount]
      SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa

      (TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ cont

      (TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
      INSERT INTO Isn{detyp=CompTariffedCharge}
      SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharge]

      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (Delta~;Delta /\ I[Amount]) - I[Amount]

(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay

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(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge~
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -(computedTariffedCharge~;computedTariffedCharge) \/ I[Amount] FROM UNI

<-----End Derivation --

```

```

ON DELETE Delta FROM computedTariffedCharge[CompTariffedCharge*Amount] EXECUTE
DELETE FROM Isn{dety=CompTariffedCharge}
SELECTFROM -((computedTariffedCharge /\ -Delta);(computedTariffedCharge /\ -Del

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedC

----- Derivation ----->

```

```

DELETE FROM Isn{dety=CompTariffedCharge}
SELECTFROM -((computedTariffedCharge /\ -Delta);(computedTariffedCharge /\ -Delta)~)

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge

<-----End Derivation --

```

```

ON INSERT Delta IN firstDate[DateDifference*Date] EXECUTE -- (ECA rule 97)
ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (rcDroppedOffDate;lastDate~ /\ contractedEndDate;(firstDate \

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
INSERT INTO Isn{dety=Integer}
SELECTFROM rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contracted

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
INSERT INTO Isn{dety=DateDifference}
SELECTFROM (lastDate;lastDate~ /\ firstDate;(firstDate \/ Delta)~ /\ -I[

(TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDiff
INSERT INTO Isn{dety=Date}
SELECTFROM ((firstDate \/ Delta)~;firstDate /\ -I[Date]) \/ ((firstDate

(TO MAINTAIN -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::Date
INSERT INTO Isn{dety=DateDifference}
SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]

INSERT INTO Isn{dety=Date}

```

```

SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference]
(MAINAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifferen
(MAINAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::Date

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
    SELECTFROM (rcDroppedOffDate;lastDate~ /\ contractedEndDate;(firstDate \/ Del

    (TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);c
INSERT INTO Isn{detyp=Integer}
    SELECTFROM rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDa

    (TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
INSERT INTO Isn{detyp=DateDifference}
    SELECTFROM (lastDate;lastDate~ /\ firstDate;(firstDate \/ Delta)~ /\ -I[DateD

    (TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifferenc
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((firstDate \/ Delta)~;firstDate /\ -I[Date]) \/ ((firstDate \/ De

    (TO MAINTAIN -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDiffe
INSERT INTO Isn{detyp=DateDifference}
    SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]

INSERT INTO Isn{detyp=Date}
    SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINAINING -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference] FROM
(MAINAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference*Da
(MAINAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::DateDiffe

```

<-----End Derivation --

```

ON DELETE Delta FROM firstDate[DateDifference*Date] EXECUTE    -- (ECA rule 98)
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
    SELECTFROM (-((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffD

    (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
DELETE FROM rcDroppedOffDate[RentalCase*Date]
    SELECTFROM -(V[RentalCase*DateDifference];((firstDate /\ -Delta);contra

```

```

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifference];((firstDate /\ -Delta);contracte

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
DELETE FROM Isn{dety=DateDifference}
      SELECTFROM  -((firstDate /\ -Delta);(firstDate /\ -Delta)~) /\ I[DateDiffere

      (TO MAINTAIN  -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI
(MAINTAINING  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
(MAINTAINING  -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifferen
(MAINTAINING  -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::Date

```

----- Derivation ----->

```

ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;l

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifference];((firstDate /\ -Delta);contractedE

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;l

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifference];((firstDate /\ -Delta);contractedE

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;la

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM Isn{dety=DateDifference}
      SELECTFROM  -((firstDate /\ -Delta);(firstDate /\ -Delta)~) /\ I[DateDifferenc

      (TO MAINTAIN  -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI firs

```

```

(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference*Da
(MAINAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::DateDiffe

```

<-----End Derivation --

```

ON INSERT Delta IN lastDate[DateDifference*Date] EXECUTE      -- (ECA rule 99)
ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (rcDroppedOffDate;(lastDate \/ Delta)~ /\ contractedEndDate;f

      (TO MAINTAIN  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~)
INSERT INTO Isn{dety=Integer}
      SELECTFROM rentalExcessPeriod~;(rcDroppedOffDate;(lastDate \/ Delta)~ /\

      (TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
INSERT INTO Isn{dety=DateDifference}
      SELECTFROM (lastDate;(lastDate \/ Delta)~ /\ firstDate;firstDate~ /\ -I[

      (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDif
INSERT INTO Isn{dety=Date}
      SELECTFROM ((lastDate \/ Delta)~;lastDate /\ -I[Date]) \/ ((lastDate \/

      (TO MAINTAIN  -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDif
INSERT INTO Isn{dety=DateDifference}
      SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]

INSERT INTO Isn{dety=Date}
      SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference]
(MAINAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*
(MAINAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDif

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (rcDroppedOffDate;(lastDate \/ Delta)~ /\ contractedEndDate;firstD

      (TO MAINTAIN  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);c
INSERT INTO Isn{dety=Integer}
      SELECTFROM rentalExcessPeriod~;(rcDroppedOffDate;(lastDate \/ Delta)~ /\ cont

      (TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
INSERT INTO Isn{dety=DateDifference}
      SELECTFROM (lastDate;(lastDate \/ Delta)~ /\ firstDate;firstDate~ /\ -I[DateD

```



```

      (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference]
      INSERT INTO Isn{dety=Date}
      SELECTFROM ((lastDate \/ Delta)~;lastDate /\ -I[Date]) \/ ((lastDate \/ Delta)~;lastDate /\ -I[Date])

      (TO MAINTAIN  -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference
      INSERT INTO Isn{dety=DateDifference}
      SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]

      INSERT INTO Isn{dety=Date}
      SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

      (MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
      (MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
      (MAINTAINING -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference] FROM
      (MAINTAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*Date)
      (MAINTAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDifference

<-----End Derivation --

```

```

ON DELETE Delta FROM lastDate[DateDifference*Date] EXECUTE      -- (ECA rule 100)
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM (-((contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate;lastDate~)
      SELECTFROM (-((contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate;lastDate~)

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDate~;lastDate;lastDate~)

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM (-((contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate;lastDate~)

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDate~;lastDate;lastDate~)

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate;lastDate~)

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM Isn{dety=DateDifference}
      SELECTFROM -((lastDate /\ -Delta);(lastDate /\ -Delta)~) /\ I[DateDifference]

      (TO MAINTAIN  -I[DateDifference] \/ lastDate;I[Date];lastDate~ FROM UNI lastDate::DateDifference
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate~)
      (MAINTAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*Date)
      (MAINTAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDifference

```

----- Derivation ----->

```
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM (-(contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate /\
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM (-(V[RentalCase*DateDifference];(firstDate;contractedEndDate~ /\ (
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM (-(contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate /\
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM (-(V[RentalCase*DateDifference];(firstDate;contractedEndDate~ /\ (
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM (-(contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate /\ -
      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM Isn{detyp=DateDifference}
      SELECTFROM (-(lastDate /\ -Delta);(lastDate /\ -Delta)~) /\ I[DateDifference]
      (TO MAINTAIN -I[DateDifference] \/ lastDate;I[Date];lastDate~ FROM UNI lastDate
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINTAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*Date)
(MAINTAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDifferen
```

<-----End Derivation --

```
ON INSERT Delta IN computedNrOfExcessDays[DateDifference*Integer] EXECUTE --
ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~)
      (TO MAINTAIN -(rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~)
INSERT INTO Isn{detyp=Integer}
      SELECTFROM (rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEnd
      (TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contracte
INSERT INTO Isn{detyp=Integer}
      SELECTFROM ((computedNrOfExcessDays \/ Delta)~;computedNrOfExcessDays /\
      (TO MAINTAIN -(computedNrOfExcessDays~;I[DateDifference];computedNrOfExcessDays~)
INSERT INTO Isn{detyp=DateDifference}
      SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]
```

```

INSERT INTO Isn{dety=Integer}
  SELECTFROM (Delta~;Delta /\ I[Integer]) - I[Integer]

(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays
(MAINAINING -(computedNrOfExcessDays~;computedNrOfExcessDays) \/ I[Integer] FROM

```

----- Derivation ----->

```

ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
  SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);c
INSERT INTO Isn{dety=Integer}
  SELECTFROM (rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndD

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
INSERT INTO Isn{dety=Integer}
  SELECTFROM ((computedNrOfExcessDays \/ Delta)~;computedNrOfExcessDays /\ -I[I

(TO MAINTAIN -(computedNrOfExcessDays~;I[DateDifference];computedNrOfExcessDa
INSERT INTO Isn{dety=DateDifference}
  SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]

INSERT INTO Isn{dety=Integer}
  SELECTFROM (Delta~;Delta /\ I[Integer]) - I[Integer]

(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~ FRO
(MAINAINING -(computedNrOfExcessDays~;computedNrOfExcessDays) \/ I[Integer] FROM UNI

```

<-----End Derivation --

```

ON DELETE Delta FROM computedNrOfExcessDays[DateDifference*Integer] EXECUTE --
DELETE FROM Isn{dety=DateDifference}
  SELECTFROM -((computedNrOfExcessDays /\ -Delta);(computedNrOfExcessDays /\ -Del

(TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDay

```

----- Derivation ----->

```

DELETE FROM Isn{dety=DateDifference}

```

```

SELECTFROM -((computedNrOfExcessDays /\ -Delta);(computedNrOfExcessDays /\ -Delta)~)

(TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~ FR

<-----End Derivation --

ON INSERT Delta IN distbranch[DistanceBetweenLocations*Branch] EXECUTE -- (EC
ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (rcDroppedOffBranch;(distbranch \/ Delta)~ /\ contractedDropoffBranch;

(TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
INSERT INTO Isn{dety=Amount}
SELECTFROM rentalLocationPenaltyCharge~;(rcDroppedOffBranch;(distbranch

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDroppedOffBranch;(dis
THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM 'a'[RentalCase]*'b'[Amount]

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
PICK a,b FROM rentalLocationPenaltyCharge~;(rcDroppedOffBranch;
THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
NEW x:Amount;
ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (rcDroppedOffBranch;(distbranch \/ Delta)~ /\

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM ((distbranch \/ Delta);rcDroppedOffBranch~ /\

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
INSERT INTO Isn{dety=DistanceBetweenLocations}
SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBetweenLocations]

INSERT INTO Isn{dety=Branch}
SELECTFROM (Delta~;Delta /\ I[Branch]) - I[Branch]

(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch;
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch;
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch;

```

----- Derivation ----->

```

ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (rcDroppedOffBranch;(distbranch \/ Delta)~ /\ contractedDropoffBra

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dis
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalLocationPenaltyCharge~;(rcDroppedOffBranch;(distbranch \/ De

      (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDroppedOffBranch;(distbran
      THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[Amount]

            (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contracte
PICK a,b FROM rentalLocationPenaltyCharge~;(rcDroppedOffBranch;(
      THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLoca
            SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

            (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contracte
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
NEW x:Amount;
      ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
            SELECTFROM (rcDroppedOffBranch;(distbranch \/ Delta)~ /\ cont

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDr
INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocat
      SELECTFROM ((distbranch \/ Delta);rcDroppedOffBranch~ /\ (dis

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDr
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
INSERT INTO Isn{detyp=DistanceBetweenLocations}
      SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBetweenL

INSERT INTO Isn{detyp=Branch}
      SELECTFROM (Delta~;Delta /\ I[Branch]) - I[Branch]

(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~

<-----End Derivation --

```

```

      ON DELETE Delta FROM distbranch[DistanceBetweenLocations*Branch] EXECUTE    -- (
BLOCK
      (CANNOT CHANGE V[Branch*Branch] FROM Completeness of distance table)

```

----- Derivation ----->

```
BLOCK
(CANNOT CHANGE V[Branch*Branch] FROM Completeness of distance table)
```

<-----End Derivation --

```
ON INSERT Delta IN distance[DistanceBetweenLocations*Distance] EXECUTE    -- (EC
ONE OF INSERT INTO Isn{dety=Distance}
    SELECTFROM ((distance \ / Delta)~;distance /\ -I[Distance]) \ / ((distance

    (TO MAINTAIN  -(distance~;distance) \ / I[Distance] FROM UNI distance::Dis
INSERT INTO Isn{dety=DistanceBetweenLocations}
    SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBet

INSERT INTO Isn{dety=Distance}
    SELECTFROM (Delta~;Delta /\ I[Distance]) - I[Distance]

(MAINTAINING -(distance~;distance) \ / I[Distance] FROM UNI distance::DistanceBet
(MAINTAINING -I[DistanceBetweenLocations] \ / distance;distance~ FROM TOT distance
```

----- Derivation ----->

```
ONE OF INSERT INTO Isn{dety=Distance}
    SELECTFROM ((distance \ / Delta)~;distance /\ -I[Distance]) \ / ((distance \ / D

    (TO MAINTAIN  -(distance~;distance) \ / I[Distance] FROM UNI distance::Distance
INSERT INTO Isn{dety=DistanceBetweenLocations}
    SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBetweenL

INSERT INTO Isn{dety=Distance}
    SELECTFROM (Delta~;Delta /\ I[Distance]) - I[Distance]

(MAINTAINING -(distance~;distance) \ / I[Distance] FROM UNI distance::DistanceBetweenL
(MAINTAINING -I[DistanceBetweenLocations] \ / distance;distance~ FROM TOT distance::Di
```

<-----End Derivation --

```
ON DELETE Delta FROM distance[DistanceBetweenLocations*Distance] EXECUTE    -- (
DELETE FROM Isn{dety=DistanceBetweenLocations}
    SELECTFROM -((distance /\ -Delta);(distance /\ -Delta)~) /\ I[DistanceBetweenLo

    (TO MAINTAIN  -(distance~;distance) \ / I[Distance] FROM UNI distance::DistanceBe
    (TO MAINTAIN  -I[DistanceBetweenLocations] \ / distance;distance~ FROM TOT distan
```

----- Derivation ----->

```

DELETE FROM Isn{dety=DistanceBetweenLocations}
  SELECTFROM -((distance /\ -Delta);(distance /\ -Delta)~) /\ I[DistanceBetweenLocations]

(TO MAINTAIN -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenLocations)
(TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance::DistanceBetweenLocations)

<-----End Derivation --

```

```

ON INSERT Delta IN projectedRentalPeriod[RentalCase*Integer] EXECUTE -- (ECA :
ALL of INSERT INTO Isn{dety=Integer}
  SELECTFROM ((projectedRentalPeriod \/ Delta)~;(contractedStartDate;earliestDate~;contractedEndDate~) /\ I[Integer])

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~;contractedEndDate~) /\ I[Integer])
(TO MAINTAIN -(projectedRentalPeriod~;projectedRentalPeriod) \/ I[Integer])
INSERT INTO projectedBasicCharge[RentalCase*Amount]
  SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalCase) /\ I[Integer])

(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalCase) /\ I[Integer])
INSERT INTO Isn{dety=Amount}
  SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalCase) /\ I[Integer])

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalCase) /\ I[Integer])
INSERT INTO Isn{dety=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedCarType;contractedCarType~) /\ I[Integer])
  THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase] /\ I[Integer])
    THEN INSERT INTO projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM 'a'[RentalCase]*'b'[Integer]

    (TO MAINTAIN -(contractedCarType;contractedCarType~) /\ I[Integer])
    PICK a,b FROM projectedRentalPeriod~;('a'[RentalCase] /\ I[Integer])
    THEN INSERT INTO ctcNrOfDays[CompTariffedCharge]
      SELECTFROM 'b'[CompTariffedCharge]

    (TO MAINTAIN -(contractedCarType;contractedCarType~) /\ I[Integer])
    (MAINTAINING -(contractedCarType;contractedCarType~) /\ I[Integer])
    NEW x:Integer;
    ALL of INSERT INTO projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

    (TO MAINTAIN -(contractedCarType;contractedCarType~) /\ I[Integer])
    INSERT INTO ctcNrOfDays[CompTariffedCharge]
      SELECTFROM 'b'[CompTariffedCharge]*'a'[RentalCase]

    (TO MAINTAIN -(contractedCarType;contractedCarType~) /\ I[Integer])
    (MAINTAINING -(contractedCarType;contractedCarType~) /\ I[Integer])

```

```

(MAINTEINING -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO contractedCarType[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType;
PICK a,b FROM contractedCarType~;('a'[RentalCase]
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
THEN INSERT INTO rentalCase
SELECTFROM 'a'[RentalCase]*'b'[CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType;
PICK a,b FROM rentalCase
THEN INSERT INTO ctcDailyRate
SELECTFROM 'b'[ContractedCarType]*'a'[RentalCase]

(TO MAINTAIN -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType;
NEW x:Amount;
ALL of INSERT INTO rentalCase
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType;
INSERT INTO ctcDailyRate
SELECTFROM 'b'[ContractedCarType]*'a'[RentalCase]

(TO MAINTAIN -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType;
NEW x:CarType;
ALL of INSERT INTO contractedCarType[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
THEN INSERT INTO rentalCase
SELECTFROM 'a'[RentalCase]*'b'[ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType;
PICK a,b FROM rentalCase
THEN INSERT INTO ctcDailyRate
SELECTFROM 'b'[ContractedCarType]*'a'[RentalCase]

(TO MAINTAIN -(contractedCarType;contractedCarType;
(MAINTEINING -(contractedCarType;contractedCarType;
NEW x:Amount;
ALL of INSERT INTO rentalCase

```



```

SELECTFROM 'x' [CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
INSERT INTO ctcDailyAmount [CarType]
SELECTFROM 'b' [CompTariff]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
PICK a,b FROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount)
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger )
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
(MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projectedRentalPeriod)
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
(MAINTAINING -(projectedRentalPeriod~;projectedRentalPeriod) /\ I[Integer] FROM I

```

----- Derivation ----->

```

ALL of INSERT INTO Isn{detyp=Integer}
SELECTFROM ((projectedRentalPeriod /\ Delta)~;(contractedStartDate;earliestDate;latestDate)

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate)
(TO MAINTAIN -(projectedRentalPeriod~;projectedRentalPeriod) /\ I[Integer] FROM I
INSERT INTO projectedBasicCharge[RentalCase*Amount]
SELECTFROM ((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)

(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
INSERT INTO Isn{detyp=Amount}
SELECTFROM (projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariff)
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
THEN INSERT INTO projectedRentalPeriod[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [Integer]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;contractedCarType)

```

```

PICK a,b FROM projectedRentalPeriod~;('a'[Ren
THEN INSERT INTO ctcNrOfDays[CompTariffedChar
SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

      (TO MAINTAIN -(contractedCarType;contra
(MAINTAINING -(contractedCarType;contractedCarType~
NEW x:Integer;
ALL of INSERT INTO projectedRentalPeriod[RentalCas
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

      (TO MAINTAIN -(contractedCarType;contracte
INSERT INTO ctcNrOfDays[CompTariffedCharge*
SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

      (TO MAINTAIN -(contractedCarType;contracte
(MAINTAINING -(contractedCarType;contractedCarType~
(MAINTAINING -(contractedCarType;contractedCarType~
(MAINTAINING -(contractedCarType;contractedCarType~ /\ proj
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO contractedCarType[RentalCase
SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN -(contractedCarType;contra
PICK a,b FROM contractedCarType~;('a'[RentalC
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO rentalTar
SELECTFROM 'a'[CarTy

      (TO MAINTAIN -(contr
PICK a,b FROM rentalTariff
THEN INSERT INTO ctcDailyA
SELECTFROM 'b'[CompT

      (TO MAINTAIN -(contr
(MAINTAINING -(contractedCarType;
NEW x:Amount;
ALL of INSERT INTO rentalTariff
SELECTFROM 'a'[CarType]

      (TO MAINTAIN -(contract
INSERT INTO ctcDailyAmou
SELECTFROM 'b'[CompTari

      (TO MAINTAIN -(contract
(MAINTAINING -(contractedCarTyp
(MAINTAINING -(contractedCarType;
(MAINTAINING -(contractedCarType;contract
(MAINTAINING -(contractedCarType;contractedCarType~
NEW x:CarType;
ALL of INSERT INTO contractedCarType[RentalCase*Ca

```

```

SELECTFROM 'a'[RentalCase]*'b'[CompTariffe]

(TO MAINTAIN -(contractedCarType;contractedCarType)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO rentalTariffPer
SELECTFROM 'a'[CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType)
PICK a,b FROM rentalTariffPer
THEN INSERT INTO ctcDailyAmount
SELECTFROM 'b'[CompTariffe]

(TO MAINTAIN -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
NEW x:Amount;
ALL of INSERT INTO rentalTariffPer
SELECTFROM 'x'[CarType]*'a'

(TO MAINTAIN -(contractedCarType;contractedCarType)
INSERT INTO ctcDailyAmount
SELECTFROM 'b'[CompTariffe]

(TO MAINTAIN -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
(MAINTAINING -(contractedCarType;contractedCarType)
PICK a,b FROM (ctcNrOfDays;projectedRentalPeriod /\ ctcDailyAmount;rentalTariffPer)
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger projectedRentalPeriod
(MAINTAINING -(contractedCarType;contractedCarType /\ projectedRentalPeriod;projectedRentalPeriod)
(MAINTAINING -((contractedStartDate;earliestDate /\ contractedEndDate;latestDate);contractedCarType;contractedCarType /\ projectedRentalPeriod;projectedRentalPeriod)
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays /\ contractedCarType;rentalTariffPer)
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays /\ contractedCarType;rentalTariffPer)
(MAINTAINING -(projectedRentalPeriod;projectedRentalPeriod) /\ I[Integer] FROM UNI p

```

<-----End Derivation --

```

ON DELETE Delta FROM projectedRentalPeriod[RentalCase*Integer] EXECUTE -- (EC
ALL of ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM ((-projectedRentalPeriod /\ (contractedStartDate;earliestDate)
(TO MAINTAIN -((contractedStartDate;earliestDate /\ contractedEndDate;latestDate)
DELETE FROM earliestDate[DateDifferencePlusOne*Date]

```

```

SELECTFROM computedRentalPeriod;((-projectedRentalPeriod~ /\ comp

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEnd
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM ((-projectedRentalPeriod /\ (contractedStartDate;earli

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEnd
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;((-projectedRentalPeriod~ /\ comp

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEnd
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;contr

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEnd
(MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;la
ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM (-(((projectedRentalPeriod /\ -Delta);ctcNrOfDays~ /\

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(proj

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM (-(((projectedRentalPeriod /\ -Delta);ctcNrOfDays~ /\

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(proj

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((projectedRentalPeriod /\ -Delta);ctcNrOfDays~ /\ c

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\ projectedR
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPer
(MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;proj

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM ((-projectedRentalPeriod /\ (contractedStartDate;earliestDate

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ contractedEndDate
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;((-projectedRentalPeriod~ /\ computedR

```

```

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM ((-projectedRentalPeriod /\ (contractedStartDate;earliestDate

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ contractedEndDate
DELETE FROM latestDate[DateDifferencePlusOne*Date]
      SELECTFROM computedRentalPeriod;((-projectedRentalPeriod~ /\ computedR

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ contractedEndDate
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
      SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;contracted

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ contractedEndDate
(MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate
ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM (-(((projectedRentalPeriod /\ -Delta);ctcNrOfDays~ /\ contr

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRental
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(projected

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRental
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM (-(((projectedRentalPeriod /\ -Delta);ctcNrOfDays~ /\ contr

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRental
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(projected

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRental
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM -(((projectedRentalPeriod /\ -Delta);ctcNrOfDays~ /\ contra

      (TO MAINTAIN  -(contractedCarType;contractedCarType~ /\ projectedRental
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;p
(MAINTAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);c
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;projecte

```

<-----End Derivation --

```

ON INSERT Delta IN projectedBasicCharge[RentalCase*Amount] EXECUTE  -- (ECA ru
ALL of INSERT INTO Isn{detyp=Amount}
      SELECTFROM ((projectedBasicCharge \/ Delta)~;(projectedRentalPeriod;ctcNr

      (TO MAINTAIN  -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
      (TO MAINTAIN  -(projectedBasicCharge~;projectedBasicCharge) \/ I[Amount]
INSERT INTO Isn{detyp=RentalCase}

```

```

SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(MAINAINING -((projectedBasicCharge~;projectedBasicCharge) /\ I[Amount] FROM UNI

----- Derivation ----->

ALL of INSERT INTO Isn{dety=Amount}
SELECTFROM ((projectedBasicCharge /\ Delta)~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(TO MAINTAIN -((projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(TO MAINTAIN -((projectedBasicCharge~;projectedBasicCharge) /\ I[Amount] FROM UNI
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(MAINAINING -((projectedBasicCharge~;projectedBasicCharge) /\ I[Amount] FROM UNI proj

<-----End Derivation --

```

```

ON DELETE Delta FROM projectedBasicCharge[RentalCase*Amount] EXECUTE      -- (ECA
ONE OF DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM ((-projectedBasicCharge /\ (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;((-projectedBasicCharge /\ computedTariffedCharge)
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM ((-projectedBasicCharge /\ (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM contractedCarType~;((-projectedBasicCharge /\ (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;((-projectedBasicCharge /\ computedTariffedCharge)
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount;rentalTariffPerDay)
(TO MAINTAIN -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffPerDay)

```

----- Derivation ----->

```
ONE OF DELETE FROM projectedRentalPeriod[RentalCase*Integer]
      SELECTFROM ((-projectedBasicCharge /\ (projectedRentalPeriod;ctcNrOfDays~ /\

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
      SELECTFROM computedTariffedCharge;((-projectedBasicCharge~ /\ computedTariffe

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM ((-projectedBasicCharge /\ (projectedRentalPeriod;ctcNrOfDays~ /\

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
DELETE FROM rentalTariffPerDay[CarType*Amount]
      SELECTFROM contractedCarType~;((-projectedBasicCharge /\ (projectedRentalPeri

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
      SELECTFROM computedTariffedCharge;((-projectedBasicCharge~ /\ computedTariffe

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
      SELECTFROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount;rentalTariff

      (TO MAINTAIN  -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;renta
(MAINTAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
```

<-----End Derivation --

```
ON INSERT Delta IN sessionUser[SESSION*Person] EXECUTE      -- (ECA rule 111)
ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM ((sessionUser \/ Delta)~;sessionUser /\ -I[Person]) \/ ((sess

      (TO MAINTAIN  -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUs
INSERT INTO Isn{dety=SESSION}
      SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

      (MAINTAINING -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUser::SESS
```

----- Derivation ----->

```
ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM ((sessionUser \/ Delta)~;sessionUser /\ -I[Person]) \/ ((sessionUs
```

```

        (TO MAINTAIN  -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUser::S
        INSERT INTO Isn{dety=SESSION}
        SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

        (MAINTAINING -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUser::SESSION*P

<-----End Derivation --

```

```

ON INSERT Delta IN sessionToday[SESSION*Date] EXECUTE      -- (ECA rule 113)
ONE OF INSERT INTO Isn{dety=Date}
        SELECTFROM ((sessionToday \/ Delta)~;sessionToday /\ -I[Date])) \/ ((sess

        (TO MAINTAIN  -(sessionToday~;I[SESSION];sessionToday) \/ I[Date] FROM In
        INSERT INTO rcDroppedOffDate[RentalCase*Date]
        SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));

        (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
        INSERT INTO Isn{dety=Date}
        SELECTFROM (rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;

        (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
        INSERT INTO Isn{dety=SESSION}
        SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

        INSERT INTO Isn{dety=Date}
        SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

        (MAINTAINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's d
        (MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
        (MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
        (MAINTAINING -(sessionToday~;sessionToday) \/ I[Date] FROM UNI sessionToday::SES

```

----- Derivation ----->

```

ONE OF INSERT INTO Isn{dety=Date}
        SELECTFROM ((sessionToday \/ Delta)~;sessionToday /\ -I[Date])) \/ ((sessionTo

        (TO MAINTAIN  -(sessionToday~;I[SESSION];sessionToday) \/ I[Date] FROM Initial
        INSERT INTO rcDroppedOffDate[RentalCase*Date]
        SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi

        (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
        INSERT INTO Isn{dety=Date}
        SELECTFROM (rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAv

        (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
        INSERT INTO Isn{dety=SESSION}

```



```

SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

INSERT INTO Isn{dety=Date}
SELECTFROM (Delta~;Delta /\ I[Date]) - I[Date]

(MAINTAINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's date)
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTAINING -(sessionToday~;sessionToday) \/ I[Date] FROM UNI sessionToday::SESSION*

```

<-----End Derivation --

```

ON DELETE Delta FROM sessionToday[SESSION*Date] EXECUTE      -- (ECA rule 114)
DELETE FROM Isn{dety=SESSION}
SELECTFROM -((sessionToday /\ -Delta);(sessionToday /\ -Delta)~) /\ I[SESSION]

(TO MAINTAIN  -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's date)

```

----- Derivation ----->

```

DELETE FROM Isn{dety=SESSION}
SELECTFROM -((sessionToday /\ -Delta);(sessionToday /\ -Delta)~) /\ I[SESSION]

(TO MAINTAIN  -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's date)

```

<-----End Derivation --

```

ON INSERT Delta IN sessionNewUserRC[SESSION*RentalCase] EXECUTE      -- (ECA rule
ALL of INSERT INTO Isn{dety=SESSION}
SELECTFROM (sessionNewUserRC;(sessionNewUserRC \/ Delta)~ /\ -I[SESSION]

(TO MAINTAIN  -(sessionNewUserRC;sessionNewUserRC~) \/ I[SESSION] FROM IN
INSERT INTO Isn{dety=RentalCase}
SELECTFROM ((sessionNewUserRC \/ Delta)~;sessionNewUserRC /\ -I[RentalCa

(TO MAINTAIN  -(sessionNewUserRC~;sessionNewUserRC) \/ I[RentalCase] FROM
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((' _SESSION' [SESSION];se
THEN INSERT INTO sessionNewUserRC[SESSION*RentalCase]
SELECTFROM 'a' [SESSION]*'b' [RentalCase]

(TO MAINTAIN  -((' _SESSION' [SESSION];sessionNewUserRC)
PICK a,b FROM sessionNewUserRC~;((' _SESSION' [SESSION];sessi
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
THEN INSERT INTO rcUserRequestedQ[Rental
SELECTFROM 'a' [RentalCase]*'b' [Yes]

```

```

        (TO MAINTAIN -( '_SESSION' [SESSION]
PICK a,b FROM rcUserRequestedQ~; ('a' [Ren
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
        THEN BLOCK
            (CANNOT CHANGE '
        PICK a,b FROM 'Yes' [Y
        THEN BLOCK
            (CANNOT CHANGE V
        (MAINTAINING -( '_SESSION' [SE
NEW x:YesNoAnswer;
        ALL of BLOCK
            (CANNOT CHANGE 'Yes
        BLOCK
            (CANNOT CHANGE V[Yes
        (MAINTAINING -( '_SESSION' [
        (MAINTAINING -( '_SESSION' [SE
        (MAINTAINING -( '_SESSION' [SESSION];
        (MAINTAINING -( '_SESSION' [SESSION];sessionNewUs
NEW x:YesNoAnswer;
        ALL of INSERT INTO rcUserRequestedQ[RentalCas
            SELECTFROM 'a' [RentalCase]*'b' [Rental

        (TO MAINTAIN -( '_SESSION' [SESSION];se
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
        THEN BLOCK
            (CANNOT CHANGE 'Yes
        PICK a,b FROM 'Yes' [YesN
        THEN BLOCK
            (CANNOT CHANGE V[Yes
        (MAINTAINING -( '_SESSION' [SESSI
NEW x:YesNoAnswer;
        ALL of BLOCK
            (CANNOT CHANGE 'Yes' [Y
        BLOCK
            (CANNOT CHANGE V[YesNo
        (MAINTAINING -( '_SESSION' [SES
        (MAINTAINING -( '_SESSION' [SESSI
        (MAINTAINING -( '_SESSION' [SESSION];ses
        (MAINTAINING -( '_SESSION' [SESSION];sessionNew
        (MAINTAINING -( '_SESSION' [SESSION];sessionNewUserRC) \
        (MAINTAINING -( '_SESSION' [SESSION];sessionNewUserRC) \ / sessionNew
NEW x:RentalCase;
        ALL of INSERT INTO sessionNewUserRC[SESSION*RentalCase]
            SELECTFROM (( '_SESSION' [SESSION];sessionNewUserRC /\ -(s

        (TO MAINTAIN -( '_SESSION' [SESSION];sessionNewUserRC) \ /
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Ren
        THEN INSERT INTO rcUserRequestedQ[RentalCas

```

[illegible]


```

SELECTFROM 'a' [RentalCase]*'b' [YesNoAns

(TO MAINTAIN -('_SESSION' [SESSION];sess
PICK a,b FROM rcUserRequestedQ~;('a' [RentalCa
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN BLOCK
(CANNOT CHANGE 'Yes' [
PICK a,b FROM 'Yes' [YesNoA
THEN BLOCK
(CANNOT CHANGE V[YesN
(MAINTAINING -('_SESSION' [SESSION
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes' [Yes
BLOCK
(CANNOT CHANGE V[YesNoAn
(MAINTAINING -('_SESSION' [SESSI
(MAINTAINING -('_SESSION' [SESSION
(MAINTAINING -('_SESSION' [SESSION];sessi
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC)
NEW x:YesNoAnswer;
ALL of INSERT INTO rcUserRequestedQ[RentalCase*Yes
SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

(TO MAINTAIN -('_SESSION' [SESSION];session
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN BLOCK
(CANNOT CHANGE 'Yes' [Yes
PICK a,b FROM 'Yes' [YesNoAnsw
THEN BLOCK
(CANNOT CHANGE V[YesNoAn
(MAINTAINING -('_SESSION' [SESSION];s
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes' [YesNoA
BLOCK
(CANNOT CHANGE V[YesNoAnsw
(MAINTAINING -('_SESSION' [SESSION]
(MAINTAINING -('_SESSION' [SESSION];s
(MAINTAINING -('_SESSION' [SESSION];sessionN
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserR
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC)
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC) \ / ses
(MAINTAINING -('_SESSION' [SESSION];sessionNewUserRC) \ / sessionNewUserR
NEW x:RentalCase;
ALL of INSERT INTO sessionNewUserRC[SESSION*RentalCase]
SELECTFROM ((' _SESSION' [SESSION];sessionNewUserRC /\ -(sessio

(TO MAINTAIN -('_SESSION' [SESSION];sessionNewUserRC) \ / sessi
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [RentalCa

```

```

THEN INSERT INTO rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM 'a'[RentalCase]*'b'[YesNoAnswer]

(TO MAINTAIN -('_SESSION'[SESSION];sessionNewUserRC) \
PICK a,b FROM rcUserRequestedQ~;('x'[RentalCase]*'b'[YesNoAnswer])
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (('a'[YesNoAnswer]
THEN BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM S
PICK a,b FROM 'Yes'[YesNoAnswer];('a'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer] FROM S
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM S
BLOCK
(CANNOT CHANGE V[YesNoAnswer] FROM S
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
NEW x:YesNoAnswer;
ALL of INSERT INTO rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM 'x'[RentalCase]*(''_SESSION'[SESSION];sessionNewUserRC) \
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (('x'[RentalCase]*'b'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM S
PICK a,b FROM 'Yes'[YesNoAnswer];('x'[RentalCase]*'b'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM S
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((sessionNewUserRC \ Delta)
THEN INSERT INTO rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM 'a'[RentalCase]*'b'[YesNoAnswer]

(TO MAINTAIN -((sessionNewUserRC~;'_SESSION'[SESSION];sessionNewUserRC) \
PICK a,b FROM rcUserRequestedQ~;(((sessionNewUserRC \ Delta)~;'_SESSION'[SESSION];sessionNewUserRC) \
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (('a'[YesNoAnswer]
THEN BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM S
PICK a,b FROM 'Yes'[YesNoAnswer];('a'[YesNoAnswer])
THEN BLOCK

```

```

(CANNOT CHANGE V[YesNoAnswer*RentalCase]
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION]
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM Subm
BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FR
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSIO
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION]
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessio
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC)
NEW x:YesNoAnswer;
ALL of INSERT INTO rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (((sessionNewUserRC \/ Delta)~;'_SESSION' [SESSION]

(TO MAINTAIN -(sessionNewUserRC~;'_SESSION' [SESSION];sessionN
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[YesNoAnswer]*((
THEN BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM Submit rent
PICK a,b FROM 'Yes'[YesNoAnswer];('x'[YesNoAnswer]*((s
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Subm
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNe
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC)
(MAINTAINING -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC) \/ rcUs
(MAINTAINING -(('_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReques
(MAINTAINING -(('_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReques
(MAINTAINING -(sessionNewUserRC;sessionNewUserRC~) \/ I[SESSION] FROM INJ sessionNewU
(MAINTAINING -(sessionNewUserRC~;sessionNewUserRC) \/ I[RentalCase] FROM UNI sessionN

```

<-----End Derivation --

```

ON DELETE Delta FROM sessionNewUserRC[SESSION*RentalCase] EXECUTE -- (ECA rul
DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM '_SESSION' [SESSION];(-(sessionNewUserRC /\ -Delta);rcUserRequestedQ

(TO MAINTAIN -('_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUser

```

----- Derivation ----->

```

DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM '_SESSION' [SESSION];(-(sessionNewUserRC /\ -Delta);rcUserRequestedQ;'Yes

(TO MAINTAIN -('_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReque

```

<-----End Derivation --

```

ON INSERT Delta IN sessionBranch[SESSION*Branch] EXECUTE    -- (ECA rule 117)
ALL of INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM ((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBr

    (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];r
INSERT INTO Isn{detyp=Branch}
    SELECTFROM (contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ

    (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequest
    (TO MAINTAIN  -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailab
    (TO MAINTAIN  -(sessionBranch~;sessionBranch) \/ I[Branch] FROM UNI sessi
INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
    SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));

    (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{detyp=SESSION}
    SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(sessionBranch~;sessionBranch) \/ I[Branch] FROM UNI sessionBranch

```

----- Derivation ----->

```

ALL of INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM ((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR

    (TO MAINTAIN  -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBr
INSERT INTO Isn{detyp=Branch}
    SELECTFROM (contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes

    (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'
    (TO MAINTAIN  -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;
    (TO MAINTAIN  -(sessionBranch~;sessionBranch) \/ I[Branch] FROM UNI sessionBra
INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
    SELECTFROM (rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi

    (TO MAINTAIN  -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
INSERT INTO Isn{detyp=SESSION}
    SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTAINING -(sessionBranch~;sessionBranch) \/ I[Branch] FROM UNI sessionBranch::SES

```


<-----End Derivation --

```

ON INSERT Delta IN sessionNewBranchRC[SESSION*RentalCase] EXECUTE -- (ECA rule)
ALL of INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ[RentalCase*Branch])
    (TO MAINTAIN -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ[RentalCase*Branch])
    INSERT INTO Isn{dety=Branch}
    SELECTFROM contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ[RentalCase*Branch])

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ[RentalCase*Branch])
INSERT INTO Isn{dety=RentalCase}
SELECTFROM ((sessionNewBranchRC /\ Delta)~;sessionNewBranchRC /\ -I[RentalCase])

(TO MAINTAIN -(sessionNewBranchRC~;sessionNewBranchRC) /\ I[RentalCase])
INSERT INTO Isn{dety=SESSION}
SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((' _SESSION' [SESSION];sessionNewBranchRC)
    THEN INSERT INTO sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM 'a' [SESSION]*'b' [RentalCase]

    (TO MAINTAIN -(' _SESSION' [SESSION];sessionNewBranchRC)
    PICK a,b FROM sessionNewBranchRC~;((' _SESSION' [SESSION];sessionNewBranchRC)
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [SESSION]*'b' [RentalCase])
        THEN INSERT INTO rcBranchRequestedQ[RentalCase*Branch]
        SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer]

        (TO MAINTAIN -(' _SESSION' [SESSION];sessionNewBranchRC)
        PICK a,b FROM rcBranchRequestedQ~;('a' [SESSION]*'b' [RentalCase])
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [SESSION]*'b' [RentalCase])
            THEN BLOCK
            (CANNOT CHANGE 'a' [SESSION]*'b' [RentalCase])
            PICK a,b FROM 'Yes' [YesNoAnswer]
            THEN BLOCK
            (CANNOT CHANGE V[YesNoAnswer])
            (MAINTAINING -(' _SESSION' [SESSION];sessionNewBranchRC)
            NEW x:YesNoAnswer;
            ALL of BLOCK
            (CANNOT CHANGE 'Yes' [YesNoAnswer])
            BLOCK
            (CANNOT CHANGE V[YesNoAnswer])
            (MAINTAINING -(' _SESSION' [SESSION];sessionNewBranchRC)
            (MAINTAINING -(' _SESSION' [SESSION];sessionNewBranchRC)
            (MAINTAINING -(' _SESSION' [SESSION];sessionNewBranchRC)
            (MAINTAINING -(' _SESSION' [SESSION];sessionNewBranchRC)
            NEW x:YesNoAnswer;
            ALL of INSERT INTO rcBranchRequestedQ[RentalCase*Branch]
            SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

```



```

SELECTFROM 'x' [RentalCase]*(('_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [YesNoAnswer] FROM Submit
THEN BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Submit
PICK a,b FROM 'Yes' [YesNoAnswer];('x' [YesNoAnswer] FROM Submit
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((sessionNewBranchRC \
THEN INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer]

(TO MAINTAIN -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
PICK a,b FROM rcBranchRequestedQ~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [YesNoAnswer] FROM Submit
THEN BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Submit
PICK a,b FROM 'Yes' [YesNoAnswer];('a' [YesNoAnswer] FROM Submit
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Submit
BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
(MAINTAINING -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
NEW x:YesNoAnswer;
ALL of INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (((sessionNewBranchRC \
Delta)~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \

(TO MAINTAIN -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [YesNoAnswer] FROM Submit
THEN BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Submit
PICK a,b FROM 'Yes' [YesNoAnswer];('x' [YesNoAnswer] FROM Submit
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -((sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \

```

```

        (MAINTAINING -(sessionNewBranchRC~; '_SESSION' [SESSION]; sessionNewBranchRC)
        (MAINTAINING -(sessionNewBranchRC~; '_SESSION' [SESSION]; sessionNewBranchRC)
        (MAINTAINING -(sessionNewBranchRC~; '_SESSION' [SESSION]; sessionNewBranchRC)
(MAINTAINING -('_SESSION' [SESSION]; sessionNewBranchRC) \ / sessionNewBranchRC; rcBranchRC
(MAINTAINING -('_SESSION' [SESSION]; sessionNewBranchRC) \ / sessionNewBranchRC; rcBranchRC
(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ; 'Yes' [YesNoAnswer]; rcBranchRequestedQ)
(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ; 'Yes' [YesNoAnswer]; rcBranchRequestedQ)
(MAINTAINING -(sessionNewBranchRC~; sessionNewBranchRC) \ / I[RentalCase] FROM UNI

```

----- Derivation ----->

```

ALL of INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ; 'Yes' [YesNoAnswer]; rcBranchRequestedQ)

(TO MAINTAIN -((I[RentalCase] /\ rcBranchRequestedQ; 'Yes' [YesNoAnswer]; rcBranchRequestedQ)
INSERT INTO Isn{dety=Branch}
    SELECTFROM contractedPickupBranch~; (I[RentalCase] /\ rcBranchRequestedQ; 'Yes' [YesNoAnswer]; rcBranchRequestedQ)

(TO MAINTAIN -(contractedPickupBranch~; (I[RentalCase] /\ rcBranchRequestedQ; 'Yes' [YesNoAnswer]; rcBranchRequestedQ)
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM ((sessionNewBranchRC \ / Delta)~; sessionNewBranchRC /\ -I[RentalCase] FROM UNI

(TO MAINTAIN -(sessionNewBranchRC~; sessionNewBranchRC) \ / I[RentalCase] FROM UNI
INSERT INTO Isn{dety=SESSION}
    SELECTFROM (Delta; Delta~ /\ I[SESSION]) - I[SESSION]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (( '_SESSION' [SESSION]; sessionNewBranchRC)
    THEN INSERT INTO sessionNewBranchRC[SESSION*RentalCase]
        SELECTFROM 'a' [SESSION]*'b' [RentalCase]

        (TO MAINTAIN -('_SESSION' [SESSION]; sessionNewBranchRC) \ /
PICK a,b FROM sessionNewBranchRC~; (( '_SESSION' [SESSION]; sessionNewBranchRC)
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
        THEN INSERT INTO rcBranchRequestedQ[RentalCase*Branch]
            SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer]

        (TO MAINTAIN -('_SESSION' [SESSION]; sessionNewBranchRC) \ /
PICK a,b FROM rcBranchRequestedQ~; ('a' [RentalCase]
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
        THEN BLOCK
            (CANNOT CHANGE 'Yes' [YesNoAnswer])
        PICK a,b FROM 'Yes' [YesNoAnswer]
        THEN BLOCK
            (CANNOT CHANGE V[YesNoAnswer])
        (MAINTAINING -('_SESSION' [SESSION]; sessionNewBranchRC) \ /
        NEW x:YesNoAnswer;
        ALL of BLOCK
            (CANNOT CHANGE 'Yes' [YesNoAnswer])

```

```

BLOCK
    (CANNOT CHANGE V[YesNoAn
    (MAINTAINING -('_SESSION'[SESSI
    (MAINTAINING -('_SESSION'[SESSION
    (MAINTAINING -('_SESSION'[SESSION];sessi
    (MAINTAINING -('_SESSION'[SESSION];sessionNewBranchR
NEW x:YesNoAnswer;
    ALL of INSERT INTO rcBranchRequestedQ[RentalCase*Y
        SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

    (TO MAINTAIN -('_SESSION'[SESSION];session
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
        THEN BLOCK
            (CANNOT CHANGE 'Yes'[Yes
            PICK a,b FROM 'Yes'[YesNoAnsw
            THEN BLOCK
                (CANNOT CHANGE V[YesNoAn
                (MAINTAINING -('_SESSION'[SESSION];s
                NEW x:YesNoAnswer;
                ALL of BLOCK
                    (CANNOT CHANGE 'Yes'[YesNoA
                    BLOCK
                        (CANNOT CHANGE V[YesNoAnsw
                        (MAINTAINING -('_SESSION'[SESSION]
                        (MAINTAINING -('_SESSION'[SESSION];s
                        (MAINTAINING -('_SESSION'[SESSION];sessionN
                        (MAINTAINING -('_SESSION'[SESSION];sessionNewBranch
                        (MAINTAINING -('_SESSION'[SESSION];sessionNewBranchR
                        (MAINTAINING -('_SESSION'[SESSION];sessionNewBranchRC) \ / s
    (MAINTAINING -('_SESSION'[SESSION];sessionNewBranchRC) \ / sessionNewBra
NEW x:RentalCase;
    ALL of INSERT INTO sessionNewBranchRC[SESSION*RentalCase]
        SELECTFROM (('_SESSION'[SESSION];sessionNewBranchRC /\ -(sess

    (TO MAINTAIN -('_SESSION'[SESSION];sessionNewBranchRC) \ / ses
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCa
        THEN INSERT INTO rcBranchRequestedQ[RentalCase*Y
            SELECTFROM 'a'[RentalCase]*'b'[YesNoAnswer

    (TO MAINTAIN -('_SESSION'[SESSION];session
    PICK a,b FROM rcBranchRequestedQ~;('x'[RentalCas
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
        THEN BLOCK
            (CANNOT CHANGE 'Yes'[Yes
            PICK a,b FROM 'Yes'[YesNoAnsw
            THEN BLOCK
                (CANNOT CHANGE V[YesNoAn
                (MAINTAINING -('_SESSION'[SESSION];s
                NEW x:YesNoAnswer;
                ALL of BLOCK

```

```

(CANNOT CHANGE 'Yes' [YesNoA
BLOCK
(CANNOT CHANGE V [YesNoAnsw
(MAINAINING -('_SESSION' [SESSION]
(MAINAINING -('_SESSION' [SESSION];s
(MAINAINING -('_SESSION' [SESSION];sessionN
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC)
NEW x:YesNoAnswer;
ALL of INSERT INTO rcBranchRequestedQ[RentalCase*YesN
SELECTFROM 'x' [RentalCase]*((('_SESSION' [SESSI

(TO MAINTAIN -('_SESSION' [SESSION];sessionNew
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'
THEN BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer]
PICK a,b FROM 'Yes' [YesNoAnswer];('x' [Y
THEN BLOCK
(CANNOT CHANGE V [YesNoAnswer*Renta
(MAINAINING -('_SESSION' [SESSION];sessionNewB
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC)
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC) \\/ sess
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC) \\/ sessionNewB
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC) \\/ sessionNewBra
(MAINAINING -('_SESSION' [SESSION];sessionNewBranchRC) \\/ sessionNewBranchRC;r
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((sessionNewBranchRC \\/ Delt
THEN INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer]

(TO MAINTAIN -(sessionNewBranchRC~;'_SESSION' [SESSION];ses
PICK a,b FROM rcBranchRequestedQ~;(((sessionNewBranchRC \\/ Delta
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [YesNo
THEN BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer] FROM S
PICK a,b FROM 'Yes' [YesNoAnswer];('a' [YesNoAn
THEN BLOCK
(CANNOT CHANGE V [YesNoAnswer*RentalCase]
(MAINAINING -(sessionNewBranchRC~;'_SESSION' [SESSIO
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Subm
BLOCK
(CANNOT CHANGE V [YesNoAnswer*RentalCase] FR
(MAINAINING -(sessionNewBranchRC~;'_SESSION' [SESS
(MAINAINING -(sessionNewBranchRC~;'_SESSION' [SESSIO
(MAINAINING -(sessionNewBranchRC~;'_SESSION' [SESSION];sess
(MAINAINING -(sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranch
NEW x:YesNoAnswer;
ALL of INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (((sessionNewBranchRC \\/ Delta)~;'_SESSION' [SESSIO

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INSERT INTO Isn{dety=Branch}
  SELECTFROM rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt

(TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt
INSERT INTO rcDroppedOffDate[RentalCase*Date]
  SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));(

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{dety=Date}
  SELECTFROM rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;c

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt
INSERT INTO Isn{dety=SESSION}
  SELECTFROM (Delta;Delta~ /\ I[SESSION]) - I[SESSION]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((' _SESSION' [SESSION];ses
  THEN INSERT INTO sessionReturnedCar[SESSION*Car]
    SELECTFROM 'a' [SESSION]*'b' [Car]

    (TO MAINTAIN -(' _SESSION' [SESSION];sessionReturnedCar
PICK a,b FROM sessionReturnedCar~;((' _SESSION' [SESSION];ses
  THEN ALL of INSERT INTO Isn{dety=Car}
    SELECTFROM 'a' [Car]*'b' [Car]

    (TO MAINTAIN -(' _SESSION' [SESSION];sessionRetu
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
  THEN INSERT INTO rcAssignedCar[Re
    SELECTFROM 'b' [RentalCase]*

    (TO MAINTAIN -(' _SESSION' [S
PICK a,b FROM rcAssignedCar;('a' [
  THEN ONE OF ONE NONEMPTY ALTERNAT
    THEN ALL of IN
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NEW x:RentalCase;
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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[Renta
SELECTFROM 'x' [RentalCase]*'b'

(TO MAINTAIN -('_SESSION' [SESS
ONE OF ONE NONEMPTY ALTERNATIVE
THEN ALL of INSERT
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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'x' [RentalCase]*'b' [Car]*'.

(TO MAINTAIN -('_SESSION' [SESSION];se
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SELECTFROM 'x'

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(MAINTAINING -( '_SESSION' [SESSION] ;sessionReturnedCar;
(MAINTAINING -( '_SESSION' [SESSION] ;sessionReturnedCar; (I[Car] /\ -
NEW x:Car;
ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
SELECTFROM (( '_SESSION' [SESSION] ;sessionReturnedCar; (I[C

(TO MAINTAIN -( '_SESSION' [SESSION] ;sessionReturnedCar; (I
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Car]
THEN INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'b' [RentalCase]*'a' [Car]

(TO MAINTAIN -( '_SESSION' [SESSION] ;se
PICK a,b FROM rcAssignedCar; ('x' [Car]*(('_S
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
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NEW x:RentalCase;
  ALL of ALL of INSERT INTO ren
    SELECTFROM 'a'

    (TO MAINTAIN -
  DELETE FROM ren
    SELECTFROM 'a'

    (TO MAINTAIN -
  (MAINTAINING -('_SESSI
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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(((I[Car] /\
.

(TO MAINTAIN -(('_SESSION'[SESSION];sessi
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a
THEN ALL of INSERT INTO ren
SELECTFROM 'a'

(TO MAINTAIN -
DELETE FROM ren
SELECTFROM 'a'

(TO MAINTAIN -
(MAINTAINING -(('_SESSI
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THEN ONE OF ONE NONEMPTY AL
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(MAINTAINING -('_SESSION' [SESSION]
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeen
SELECTFROM 'x' [RentalCas

(TO MAINTAIN -('_SESSION'
DELETE FROM rentalHasBeen
SELECTFROM 'x' [RentalCas

(TO MAINTAIN -('_SESSION'
ONE OF ONE NONEMPTY ALTER
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NEW x:YesNoAnswer;
ALL of INSERT INTO rentalI
SELECTFROM 'a' [Ren

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(MAINTAINING -(sessionReturnedCar~;'_SESSION' [S
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasBeenStarte
SELECTFROM 'a' [RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
DELETE FROM rentalHasBeenEnded[
SELECTFROM 'a' [RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_S
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK

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SELECTFROM 'x'[RentalCase]*(((I[Car] /\ -(carAvailableAt

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];s
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Ren
      THEN ALL of INSERT INTO rentalHasBeenStarted
        SELECTFROM 'a'[RentalCase]*'b'

      (TO MAINTAIN -(sessionReturned
DELETE FROM rentalHasBeenEnded[
      SELECTFROM 'a'[RentalCase]*'b'

      (TO MAINTAIN -(sessionReturned
      (MAINTAINING -(sessionReturnedCar~;'_S
PICK a,b FROM (rentalHasBeenStarted~ /\ -re
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PIC
      THEN INSERT INTO rentalI
        SELECTFROM 'a'[Ren

      (TO MAINTAIN -(ses
PICK a,b FROM rentalIsPa
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NEW x:YesNoAnswer;
      ALL of INSERT INTO rentalIsPa
        SELECTFROM 'a'[Rental

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      THEN BLO
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      THEN BLO
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      NEW x:YesNoAnsw
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(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESS
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
SELECTFROM 'x'[RentalCase]*(((sessionRet

(TO MAINTAIN -(sessionReturnedCar~;'_SES
DELETE FROM rentalHasBeenEnded[RentalCase]
SELECTFROM 'x'[RentalCase]*(((sessionRet

(TO MAINTAIN -(sessionReturnedCar~;'_SES
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a
THEN INSERT INTO rentalIsPaidQ
SELECTFROM 'a'[RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;'_SES
PICK a,b FROM rentalIsPaidQ
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a
THEN BLOCK
(CANNOT CHANGE
PICK a,b
THEN BLOCK
(CANNOT CHANGE
(MAINTAINING -(sessionReturnedCar~;'_SES
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE
BLOCK
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(MAINTAINING -(sessionReturnedCar~;'_SES
(MAINTAINING -(sessionReturnedCar~;'_SES
(MAINTAINING -(sessionReturnedCar~;'_SES
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ
SELECTFROM 'x'[RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;'_SES
ONE NONEMPTY ALTERNATIVE OF PICK a
THEN BLOCK
(CANNOT CHANGE
PICK a,b FROM 'Yes

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((' _SESSION' [SESSION];session
    THEN INSERT INTO sessionReturnedCar[SESSION*Car]
        SELECTFROM 'a' [SESSION]*'b' [Car]

    (TO MAINTAIN -(' _SESSION' [SESSION];sessionReturnedCar) \ /
PICK a,b FROM sessionReturnedCar~; ((' _SESSION' [SESSION];sessionR
THEN ALL of INSERT INTO Isn{dety=Car}
    SELECTFROM 'a' [Car]*'b' [Car]

    (TO MAINTAIN -(' _SESSION' [SESSION];sessionReturnedC
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a
    THEN INSERT INTO rcAssignedCar[RentalC
        SELECTFROM 'b' [RentalCase]*'a' [C

        (TO MAINTAIN -(' _SESSION' [SESSIO
PICK a,b FROM rcAssignedCar; ('a' [Car]*
THEN ONE OF ONE NONEMPTY ALTERNATIVE O
    THEN ALL of INSERT
        SELECT

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(MAINTAINING -
PICK a,b FROM (rent
THEN INSERT INTO rc
    SELECTFROM 'a

        (TO MAINTAIN
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NEW x:RentalCase;
    ALL of ALL of INSERT INT
        SELECTFRO

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INSERT INTO rcAss
    SELECTFROM 'x' [R

        (TO MAINTAIN -('
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(MAINTAINING -(' _SESSION' [
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(MAINTAINING -(' _SESSION' [SESSION];sessionRet

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NEW x:RentalCase;
  ALL of INSERT INTO rcAssignedCar[RentalCase]
    SELECTFROM 'x'[RentalCase]*'b'[Car]

    (TO MAINTAIN -('_SESSION'[SESSION];
    ONE OF ONE NONEMPTY ALTERNATIVE OF P
      THEN ALL of INSERT INTO
        SELECTFROM

        (TO MAINTAIN
        DELETE FROM
        SELECTFROM

        (TO MAINTAIN
        (MAINTAINING -('_
        PICK a,b FROM (rentalH
        THEN INSERT INTO rcAss
        SELECTFROM 'a'[R

        (TO MAINTAIN -('_
        (MAINTAINING -('_SESSION'[SES
NEW x:RentalCase;
  ALL of ALL of INSERT INTO r
    SELECTFROM '

    (TO MAINTAIN
    DELETE FROM r
    SELECTFROM '

    (TO MAINTAIN
    (MAINTAINING -('_SES
    INSERT INTO rcAssign
    SELECTFROM 'x'[Rent

    (TO MAINTAIN -('_SE
    (MAINTAINING -('_SESSION'[S
    (MAINTAINING -('_SESSION'[SES
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    (MAINTAINING -('_SESSION'[SESSION];sessionR
    (MAINTAINING -('_SESSION'[SESSION];sessionRet
    (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar
    (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \ / s
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturn
NEW x:Car;
  ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
    SELECTFROM ((('_SESSION'[SESSION];sessionReturnedCar /\ -(sess

    (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \ / ses
    INSERT INTO Isn{dety=Car}
    SELECTFROM 'x'[Car]*((('_SESSION'[SESSION];sessionReturnedCar

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(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \ / ses
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Car]*('
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN -('_SESSION'[SESSION];session
PICK a,b FROM rcAssignedCar;('x'[Car]*(' _SESSIO
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
      THEN ALL of INSERT INTO renta
      SELECTFROM 'a'[R

      (TO MAINTAIN -('
      DELETE FROM renta
      SELECTFROM 'a'[R

      (TO MAINTAIN -('
      (MAINTAINING -('_SESSION
PICK a,b FROM (rentalHasBeenS
      THEN INSERT INTO rcAssignedCa
      SELECTFROM 'a'[RentalCa

      (TO MAINTAIN -('_SESSIO
(MAINTAINING -('_SESSION'[SESSION];s
NEW x:RentalCase;
      ALL of ALL of INSERT INTO rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -('_SE
      DELETE FROM rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -('_SE
      (MAINTAINING -('_SESSION'[S
      INSERT INTO rcAssignedCar[R
      SELECTFROM 'x'[RentalCase]

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      (MAINTAINING -('_SESSION'[SESSION]
      (MAINTAINING -('_SESSION'[SESSION];s
      (MAINTAINING -('_SESSION'[SESSION];sessionR
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar)
NEW x:RentalCase;
      ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'x'[RentalCase]*((sessionReturnedC

      (TO MAINTAIN -('_SESSION'[SESSION];sessionRet
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FR
      THEN ALL of INSERT INTO rentalHa
      SELECTFROM 'a'[Rent

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        (MAINTAINING -(sessionReturnedCar~;'_SES
PICK a,b FROM (rentalHasBeenStarted~ /\ -rent
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(sessionReturnedCar~;'_SE
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSIO
NEW x:RentalCase;
        ALL of ALL of INSERT INTO rentalHasBeenStarted[Ren
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(sessionReturnedCar~;
(MAINTAINING -(sessionReturnedCar~;'_SESSIO
INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*'a'[RentalCase]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSI
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(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSIO
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sess
NEW x:RentalCase;
        ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*((sessionReturnedCar~;'_SESSION'[S

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessio
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCa
        THEN ALL of INSERT INTO rentalHasBeenStarted[Ren
        SELECTFROM 'a'[RentalCase]*'b'[Rent

        (TO MAINTAIN -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
        SELECTFROM 'a'[RentalCase]*'b'[Rent

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(MAINTAINING -(sessionReturnedCar~;'_SESSIO
PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalH
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSI
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NEW x:RentalCase;
        ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Re
        SELECTFROM 'x'[RentalCase]*((sessionReturned

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        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'
DELETE FROM rentalHasBeenEnded[RentalCase*Rent
        SELECTFROM 'x'[RentalCase]*(((sessionReturned

        (TO MAINTAIN  -(sessionReturnedCar~;'_SESSION'
INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*'x'[RentalCase]*((

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        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturne
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        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar) \
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (('_SESSION'[SESSION];session
        THEN INSERT INTO sessionReturnedCar[SESSION*Car]
        SELECTFROM 'a'[SESSION]*'b'[Car]

        (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[C
PICK a,b FROM sessionReturnedCar~;(('_SESSION'[SESSION];sessionR
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Car]*
        THEN INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'b'[RentalCase]*'a'[Car]

        (TO MAINTAIN  -('_SESSION'[SESSION];sess
PICK a,b FROM rcAssignedCar;('a'[Car]*'b'[Car]
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
        THEN ALL of INSERT INTO re
        SELECTFROM 'a

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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*'b'[Car]*'a'[Ca
(TO MAINTAIN -('_SESSION' [SESSION];session
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN ALL of INSERT INTO renta

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SELECTFROM 'a' [R

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DELETE FROM renta
SELECTFROM 'a' [R

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NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHa
SELECTFROM 'x' [Rent

(TO MAINTAIN -(('_SE
DELETE FROM rentalHa
SELECTFROM 'x' [Rent

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(MAINTAINING -('_SESSION
(MAINTAINING -('_SESSION' [SESSION];s
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHa
SELECTFROM 'a' [Rent

(TO MAINTAIN -('_SE
DELETE FROM rentalHa
SELECTFROM 'a' [Rent

(TO MAINTAIN -('_SE
(MAINTAINING -('_SESSION' [S
ONE OF ONE NONEMPTY ALTERNA
THEN INSERT I
SELECTF

(TO MAIN

PICK a,b FROM
THEN ONE OF 0

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(MAINTAIN
(MAINTAINING -(' _SES
NEW x:YesNoAnswer;
ALL of INSERT INTO
SELECTFROM

(TO MAINTAI
ONE OF ONE

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NEW
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(MAINTAININ
(MAINTAINING -(' _S
(MAINTAINING -(' _SES
(MAINTAINING -(' _SESSION' [S
(MAINTAINING -(' _SESSION' [SESSION]
(MAINTAINING -(' _SESSION' [SESSION];s
(MAINTAINING -(' _SESSION' [SESSION];sessionR
(MAINTAINING -(' _SESSION' [SESSION];sessionReturnedCar;(NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(((I[Car] /\ - (car

(TO MAINTAIN -(' _SESSION' [SESSION];sessionRet
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FR

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THEN ALL of INSERT INTO rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -( '_SE
DELETE FROM rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -( '_SE
      (MAINTAINING -( '_SESSION' [S
PICK a,b FROM (rentalHasBeenStar
THEN ONE OF ONE NONEMPTY ALTERNA
      THEN INSERT I
      SELECTF

      (TO MAIN
PICK a,b FROM
THEN ONE OF O

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      (MAINTAI
      (MAINTAINING -( '_SES
NEW x:YesNoAnswer;
      ALL of INSERT INTO
      SELECTFROM

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      (TO MAINTAI
ONE OF ONE

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(MAI
(MAINTAINING -('_S
(MAINTAINING -('_SES
(MAINTAINING -('_SESSION' [S
(MAINTAINING -('_SESSION' [SESSION];sess
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStart
SELECTFROM 'x' [RentalCase]*'x

(TO MAINTAIN -('_SESSION' [SES
DELETE FROM rentalHasBeenEnded
SELECTFROM 'x' [RentalCase]*'x

(TO MAINTAIN -('_SESSION' [SES
ONE OF ONE NONEMPTY ALTERNATIV
THEN INSERT INTO
SELECTFROM

(TO MAINTAIN
PICK a,b FROM re
THEN ONE OF ONE

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(MAINTEINING -('_SESSION
(MAINTEINING -('_SESSION'[SESS
(MAINTEINING -('_SESSION'[SESSION];se
(MAINTEINING -('_SESSION'[SESSION];sess
(MAINTEINING -('_SESSION'[SESSION];sessionRetu
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car]
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ - (ca
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ - (carA
(MAINTEINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ - (carAvailabl
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((sessionReturnedCar /\ Delt
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'b'[RentalCase]*'a'[Car]

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
PICK a,b FROM rcAssignedCar;(((sessionReturnedCar /\ Delta)~;'_S
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN ALL of INSERT INTO rentalHasBeenStarted[
SELECTFROM 'a'[RentalCase]*'b'[R

(TO MAINTAIN -(sessionReturnedCa
DELETE FROM rentalHasBeenEnded[Re
SELECTFROM 'a'[RentalCase]*'b'[R

(TO MAINTAIN -(sessionReturnedCa
(MAINTEINING -(sessionReturnedCar~;'_SES
PICK a,b FROM (rentalHasBeenStarted~ /\ -rent
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO rentalIsP
SELECTFROM 'a'[Renta

(TO MAINTAIN -(sessi
PICK a,b FROM rentalIsPaid
THEN ONE OF ONE NONEMPTY A
THEN BL
(C
PICK a,
THEN BL
(C
(MAINTEINING -
NEW x:YesNoAns
ALL of BLOCK
(CANN
BLOCK
(CANN
(MAINTEINING
(MAINTEINING -
(MAINTEINING -(sessio
(MAINTEINING -(sessionReturnedCar

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NEW x:YesNoAnswer;
  ALL of INSERT INTO rentalIsPaid
    SELECTFROM 'a'[RentalCa

      (TO MAINTAIN -(sessionR
      ONE OF ONE NONEMPTY ALTE
        THEN BLOCK
        (CANN
        PICK a,b F
        THEN BLOCK
        (CANN
      (MAINTAINING -(se
      NEW x:YesNoAnswer
        ALL of BLOCK
        (CANNOT
        BLOCK
        (CANNOT
      (MAINTAINING -(
      (MAINTAINING -(se
      (MAINTAINING -(sessionRe
      (MAINTAINING -(sessionReturnedC
      (MAINTAINING -(sessionReturnedCar
      (MAINTAINING -(sessionReturnedCar~;'_SES
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSIO
NEW x:RentalCase;
  ALL of ALL of INSERT INTO rentalHasBeenStarted[Ren
    SELECTFROM 'a'[RentalCase]*'b'[Car]

      (TO MAINTAIN -(sessionReturnedCar~;
      DELETE FROM rentalHasBeenEnded[Renta
      SELECTFROM 'a'[RentalCase]*'b'[Car]

      (TO MAINTAIN -(sessionReturnedCar~;
      (MAINTAINING -(sessionReturnedCar~;'_SESSIO
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
        THEN INSERT INTO rentalIsPaid
          SELECTFROM 'a'[RentalCa

      (TO MAINTAIN -(sessionR
      PICK a,b FROM rentalIsPaidQ~;
      THEN ONE OF ONE NONEMPTY ALTE
        THEN BLOCK
        (CANN
        PICK a,b F
        THEN BLOCK
        (CANN
      (MAINTAINING -(se
      NEW x:YesNoAnswer
        ALL of BLOCK
        (CANNOT

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BLOCK
(CANNOT
(MAINTAINING -(
(MAINTAINING -(se
(MAINTAINING -(sessionRetu
(MAINTAINING -(sessionReturnedCar~;'
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ[R
SELECTFROM 'x'[RentalCase]

(TO MAINTAIN -(sessionRetu
ONE OF ONE NONEMPTY ALTERNA
THEN BLOCK
(CANNOT
PICK a,b FROM
THEN BLOCK
(CANNOT
(MAINTAINING -(sessi
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHA
BLOCK
(CANNOT CHA
(MAINTAINING -(ses
(MAINTAINING -(sessi
(MAINTAINING -(sessionRetur
(MAINTAINING -(sessionReturnedCar~
(MAINTAINING -(sessionReturnedCar~;'
(MAINTAINING -(sessionReturnedCar~;'_SESSION
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESS
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sess
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(((I[Car] /\ -(carAvailableAt;carA

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessio
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCa
THEN ALL of INSERT INTO rentalHasBeenStarted[Rent
SELECTFROM 'a'[RentalCase]*'b'[Rent

(TO MAINTAIN -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
SELECTFROM 'a'[RentalCase]*'b'[Rent

(TO MAINTAIN -(sessionReturnedCar~;
(MAINTAINING -(sessionReturnedCar~;'_SESSION
PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalH
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b

```

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THEN INSERT INTO rentalIsPaid
    SELECTFROM 'a'[RentalCa

    (TO MAINTAIN -(sessionR
PICK a,b FROM rentalIsPaidQ~;
THEN ONE OF ONE NONEMPTY ALTE
    THEN BLOCK
    (CANN
    PICK a,b F
    THEN BLOCK
    (CANN
    (MAINTAINING -(se
NEW x:YesNoAnswer
    ALL of BLOCK
    (CANNOT
    BLOCK
    (CANNOT
    (MAINTAINING -(
    (MAINTAINING -(se
    (MAINTAINING -(sessionRe
(MAINTAINING -(sessionReturnedCar~;'
NEW x:YesNoAnswer;
    ALL of INSERT INTO rentalIsPaidQ[R
        SELECTFROM 'a'[RentalCase]

    (TO MAINTAIN -(sessionRetu
    ONE OF ONE NONEMPTY ALTERNA
    THEN BLOCK
    (CANNOT
    PICK a,b FROM
    THEN BLOCK
    (CANNOT
    (MAINTAINING -(sessi
NEW x:YesNoAnswer;
    ALL of BLOCK
    (CANNOT CHA
    BLOCK
    (CANNOT CHA
    (MAINTAINING -(ses
    (MAINTAINING -(sessi
    (MAINTAINING -(sessionRetur
    (MAINTAINING -(sessionReturnedCar~
    (MAINTAINING -(sessionReturnedCar~;'
    (MAINTAINING -(sessionReturnedCar~;'_SESSION
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
NEW x:RentalCase;
    ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Re
        SELECTFROM 'x'[RentalCase]*(((sessionReturned

    (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'

```

```

DELETE FROM rentalHasBeenEnded[RentalCase*Rent
SELECTFROM 'x'[RentalCase]*(((sessionReturned

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FR
THEN INSERT INTO rentalIsPaidQ[R
SELECTFROM 'a'[RentalCase]

(TO MAINTAIN -(sessionRetu
PICK a,b FROM rentalIsPaidQ~;'x
THEN ONE OF ONE NONEMPTY ALTERNA
THEN BLOCK
(CANNOT
PICK a,b FROM
THEN BLOCK
(CANNOT
(MAINTAINING -(sessi
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHA
BLOCK
(CANNOT CHA
(MAINTAINING -(ses
(MAINTAINING -(sessi
(MAINTAINING -(sessionRetur
(MAINTAINING -(sessionReturnedCar~;'_SE
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ[Rent
SELECTFROM 'x'[RentalCase]*'x

(TO MAINTAIN -(sessionReturne
ONE NONEMPTY ALTERNATIVE OF PI
THEN BLOCK
(CANNOT CHANGE 'Ye
PICK a,b FROM 'Yes'[Yes
THEN BLOCK
(CANNOT CHANGE V[Y
(MAINTAINING -(sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_
(MAINTAINING -(sessionReturnedCar~;'_SE
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];session
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturne
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;(I[C
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[Car]
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[Car]
(MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

```



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(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(sessionReturnedCar~;sessionReturnedCar) \/ I[Car] FROM UNI sessionRetu

```

<-----End Derivation --

```

ON DELETE Delta FROM sessionReturnedCar[SESSION*Car] EXECUTE      -- (ECA rule 122
ALL of DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM ' _SESSION' [SESSION];(-(sessionReturnedCar /\ -Delta);(I[Car]

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturned
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM ' _SESSION' [SESSION];(-(sessionReturnedCar /\ -Delta);

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;' _SESSION' [SESSION];(-(sessionRet

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;' _SE
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'a' [Car]*'b' [Branch]

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;' _SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b' [Car]*'a' [Branch]

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;' _SESSION' [SESSION];(-(session

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAva
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA

```

----- Derivation ----->

```

ALL of DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM ' _SESSION' [SESSION];(-(sessionReturnedCar /\ -Delta);(I[Car] /\ r

```

```

(TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM  '_SESSION'[SESSION];(-(sessionReturnedCar /\ -Delta);rcAss

(TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
DELETE FROM Isn{dety=Car}
      SELECTFROM  sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturned

(TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION'
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM  'a'[Car]*'b'[Branch]

            (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[C
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION'[SES
      THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM  'b'[Car]*'a'[Branch]

            (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[C
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM  (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionRetur

      (TO MAINTAIN  -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(c
      (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
      (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[Car]
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=Branch} EXECUTE      -- (ECA rule 123)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchOf;'EU-Rent'
      THEN INSERT INTO branchOf[Branch*CarRentalCompany]
            SELECTFROM  'a'[Branch]*'b'[CarRentalCompany]

      (TO MAINTAIN  -I[Branch] \ / branchOf;'EU-Rent'[CarRentalCompany]
PICK a,b FROM branchOf~;(I[Branch] /\ -(branchOf;'EU-Rent'[CarRent
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[CarRent
            THEN BLOCK
                  (CANNOT CHANGE 'EU-Rent'[CarRentalCompany]
PICK a,b FROM 'EU-Rent'[CarRentalCompany];('a'[
      THEN INSERT INTO branchOf[Branch*CarRentalCompany]
            SELECTFROM  'b'[Branch]*'a'[CarRentalCompany]

      (TO MAINTAIN  -I[Branch] \ / branchOf;'EU-R

```

```

(MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
NEW x:CarRentalCompany;
    ALL of BLOCK
        (CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM
        INSERT INTO branchOf[Branch*CarRentalCompany]
        SELECTFROM 'b'[Branch]*'a'[CarRentalCompany])

        (TO MAINTAIN -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
        (MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
        (MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
        (MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
(MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
NEW x:CarRentalCompany;
    ALL of INSERT INTO branchOf[Branch*CarRentalCompany]
        SELECTFROM (I[Branch] /\ -(branchOf;'EU-Rent'[CarRentalCompany])

        (TO MAINTAIN -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[CarRentalCompany])
        THEN BLOCK
            (CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EUREnt
            PICK a,b FROM 'EU-Rent'[CarRentalCompany];('x'[CarRentalCompany])
            THEN INSERT INTO branchOf[Branch*CarRentalCompany]
            SELECTFROM 'b'[Branch]*'a'[CarRentalCompany])

            (TO MAINTAIN -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
            (MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];
            (MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
            (MAINAINING -I[Branch] \\/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
            ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchOf;branchOf~
            THEN INSERT INTO branchOf[Branch*CarRentalCompany]
            SELECTFROM 'a'[Branch]*'b'[CarRentalCompany])

            (TO MAINTAIN -I[Branch] \\/ branchOf;I[CarRentalCompany];branchOf~
            PICK a,b FROM branchOf~;(I[Branch] /\ -(branchOf;branchOf~))
            THEN INSERT INTO branchOf[Branch*CarRentalCompany]
            SELECTFROM 'b'[Branch]*'a'[CarRentalCompany])

            (TO MAINTAIN -I[Branch] \\/ branchOf;I[CarRentalCompany];branchOf~
            (MAINAINING -I[Branch] \\/ branchOf;I[CarRentalCompany];branchOf~ FROM UN
            ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchLocation;branchOf~
            THEN INSERT INTO branchLocation[Branch*Location]
            SELECTFROM 'a'[Branch]*'b'[Location])

            (TO MAINTAIN -I[Branch] \\/ branchLocation;I[Location];branchOf~
            PICK a,b FROM branchLocation~;(I[Branch] /\ -(branchLocation;branchOf~
            THEN INSERT INTO branchLocation[Branch*Location]
            SELECTFROM 'b'[Branch]*'a'[Location])

            (TO MAINTAIN -I[Branch] \\/ branchLocation;I[Location];branchOf~
            (MAINAINING -I[Branch] \\/ branchLocation;I[Location];branchLocation~ FROM UN

```

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NEW x:Location;
INSERT INTO branchLocation[Branch*Location]
SELECTFROM (I[Branch] /\ -(branchLocation;branchLocation~))*'x'[Locati

      (TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branchLocation~
      (MAINTAINING -I[Branch] \/ branchLocation;I[Location];branchLocation~ FROM
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent bran
(MAINTAINING -(branchOf~;branchOf) \/ I[CarRentalCompany] FROM UNI branchOf::Bra
(MAINTAINING -I[Branch] \/ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRenta
(MAINTAINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLoc
(MAINTAINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocatio

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchOf;'EU-Rent'[C
      THEN INSERT INTO branchOf[Branch*CarRentalCompany]
      SELECTFROM 'a'[Branch]*'b'[CarRentalCompany]

      (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];b
      PICK a,b FROM branchOf~;(I[Branch] /\ -(branchOf;'EU-Rent'[CarRentalCom
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[CarRentalCom
      THEN BLOCK
      (CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM
      PICK a,b FROM 'EU-Rent'[CarRentalCompany];('a'[CarRe
      THEN INSERT INTO branchOf[Branch*CarRentalCompany]
      SELECTFROM 'b'[Branch]*'a'[CarRentalCompany]

      (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[
      (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalComp
      NEW x:CarRentalCompany;
      ALL of BLOCK
      (CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EU
      INSERT INTO branchOf[Branch*CarRentalCompany]
      SELECTFROM 'b'[Branch]*'a'[CarRentalCompany]*'x'[

      (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[Car
      (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCo
      (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalComp
      (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];br
      (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~ FROM
      NEW x:CarRentalCompany;
      ALL of INSERT INTO branchOf[Branch*CarRentalCompany]
      SELECTFROM (I[Branch] /\ -(branchOf;'EU-Rent'[CarRentalCompany];bran

      (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];bran
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[CarRentalCompany]*(I[B
      THEN BLOCK
      (CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EURent br

```

```

PICK a,b FROM 'EU-Rent'[CarRentalCompany];('x'[CarRentalCompany]
THEN INSERT INTO branchOf[Branch*CarRentalCompany]
SELECTFROM 'b'[Branch]*'a'[CarRentalCompany]

(TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~ FROM
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~ FROM
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchOf;branchOf~))
THEN INSERT INTO branchOf[Branch*CarRentalCompany]
SELECTFROM 'a'[Branch]*'b'[CarRentalCompany]

(TO MAINTAIN -I[Branch] \/ branchOf;I[CarRentalCompany];branchOf~
PICK a,b FROM branchOf~;(I[Branch] /\ -(branchOf;branchOf~))
THEN INSERT INTO branchOf[Branch*CarRentalCompany]
SELECTFROM 'b'[Branch]*'a'[CarRentalCompany]

(TO MAINTAIN -I[Branch] \/ branchOf;I[CarRentalCompany];branchOf~
(MAINTAINING -I[Branch] \/ branchOf;I[CarRentalCompany];branchOf~ FROM UNI
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchLocation;branchLocation~))
THEN INSERT INTO branchLocation[Branch*Location]
SELECTFROM 'a'[Branch]*'b'[Location]

(TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branchLocation~
PICK a,b FROM branchLocation~;(I[Branch] /\ -(branchLocation;branchLocation~))
THEN INSERT INTO branchLocation[Branch*Location]
SELECTFROM 'b'[Branch]*'a'[Location]

(TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branchLocation~
(MAINTAINING -I[Branch] \/ branchLocation;I[Location];branchLocation~ FROM UNI
NEW x:Location;
INSERT INTO branchLocation[Branch*Location]
SELECTFROM (I[Branch] /\ -(branchLocation;branchLocation~))*'x'[Location]

(TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branchLocation~ FROM
(MAINTAINING -I[Branch] \/ branchLocation;I[Location];branchLocation~ FROM UNI
(MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
(MAINTAINING -(branchOf~;branchOf) \/ I[CarRentalCompany] FROM UNI branchOf::Branch*CarRentalCompany
(MAINTAINING -I[Branch] \/ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRentalCompany
(MAINTAINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocation
(MAINTAINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation::Branch*CarRentalCompany

<-----End Derivation --

ON DELETE Delta FROM Isn{dety=Branch} EXECUTE -- (ECA rule 124)
BLOCK
(CANNOT CHANGE V[Branch*Branch] FROM Completeness of distance table)

----- Derivation ----->

```

```
BLOCK
(CANNOT CHANGE V[Branch*Branch] FROM Completeness of distance table)
```

<-----End Derivation --

```
ON INSERT Delta IN Isn{dety=CarRentalCompany} EXECUTE    -- (ECA rule 125)
ONE OF INSERT INTO Isn{dety=CarRentalCompany}
      SELECTFROM 'EU-Rent' [CarRentalCompany];branchOf~;branchOf /\ -I[CarRentalCompany]

      (TO MAINTAIN  -( 'EU-Rent' [CarRentalCompany];branchOf~;branchOf) \/ I[CarRentalCompany]
INSERT INTO Isn{dety=CarRentalCompany}
      SELECTFROM branchOf~;branchOf; 'EU-Rent' [CarRentalCompany] /\ -I[CarRentalCompany]

      (TO MAINTAIN  -(branchOf~;branchOf; 'EU-Rent' [CarRentalCompany]) \/ I[CarRentalCompany]
INSERT INTO branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf; 'EU-Rent' [CarRentalCompany] /\ -branchOf

      (TO MAINTAIN  -(branchOf; 'EU-Rent' [CarRentalCompany]) \/ branchOf FROM EURent
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
```

----- Derivation ----->

```
ONE OF INSERT INTO Isn{dety=CarRentalCompany}
      SELECTFROM 'EU-Rent' [CarRentalCompany];branchOf~;branchOf /\ -I[CarRentalCompany]

      (TO MAINTAIN  -( 'EU-Rent' [CarRentalCompany];branchOf~;branchOf) \/ I[CarRentalCompany]
INSERT INTO Isn{dety=CarRentalCompany}
      SELECTFROM branchOf~;branchOf; 'EU-Rent' [CarRentalCompany] /\ -I[CarRentalCompany]

      (TO MAINTAIN  -(branchOf~;branchOf; 'EU-Rent' [CarRentalCompany]) \/ I[CarRentalCompany]
INSERT INTO branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf; 'EU-Rent' [CarRentalCompany] /\ -branchOf

      (TO MAINTAIN  -(branchOf; 'EU-Rent' [CarRentalCompany]) \/ branchOf FROM EURent
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf \/ branchOf; 'EU-Rent' [CarRentalCompany] FROM EURent branches)
```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=CarRentalCompany} EXECUTE      -- (ECA rule 126)
ONE OF DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM -(branchOf;'EU-Rent'[CarRentalCompany]) /\ branchOf

      (TO MAINTAIN  -branchOf /\ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-'EU-Rent'[CarRentalCompany] /\ branchOf~;branchOf)

      (TO MAINTAIN  -(branchOf~;branchOf) /\ 'EU-Rent'[CarRentalCompany] FROM EURent
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-I[CarRentalCompany] /\ branchOf~;branchOf;'EU-Rent

      (TO MAINTAIN  -('EU-Rent'[CarRentalCompany];branchOf~;branchOf) /\ I[CarR
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;'EU-Rent'[CarRentalCompany];(-I[CarRentalCompany] /\

      (TO MAINTAIN  -('EU-Rent'[CarRentalCompany];branchOf~;branchOf) /\ I[CarR
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;'EU-Rent'[CarRentalCompany];(-I[CarRentalCompany] /\

      (TO MAINTAIN  -(branchOf~;branchOf;'EU-Rent'[CarRentalCompany]) /\ I[CarR
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-I[CarRentalCompany] /\ branchOf~;branchOf;'EU-Rent

      (TO MAINTAIN  -(branchOf~;branchOf;'EU-Rent'[CarRentalCompany]) /\ I[CarR
DELETE FROM Isn{dety=Branch}
      SELECTFROM -(branchOf;'EU-Rent'[CarRentalCompany];branchOf~) /\ I[Branch

      (TO MAINTAIN  -I[Branch] /\ branchOf;'EU-Rent'[CarRentalCompany];branchOf
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-I[CarRentalCompany] /\ branchOf~;branchOf)

      (TO MAINTAIN  -(branchOf~;branchOf) /\ I[CarRentalCompany] FROM UNI branchOf
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM V[Branch*CarRentalCompany];Delta

DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
      SELECTFROM Delta;V[CarRentalCompany*Integer]

      (MAINTAINING -branchOf /\ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branchOf
      (MAINTAINING -branchOf /\ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branchOf
      (MAINTAINING -branchOf /\ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branchOf
      (MAINTAINING -branchOf /\ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branchOf
      (MAINTAINING -branchOf /\ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branchOf
      (MAINTAINING -(branchOf~;branchOf) /\ I[CarRentalCompany] FROM UNI branchOf::BranchOf
      (MAINTAINING -I[Branch] /\ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRentalCompany

```

----- Derivation ----->

```

ONE OF DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM -(branchOf;'EU-Rent' [CarRentalCompany]) /\ branchOf

(TO MAINTAIN  -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent br
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-'EU-Rent' [CarRentalCompany] /\ branchOf~;branchOf)

(TO MAINTAIN  -(branchOf~;branchOf) /\ 'EU-Rent' [CarRentalCompany] FROM EURent
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-I[CarRentalCompany] /\ branchOf~;branchOf;'EU-Rent' [Car

(TO MAINTAIN  -('EU-Rent' [CarRentalCompany];branchOf~;branchOf) /\ I[CarRental
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;'EU-Rent' [CarRentalCompany];(-I[CarRentalCompany] /\ 'EU-

(TO MAINTAIN  -('EU-Rent' [CarRentalCompany];branchOf~;branchOf) /\ I[CarRental
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;'EU-Rent' [CarRentalCompany];(-I[CarRentalCompany] /\ 'EU-

(TO MAINTAIN  -(branchOf~;branchOf;'EU-Rent' [CarRentalCompany]) /\ I[CarRental
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-I[CarRentalCompany] /\ branchOf~;branchOf;'EU-Rent' [Car

(TO MAINTAIN  -(branchOf~;branchOf;'EU-Rent' [CarRentalCompany]) /\ I[CarRental
DELETE FROM Isn{detyp=Branch}
      SELECTFROM -(branchOf;'EU-Rent' [CarRentalCompany];branchOf~) /\ I[Branch]

(TO MAINTAIN  -I[Branch] /\ branchOf;'EU-Rent' [CarRentalCompany];branchOf~ FROM
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM branchOf;(-I[CarRentalCompany] /\ branchOf~;branchOf)

(TO MAINTAIN  -(branchOf~;branchOf) /\ I[CarRentalCompany] FROM UNI branchOf::
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM V [Branch*CarRentalCompany];Delta

DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
      SELECTFROM Delta;V[CarRentalCompany*Integer]

(MAINTAINING -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -branchOf /\ branchOf;'EU-Rent' [CarRentalCompany] FROM EURent branches)
(MAINTAINING -(branchOf~;branchOf) /\ I[CarRentalCompany] FROM UNI branchOf::Branch*C
(MAINTAINING -I[Branch] /\ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRentalComp

```

<-----End Derivation --


```

ON INSERT Delta IN Isn{dety=Car} EXECUTE    -- (ECA rule 127)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carAvailableAt;carAvail
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

        (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
        PICK a,b FROM carAvailableAt~;(I[Car] /\ -(carAvailableAt;carAvailableAt~)
        THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
        (MAINTAINING -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar~;
        NEW x:Branch;
        INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM (I[Car] /\ -(carAvailableAt;carAvailableAt~) /\ -(rcAssignedCar;

        (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
        (MAINTAINING -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar~;
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carAvailableAt;carAvail
            THEN INSERT INTO rcAssignedCar[RentalCase*Car]
                SELECTFROM 'b'[RentalCase]*'a'[Car]

            (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
            PICK a,b FROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~)
            THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
                THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
                    SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

                (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
                DELETE FROM rentalHasBeenEnded[RentalCase*Car]
                    SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

                (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
                (MAINTAINING -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
                PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded[RentalCase*Car]
                THEN INSERT INTO rcAssignedCar[RentalCase*Car]
                    SELECTFROM 'a'[RentalCase]*'b'[Car]

                (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
                (MAINTAINING -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
                NEW x:RentalCase;
                ALL of ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
                    SELECTFROM 'a'[RentalCase]*'b'[Car]*'c'[RentalCase]

                (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;
                DELETE FROM rentalHasBeenEnded[RentalCase*Car]
                    SELECTFROM 'a'[RentalCase]*'b'[Car]*'c'[RentalCase]

                (TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcAssignedCar;

```

```

(MAINAINING -I[Car] \/ carAvailableAt;carAvail
INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*'a'[RentalCase]*'

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvail

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCase]
THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[RentalCase]*

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
DELETE FROM rentalHasBeenEnded[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[RentalCase]*

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
(MAINAINING -I[Car] \/ carAvailableAt;carAvail
PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvail

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
DELETE FROM rentalHasBeenEnded[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvail

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvail

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvail
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sessionReturnedCar
THEN INSERT INTO sessionReturnedCar[SESSION*Car]

```

```

SELECTFROM 'a'[SESSION]*'b'[Car]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car]
PICK a,b FROM sessionReturnedCar~;('_SESSION'[SESSION];sessionRetu
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Car]*'b'
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
            SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN -('_SESSION'[SESSION];session
PICK a,b FROM rcAssignedCar;('a'[Car]*'b'[Car])
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,
      THEN ALL of INSERT INTO rent
            SELECTFROM 'a'[

      (TO MAINTAIN -(
DELETE FROM rent
      SELECTFROM 'a'[

      (TO MAINTAIN -(
      (MAINTAINING -('_SESSION
PICK a,b FROM (rentalHasBeen
THEN ONE OF ONE NONEMPTY ALT
      THEN INSE
      SEL

      (TO M
PICK a,b
THEN ONE

      (MAI
(MAINTAINING -('_
NEW x:YesNoAnswer
      ALL of INSERT
      SELECT

      (TO MAI
ONE OF

```

```

(MAINTAINING -(' _SESSION' [SESSION]);
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalH
SELECTFROM 'a' [Ren

(TO MAINTAIN -(' _S
DELETE FROM rentalH
SELECTFROM 'a' [Ren

(TO MAINTAIN -(' _S
(MAINTAINING -(' _SESSION' [
ONE OF ONE NONEMPTY ALTERN
THEN INSERT
SELECT

(TO MAI
PICK a,b FROM
THEN ONE OF

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(MAINTAINING -(' _SE
NEW x:YesNoAnswer;

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(MAINTAINING -( '_SE
(MAINTAINING -( '_SE
NEW x:YesNoAnswer;
ALL of INSERT INTO
SELECTFROM

(TO MAINTAIN
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NEW
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(MAINTAINING -( '_SE
(MAINTAINING -( '_SE
(MAINTAINING -( '_SE
(MAINTAINING -( '_SESSION' [SESSION];ses
(MAINTAINING -( '_SESSION' [SESSION];ses
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasB
SELECTFROM 'x' [Rental

(TO MAINTAIN -( '_SESS
DELETE FROM rentalHasB
SELECTFROM 'x' [Rental

(TO MAINTAIN -( '_SESS
(MAINTAINING -( '_SESSION' [SES
ONE OF ONE NONEMPTY ALTERNATI
THEN INSERT INTO

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SELECTFROM
    (TO MAINTA
PICK a,b FROM r
THEN ONE OF ONE

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(MAINTAINING -('_SESSI
NEW x:YesNoAnswer;
    ALL of INSERT INTO r
        SELECTFROM '

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ONE OF ONE NO

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NEW x:
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(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car]
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ - (carAva

```

```

NEW x:Car;
  ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
    SELECTFROM ('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\-

  (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\-
  ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Car]*('_SE
    THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN -('_SESSION'[SESSION];sessionRe
      PICK a,b FROM rcAssignedCar;('x'[Car]*('_SESSION'[
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b F
        THEN ALL of INSERT INTO rentalH
          SELECTFROM 'a'[Ren

          (TO MAINTAIN -('_S
          DELETE FROM rentalH
          SELECTFROM 'a'[Ren

          (TO MAINTAIN -('_S
          (MAINTAINING -('_SESSION'[
          PICK a,b FROM (rentalHasBeenSta
          THEN ONE OF ONE NONEMPTY ALTERN
            THEN INSERT
            SELECT

            (TO MAI
            PICK a,b FROM
            THEN ONE OF

            (MAINTA
            (MAINTAINING -('_SE
            NEW x:YesNoAnswer;
            ALL of INSERT INTO
            SELECTFROM

            (TO MAINTA
            ONE OF ONE

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(MAINTAINING -('_SE
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(MAINTAINING -('_SESSION' [SESSION];ses
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasB
SELECTFROM 'a'[Rental

(TO MAINTAIN -('_SESS
DELETE FROM rentalHasB
SELECTFROM 'a'[Rental

(TO MAINTAIN -('_SESS
(MAINTAINING -('_SESSION' [SES
ONE OF ONE NONEMPTY ALTERNATI
THEN INSERT INTO
SELECTFROM

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PICK a,b FROM r
THEN ONE OF ONE

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(MAINTAINING -('_SESSI

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NEW x:YesNoAnswer;
ALL of INSERT INTO r
SELECTFROM 'x'

(TO MAINTAIN
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM r
THEN ALL of INSERT INTO rentalHasBeenStarted
SELECTFROM 'a' [RentalCase]

(TO MAINTAIN
DELETE FROM rentalHasBeenStarted
SELECTFROM 'a' [RentalCase]

(TO MAINTAIN
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar; (I[Car] /\ -(carAvailable
PICK a,b FROM (rentalHasBeenStarted
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM r
THEN INSERT INTO rentalHasBeenStarted
SELECTFROM 'a' [RentalCase]

(TO MAINTAIN
PICK a,b FROM r
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM r
THEN INSERT INTO rentalHasBeenStarted
SELECTFROM 'a' [RentalCase]

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NEW
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(MAINTAINING -('_SESSION
NEW x:YesNoAnswer;
ALL of INSERT INTO r
SELECTFROM '

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ONE OF ONE NO

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NEW x:
ALL

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(MAINT.
(MAINTAINING
(MAINTAINING -('_SES
(MAINTAINING -('_SESSION
(MAINTAINING -('_SESSION' [SESS
(MAINTAINING -('_SESSION' [SESSION];session
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStarted
SELECTFROM 'x' [RentalCase]*'x' [

(TO MAINTAIN -('_SESSION' [SESSI
DELETE FROM rentalHasBeenEnded[R
SELECTFROM 'x' [RentalCase]*'x' [

(TO MAINTAIN -('_SESSION' [SESSI
ONE OF ONE NONEMPTY ALTERNATIVE
THEN INSERT INTO r

```



```

(MAINAINING -(sess
(MAINAINING -(sessionRetu
(MAINAINING -(sessionReturnedCar~;
(MAINAINING -(sessionReturnedCar~;
(MAINAINING -(sessionReturnedCar~;'_SESSI
(MAINAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[Car]*'.

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
DELETE FROM rentalHasBeenEnded[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[Car]*'.

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
(MAINAINING -(sessionReturnedCar~;'_SESSION'
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalHasBeenStarted[RentalCase]
THEN INSERT INTO rentalIsPaidQ[RentalCase]
SELECTFROM 'a'[RentalCase]*'b'[Car]*'.

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
PICK a,b FROM rentalIsPaidQ[RentalCase];('
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPaidQ[RentalCase]
THEN BLOCK
(CANNOT CHOOSE)
PICK a,b FROM rentalIsPaidQ[RentalCase];('
THEN BLOCK
(CANNOT CHOOSE)
(MAINAINING -(sessionReturnedCar~;'_SESSION'
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHOOSE)
BLOCK
(CANNOT CHOOSE)
(MAINAINING -(sessionReturnedCar~;'_SESSION'
(MAINAINING -(sessionReturnedCar~;'_SESSION'
(MAINAINING -(sessionReturnedCar~;'_SESSION'
(MAINAINING -(sessionReturnedCar~;'_SESSION'
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ[RentalCase]
SELECTFROM 'x'[RentalCase]*'b'[Car]*'.

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPaidQ[RentalCase]
THEN BLOCK
(CANNOT CHOOSE)
PICK a,b FROM rentalIsPaidQ[RentalCase];('
THEN BLOCK
(CANNOT CHOOSE)
(MAINAINING -(sessionReturnedCar~;'_SESSION'

```

```

NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE
BLOCK
(CANNOT CHANGE
(MAINTAINING -(session
(MAINTAINING -(session
(MAINTAINING -(sessionReturnedCar~;
(MAINTAINING -(sessionReturnedCar~;
(MAINTAINING -(sessionReturnedCar~; '_SESSION'
(MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION]
(MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION]
(MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturnedCar
INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));s

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{dety=Branch}
SELECTFROM rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt

(TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt
INSERT INTO rcDroppedOffDate[RentalCase*Date]
SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));s

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~
INSERT INTO Isn{dety=Date}
SELECTFROM rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;c

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carType;carType~))
THEN INSERT INTO carType[Car*CarType]
SELECTFROM 'a'[Car]*'b'[CarType]

(TO MAINTAIN -I[Car] \/ carType;I[CarType];carType~ FROM UNI
PICK a,b FROM carType~;(I[Car] /\ -(carType;carType~))
THEN INSERT INTO carType[Car*CarType]
SELECTFROM 'b'[Car]*'a'[CarType]

(TO MAINTAIN -I[Car] \/ carType;I[CarType];carType~ FROM UNI
(MAINTAINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car
NEW x:CarType;
INSERT INTO carType[Car*CarType]
SELECTFROM (I[Car] /\ -(carType;carType~))*'x'[CarType]

(TO MAINTAIN -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::
(MAINTAINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rental
(MAINTAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt

```



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(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ r
NEW x:RentalCase;
  ALL of ALL of INSERT INTO rentalHasBeenStarted[RentalCase
    SELECTFROM 'a'[RentalCase]*'b'[Car]*'x'[Re

    (TO MAINTAIN -I[Car] \/ carAvailableAt;car
    DELETE FROM rentalHasBeenEnded[RentalCase*R
    SELECTFROM 'a'[RentalCase]*'b'[Car]*'x'[Re

    (TO MAINTAIN -I[Car] \/ carAvailableAt;car
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailabl
    INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'x'[RentalCase]*'a'[RentalCase]*'b'[Ca

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailab
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ r
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssign
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rent
NEW x:RentalCase;
  ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvailableA

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssigned
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCase]*(I[
    THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase
    SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

    (TO MAINTAIN -I[Car] \/ carAvailableAt;car
    DELETE FROM rentalHasBeenEnded[RentalCase*R
    SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

    (TO MAINTAIN -I[Car] \/ carAvailableAt;car
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailabl
    PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenE
    THEN INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'a'[RentalCase]*'b'[Car]

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailab
    (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAs
NEW x:RentalCase;
  ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCas
    SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailable

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableA
    DELETE FROM rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailable

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableA
    INSERT INTO rcAssignedCar[RentalCase*Car]

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SELECTFROM 'x' [RentalCase]*'x' [RentalCase]*(I[Car] /

      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
      (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
      (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAs
      (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedC
      (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(re
      (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sessionReturned
      THEN INSERT INTO sessionReturnedCar[SESSION*Car]
      SELECTFROM 'a' [SESSION]*'b' [Car]

      (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
PICK a,b FROM sessionReturnedCar~;('_SESSION'[SESSION];sessionReturnedC
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Car]*'b'[Car]
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b' [RentalCase]*'a' [Car]

      (TO MAINTAIN -('_SESSION'[SESSION];sessionRetu
PICK a,b FROM rcAssignedCar;('a'[Car]*'b'[Car])
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
      THEN ALL of INSERT INTO rentalHas
      SELECTFROM 'a' [Renta

      (TO MAINTAIN -('_SES
DELETE FROM rentalHas
SELECTFROM 'a' [Renta

      (TO MAINTAIN -('_SES
      (MAINTAINING -('_SESSION'[SE
PICK a,b FROM (rentalHasBeenStart
THEN ONE OF ONE NONEMPTY ALTERNAT
      THEN INSERT IN
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SELECTFROM 'x'

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(MAINTAINING -('_SESSION'[SESSION];sessionRetur
(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Ca
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*'b'[Car]*'a'[Car]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturne
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (
THEN ALL of INSERT INTO rentalHasBee
SELECTFROM 'a'[RentalCa

(TO MAINTAIN -('_SESSIO
DELETE FROM rentalHasBee
SELECTFROM 'a'[RentalCa

(TO MAINTAIN -('_SESSIO

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SELECTFROM 'x'[RentalCase]

(TO MAINTAIN -( '_SESSION'[
DELETE FROM rentalHasBeenEn
SELECTFROM 'x'[RentalCase]

(TO MAINTAIN -( '_SESSION'[
(MAINTAINING -( '_SESSION'[SESSION]
ONE OF ONE NONEMPTY ALTERNATIVE OF
THEN INSERT INTO ren
SELECTFROM 'a'

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PICK a,b FROM rental
THEN ONE OF ONE NONE
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NEW x:YesNoAnswer;
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SELECTFROM 'x'[Re

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(MAINTEINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -
(MAINTEINING -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailable
NEW x:Car;
ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
SELECTFROM ('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carA

(TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(c
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Car]*('_SESSION
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'b' [RentalCase]*'a' [Car]

(TO MAINTAIN -('_SESSION' [SESSION];sessionReturne
PICK a,b FROM rcAssignedCar;('x' [Car]*('_SESSION' [SESSI
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (
THEN ALL of INSERT INTO rentalHasBee
SELECTFROM 'a' [RentalCa

(TO MAINTAIN -('_SESSIO
DELETE FROM rentalHasBee
SELECTFROM 'a' [RentalCa

(TO MAINTAIN -('_SESSIO
(MAINTEINING -('_SESSION' [SESSI
PICK a,b FROM (rentalHasBeenStarted~
THEN ONE OF ONE NONEMPTY ALTERNATIVE
THEN INSERT INTO
SELECTFROM

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PICK a,b FROM ren
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NEW x:YesNoAnswer;
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(MAINTAINING -('_SESSION'[SESSION];sessionR
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasBeenSt
SELECTFROM 'a'[RentalCase]

(TO MAINTAIN -('_SESSION'[
DELETE FROM rentalHasBeenEn
SELECTFROM 'a'[RentalCase]

(TO MAINTAIN -('_SESSION'[
(MAINTAINING -('_SESSION'[SESSION]
ONE OF ONE NONEMPTY ALTERNATIVE OF
THEN INSERT INTO ren
SELECTFROM 'a'

(TO MAINTAIN -
PICK a,b FROM rental
THEN ONE OF ONE NONE
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NEW x:YesNoAnswer;
ALL of INSERT INTO rental
SELECTFROM 'x' [Re

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ALL of BL
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(MAINTEINING -( '_SESSION' [SESSION];sessionReturned
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar; (I[Car]
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x' [RentalCase]*((I[Car] /\ -(carAvailabl

(TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCa
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'
THEN ALL of INSERT INTO rentalHasBeenSt
SELECTFROM 'a' [RentalCase]

(TO MAINTAIN -( '_SESSION' [
DELETE FROM rentalHasBeenEn
SELECTFROM 'a' [RentalCase]

```

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        (TO MAINTAIN -( '_SESSION' [
        (MAINTAINING -( '_SESSION' [SESSION]
PICK a,b FROM (rentalHasBeenStarted~ /\
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
        THEN INSERT INTO ren
        SELECTFROM 'a'

        (TO MAINTAIN -
PICK a,b FROM rental
THEN ONE OF ONE NONE
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        (MAINTAIN
NEW x:Ye
        ALL of

        (MAINT
        (MAINTAIN
        (MAINTAINING -( '_SESSION' [S
NEW x:YesNoAnswer;
        ALL of INSERT INTO rental
        SELECTFROM 'a' [Re

        (TO MAINTAIN -( '_
ONE OF ONE NONEMPT
        THEN

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        (MAINTAININ
NEW x:YesNo
        ALL of BL
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        (MAINTAINING -( '_SESSION' [SESSION]
        (MAINTAINING -( '_SESSION' [SESSION];sessionRetu
NEW x:RentalCase;

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        (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(ca
        (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvaila
        (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionReturnedCar~;'_SESSION'[SESS
        THEN INSERT INTO rcAssignedCar[RentalCase*Car]
                SELECTFROM 'b'[RentalCase]*'a'[Car]

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
PICK a,b FROM rcAssignedCar;(sessionReturnedCar~;'_SESSION'[SESSION];se
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]*
        THEN ALL of INSERT INTO rentalHasBeenStarted[RentalC
                SELECTFROM 'a'[RentalCase]*'b'[RentalCa

        (TO MAINTAIN -(sessionReturnedCar~;'_SE
DELETE FROM rentalHasBeenEnded[RentalCas
        SELECTFROM 'a'[RentalCase]*'b'[RentalCa

        (TO MAINTAIN -(sessionReturnedCar~;'_SE
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[S
PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBe
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
        THEN INSERT INTO rentalIsPaidQ[Re
                SELECTFROM 'a'[RentalCase]*

        (TO MAINTAIN -(sessionRetur
PICK a,b FROM rentalIsPaidQ~;'a'
THEN ONE OF ONE NONEMPTY ALTERNAT
        THEN BLOCK
                (CANNOT C
                PICK a,b FROM
        THEN BLOCK
                (CANNOT C
        (MAINTAINING -(sessio
NEW x:YesNoAnswer;
        ALL of BLOCK
                (CANNOT CHAN
                BLOCK
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        (MAINTAINING -(sess
        (MAINTAINING -(sessio
        (MAINTAINING -(sessionReturn
        (MAINTAINING -(sessionReturnedCar~;'_SES
NEW x:YesNoAnswer;
        ALL of INSERT INTO rentalIsPaidQ[Renta
                SELECTFROM 'a'[RentalCase]*'b'

        (TO MAINTAIN -(sessionReturned
ONE OF ONE NONEMPTY ALTERNATIVE
        THEN BLOCK
                (CANNOT CHAN

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PICK a,b FROM 'Ye
THEN BLOCK
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NEW x:YesNoAnswer;
ALL of BLOCK
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(MAINAINING -(sessionReturnedCar~;'_SESSION' [S
(MAINAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sess
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasBeenStarted[RentalCase
SELECTFROM 'a' [RentalCase]*'b' [Car]*'x' [Re

(TO MAINTAIN -(sessionReturnedCar~;'_SESSI
DELETE FROM rentalHasBeenEnded[RentalCase*R
SELECTFROM 'a' [RentalCase]*'b' [Car]*'x' [Re

(TO MAINTAIN -(sessionReturnedCar~;'_SESSI
(MAINAINING -(sessionReturnedCar~;'_SESSION' [SESS
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (
THEN INSERT INTO rentalIsPaidQ[Renta
SELECTFROM 'a' [RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
PICK a,b FROM rentalIsPaidQ~;('x' [Re
THEN ONE OF ONE NONEMPTY ALTERNATIVE
THEN BLOCK
(CANNOT CHAN
PICK a,b FROM 'Ye
THEN BLOCK
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(MAINAINING -(sessionRe
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE
BLOCK
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(MAINAINING -(session
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(MAINAINING -(sessionReturnedC
(MAINAINING -(sessionReturnedCar~;'_SESSIO
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ[RentalCa

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SELECTFROM 'x'[RentalCase]*'a'[Re

(TO MAINTAIN -(sessionReturnedCar
ONE OF ONE NONEMPTY ALTERNATIVE OF
THEN BLOCK
(CANNOT CHANGE
PICK a,b FROM 'Yes'[
THEN BLOCK
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NEW x:YesNoAnswer;
ALL of BLOCK
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(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];se
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sess
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;(I[C
INSERT INTO rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessio

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
INSERT INTO Isn{dety=Branch}
SELECTFROM rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carA

(TO MAINTAIN -(rcDroppedOffBranch~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;
INSERT INTO rcDroppedOffDate[RentalCase*Date]
SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessio

(TO MAINTAIN -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));se
INSERT INTO Isn{dety=Date}
SELECTFROM rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAva

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carType;carType~));carT
THEN INSERT INTO carType[Car*CarType]
SELECTFROM 'a'[Car]*'b'[CarType]

(TO MAINTAIN -I[Car] /\ carType;I[CarType];carType~ FROM UNI carT
PICK a,b FROM carType~;(I[Car] /\ -(carType;carType~))
THEN INSERT INTO carType[Car*CarType]
SELECTFROM 'b'[Car]*'a'[CarType]

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        (TO MAINTAIN  -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType
(MAINTEINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car*CarType
NEW x:CarType;
    INSERT INTO carType[Car*CarType]
        SELECTFROM (I[Car] /\ -(carType;carType~))*'x'[CarType]

        (TO MAINTAIN  -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car*CarType
        (MAINTEINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car*CarType
(MAINTEINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcAssignedCar~;(rentalHasBe
(MAINTEINING -(('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTEINING -(('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTEINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINTEINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)

<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=Car} EXECUTE      -- (ECA rule 128)
ALL of DELETE FROM sessionReturnedCar[SESSION*Car]
    SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ rcAssignedCar~)

    (TO MAINTAIN  -(('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar
    (TO MAINTAIN  -(sessionReturnedCar~;sessionReturnedCar) \/ I[Car] FROM UNI
DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM rcAssignedCar;(-I[Car] /\ rcAssignedCar~;rcAssignedCar) \/ V[Car]

    (TO MAINTAIN  -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssignedCar
DELETE FROM rcDroppedOffCar[RentalCase*Car]
    SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcDroppedOffCar)

    (TO MAINTAIN  -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar
DELETE FROM carAvailableAt[Car*Branch]
    SELECTFROM Delta;V[Car*Branch]

DELETE FROM carType[Car*CarType]
    SELECTFROM Delta;V[Car*CarType]

ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
    SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcAssignedCar~)

    (TO MAINTAIN  -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM DroptOffCar
DELETE FROM rcDroppedOffCar[RentalCase*Car]
    SELECTFROM rcAssignedCar;(-I[Car] /\ rcAssignedCar~;rcDroppedOffCar)

    (TO MAINTAIN  -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM DroptOffCar

```

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(MAINAINING -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ se

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;((-I[Car] /\ se

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
(MAINAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integri
(MAINAINING -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[
(MAINAINING -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[
(MAINAINING -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssignedCar::R
(MAINAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOff
(MAINAINING -(sessionReturnedCar~;sessionReturnedCar) \/ I[Car] FROM UNI session

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----- Derivation ----->

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ALL of DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];(-(sessionReturnedCar;(I[Car] /\ rcAssignedCar

      (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \/ sessionReturnedCar;
      (TO MAINTAIN -(sessionReturnedCar~;sessionReturnedCar) \/ I[Car] FROM UNI ses
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM rcAssignedCar;(-I[Car] /\ rcAssignedCar~;rcAssignedCar) \/ V[Renta

      (TO MAINTAIN -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssignedCar
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcDroppedOffCar) \/ V

      (TO MAINTAIN -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDropped
DELETE FROM carAvailableAt[Car*Branch]
      SELECTFROM Delta;V[Car*Branch]

DELETE FROM carType[Car*CarType]
      SELECTFROM Delta;V[Car*CarType]

ONE OF DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcAssignedCar)

      (TO MAINTAIN -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM rcAssignedCar;(-I[Car] /\ rcAssignedCar~;rcDroppedOffCar)

      (TO MAINTAIN -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-
(MAINAINING -(rcAssignedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off car
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]

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```

SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;((-I[Car] /\ session

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturned
DELETE FROM sessionReturnedCar [SESSION*Car]
SELECTFROM '_SESSION' [SESSION];sessionReturnedCar;((-I[Car] /\ session

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar) \/
(MAINTAINING -rcDroppedOffCar \/ rcAssignedCar FROM Dropped-off car type integrity)
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[Car]
(MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar;(I[Car]
(MAINTAINING -(rcAssignedCar~;rcAssignedCar) \/ I[Car] FROM UNI rcAssignedCar::Rental
(MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar::
(MAINTAINING -(sessionReturnedCar~;sessionReturnedCar) \/ I[Car] FROM UNI sessionRetu

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=RentalCase} EXECUTE -- (ECA rule 129)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAns
THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'[YesNo
THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Branch;
INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNo
THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'[YesNo
THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAns
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]

```

```

SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes' [Yes
THEN INSERT INTO contractedDropoffBranch [RentalCase*Branch]
SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO contractedDropoffBranch [RentalCase*Branch]
SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes' [Y
THEN INSERT INTO contractedDropoffBranch [RentalCase*Branch]
SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO contractedStartDate [RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO contractedStartDate [RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Date;
INSERT INTO contractedStartDate [RentalCase*Date]
SELECTFROM (rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO contractedStartDate [RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO contractedStartDate [RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO contractedEndDate [RentalCase*Date]

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SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes' [YesNoAnsw
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'a' [RentalCase]*'b' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes' [YesNoAnsw
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b' [RentalCase]*'a' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:CarType;
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM (rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'a' [RentalCase]*'b' [CarType]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b' [RentalCase]*'a' [CarType]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO rcDriver[RentalCase*Person]

```

```

SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUser
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM (rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcB
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAn
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUser
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcB
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ rc

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(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
        PICK a,b FROM carAvailableAt;(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
        THEN INSERT INTO carType[Car*CarType]
            SELECTFROM 'a'[Car]*'b'[CarType]

        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
NEW x:Car;
    ALL of INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'x'[Car]*(contractedCarType~;(I[RentalCase] /\ rentalHasBeenProm

        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
        INSERT INTO carType[Car*CarType]
            SELECTFROM 'x'[Car]*(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm

        (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
        (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
    THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
        PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
    THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
        PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
        THEN INSERT INTO rcRenter[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~/
INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~/ /\ rcDroppedOrCancelled

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~/ /\ rcDroppedOrCancelled

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ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[YesNoAnswer]
    THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
    PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
    THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'b'[RentalCase]*'a'[Amount]

    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
NEW x:Amount;
    INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]

    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcMaxRentalDuration;rcMaxRentalDuration~
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ rcMaxRentalDuration~
    PICK a,b FROM contractedStartDate~;(rcMaxRentalDuration;rcMaxRentalDuration~
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Date]*'b'[Date]
        THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
            SELECTFROM 'a'[Date]*'b'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
    PICK a,b FROM dateIntervalCompTrigger~;('a'[Date]*'b'[Date]
    THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
NEW x:Date;
    ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[RentalCase]*'x'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
    INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]*'x'[Date]

    (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
    THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Date]*'b'[Date]
        THEN INSERT INTO rentalBasicCharge[RentalCase*Amount]

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SELECTFROM 'a'[RentalCase]*'b'[Amo

(TO MAINTAIN -(rentalLocationPenal
PICK a,b FROM rentalBasicCharge~;('a'[Re
THEN INSERT INTO arg1[CompRentalCharge*Am
SELECTFROM 'b'[CompRentalCharge]*'.

(TO MAINTAIN -(rentalLocationPenal
(MAINTAINING -(rentalLocationPenaltyCharge;rent
NEW x:Amount;
ALL of INSERT INTO rentalBasicCharge[RentalCa
SELECTFROM 'a'[RentalCase]*'b'[CompRe

(TO MAINTAIN -(rentalLocationPenaltyC
INSERT INTO arg1[CompRentalCharge*Amou
SELECTFROM 'b'[CompRentalCharge]*'a'[,

(TO MAINTAIN -(rentalLocationPenaltyC
(MAINTAINING -(rentalLocationPenaltyCharge;re
(MAINTAINING -(rentalLocationPenaltyCharge;rent
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocat
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[,
THEN INSERT INTO rentalPenaltyCharge[Ren
SELECTFROM 'a'[RentalCase]*'b'[Amo

(TO MAINTAIN -(rentalLocationPenal
PICK a,b FROM rentalPenaltyCharge~;('a'[,
THEN INSERT INTO arg2[CompRentalCharge*Am
SELECTFROM 'b'[CompRentalCharge]*'.

(TO MAINTAIN -(rentalLocationPenal
(MAINTAINING -(rentalLocationPenaltyCharge;rent
NEW x:Amount;
ALL of INSERT INTO rentalPenaltyCharge[Rental
SELECTFROM 'a'[RentalCase]*'b'[CompRe

(TO MAINTAIN -(rentalLocationPenaltyC
INSERT INTO arg2[CompRentalCharge*Amou
SELECTFROM 'b'[CompRentalCharge]*'a'[,

(TO MAINTAIN -(rentalLocationPenaltyC
(MAINTAINING -(rentalLocationPenaltyCharge;re
(MAINTAINING -(rentalLocationPenaltyCharge;rent
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocat
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[,
THEN INSERT INTO rentalLocationPenaltyCh
SELECTFROM 'a'[RentalCase]*'b'[Amo

(TO MAINTAIN -(rentalLocationPenal
PICK a,b FROM rentalLocationPenaltyCharg

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        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
        PICK a,b FROM rcDroppedOffDate~;('a'[RentalCase]
        THEN INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        NEW x:Date;
        ALL of INSERT INTO rcDroppedOffDate[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
        INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contract
        PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcD
        THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigg
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcAssignedCar;rcAssignedCar~ /\
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO rentalPeriod[RentalCase*In]
        SELECTFROM 'a'[RentalCase]*'b'[In]

        (TO MAINTAIN -(rcAssignedCar;rcAssignedCar~)
        PICK a,b FROM rentalPeriod~;('a'[RentalCase]
        THEN INSERT INTO ctcNrOfDays[CompTariffedCharge]
        SELECTFROM 'b'[CompTariffedCharge]

        (TO MAINTAIN -(rcAssignedCar;rcAssignedCar~)
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
        NEW x:Integer;
        ALL of INSERT INTO rentalPeriod[RentalCase*In]
        SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

        (TO MAINTAIN -(rcAssignedCar;rcAssignedCar~)
        INSERT INTO ctcNrOfDays[CompTariffedCharge]
        SELECTFROM 'b'[CompTariffedCharge]*'a'[RentalCase]

        (TO MAINTAIN -(rcAssignedCar;rcAssignedCar~)
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO rcAssignedCar[RentalCase]

```

```

SELECTFROM 'a'[RentalCase]*'b'[Car

      (TO MAINTAIN -(rcAssignedCar;rcAss
PICK a,b FROM rcAssignedCar~;('a'[Rental
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
      THEN INSERT INTO carT
      SELECTFROM 'a'[

      (TO MAINTAIN -(
PICK a,b FROM carType
THEN ONE OF ONE NONEM
TH

PI
TH

(MAINTAIN
NEW x:Amo
ALL of

(MAINTA
(MAINTAIN
(MAINTAINING -(r
(MAINTAINING -(rcAssignedCar
NEW x:CarType;
ALL of INSERT INTO carType
SELECTFROM 'a'[Car

      (TO MAINTAIN -(rcA
ONE OF ONE NONEMPTY
THEN

PICK
THEN

(MAINTAINING

```

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NEW x:Amount
ALL of INS
SE

(TO
INS
SE

(TO
(MAINAINI
(MAINAINING
(MAINAINING -(rcAs
(MAINAINING -(rcAssignedC
(MAINAINING -(rcAssignedCar
(MAINAINING -(rcAssignedCar;rcAssi
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\
NEW x:Car;
ALL of INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'a'[RentalCase]*'b'[CompTa

(TO MAINTAIN -(rcAssignedCar;rcAssign
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO carType
SELECTFROM 'a'[Car

(TO MAINTAIN -(rcA
PICK a,b FROM carType~;(
THEN ONE OF ONE NONEMPTY
THEN

PICK
THEN

(MAINAINING
NEW x:Amount
ALL of INS
SE

(TO
INS
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(MAINAINI
(MAINAINING
(MAINAINING -(rcAs

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        (TO MAINTAIN -(rentalExcessPeriod;
(MAINAINING -(rentalExcessPeriod;rentalExcessP
NEW x:Integer;
    ALL of INSERT INTO rentalExcessPeriod[RentalC
        SELECTFROM 'a'[RentalCase]*'b'[CompTa

        (TO MAINTAIN -(rentalExcessPeriod;ren
INSERT INTO ctcNrOfDays[CompTariffedCh
        SELECTFROM 'b'[CompTariffedCharge]*'a

        (TO MAINTAIN -(rentalExcessPeriod;ren
        (MAINAINING -(rentalExcessPeriod;rentalExces
        (MAINAINING -(rentalExcessPeriod;rentalExcessP
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
    THEN INSERT INTO rcAssignedCar[RentalCase
        SELECTFROM 'a'[RentalCase]*'b'[Car

        (TO MAINTAIN -(rentalExcessPeriod;
PICK a,b FROM rcAssignedCar~;('a'[Rental
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
        THEN INSERT INTO carT
            SELECTFROM 'a'[

            (TO MAINTAIN -(
PICK a,b FROM carType
    THEN ONE OF ONE NONEM
        TH

        PI
        TH

        (MAINAIN
NEW x:Amo
    ALL of

        (MAINTA
        (MAINTAIN
        (MAINAINING -(r
(MAINAINING -(rentalExcessP

```



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(MAINTEINING
NEW x:Amount
ALL of INS
SE

(TO
INS
SE

(TO
(MAINTEINING
(MAINTEINING
(MAINTEINING -(rent
(MAINTEINING -(rentalExcessPeri
NEW x:CarType;
ALL of INSERT INTO carType[Car]
SELECTFROM 'x'[Car]*'

(TO MAINTAIN -(rental
ONE OF ONE NONEMPTY AL
THEN INS
SE

(TO
PICK a,b
THEN INS
SE

(TO
(MAINTEINING -(
NEW x:Amount;
ALL of INSERT
SELEC

(TO MA
INSERT
SELEC

(TO MA
(MAINTEINING -(
(MAINTEINING -(
(MAINTEINING -(rentalE
(MAINTEINING -(rentalExcessPe
(MAINTEINING -(rentalExcessPeri
(MAINTEINING -(rentalExcessPeriod;rent
(MAINTEINING -(rentalExcessPeriod;rentalExces
(MAINTEINING -(rentalExcessPeriod;rentalExcessP

```

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        (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Re
        (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Re
        PICK a,b FROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;e
        THEN BLOCK
        (CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger
        (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDroppedOffDate;rcDroppedOffD
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
        THEN INSERT INTO contractedEndDate[RentalCase]
        SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        PICK a,b FROM contractedEndDate~;('a' [RentalCase]
        THEN INSERT INTO firstDate[DateDifference]
        SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        NEW x:Date;
        ALL of INSERT INTO contractedEndDate[RentalCase]
        SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        INSERT INTO firstDate[DateDifference]
        SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
        THEN INSERT INTO rcDroppedOffDate[RentalCase]
        SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        PICK a,b FROM rcDroppedOffDate~;('a' [RentalCase]
        THEN INSERT INTO lastDate[DateDifference]
        SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        NEW x:Date;
        ALL of INSERT INTO rcDroppedOffDate[RentalCase]
        SELECTFROM 'a' [RentalCase]*'b' [DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]
        INSERT INTO lastDate[DateDifference]
        SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a' [RentalCase]

```



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(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contract
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger exce
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;con
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedEndDate;contractedEnd
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
THEN INSERT INTO contractedStartDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
PICK a,b FROM contractedStartDate~;('a' [RentalCase]
THEN INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
INSERT INTO earliestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
THEN INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
PICK a,b FROM contractedEndDate~;('a' [RentalCase]
THEN INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
(MAINAINING -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [DateDifferencePlusOne]

(TO MAINTAIN -(contractedEndDate;contractedEndDate~;('a' [RentalCase]
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b' [DateDifferencePlusOne]

```

```

        (TO MAINTAIN -(contractedEndDate;cont.
        (MAINTAINING -(contractedEndDate;contractedEnd
        (MAINTAINING -(contractedEndDate;contractedEndD
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contra
        PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;con
        THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigg
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDat
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedCarType;contractedCar
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
        THEN INSERT INTO projectedRentalPeriod[R
        SELECTFROM 'a' [RentalCase]*'b' [Int

        (TO MAINTAIN -(contractedCarType;c
        PICK a,b FROM projectedRentalPeriod~;('a'
        THEN INSERT INTO ctcNrOfDays[CompTariffed
        SELECTFROM 'b' [CompTariffedCharge]

        (TO MAINTAIN -(contractedCarType;c
        (MAINTAINING -(contractedCarType;contractedCarType
        NEW x:Integer;
        ALL of INSERT INTO projectedRentalPeriod[Rent
        SELECTFROM 'a' [RentalCase]*'b' [CompTar

        (TO MAINTAIN -(contractedCarType;cont.
        INSERT INTO ctcNrOfDays[CompTariffedCh
        SELECTFROM 'b' [CompTariffedCharge]*'a

        (TO MAINTAIN -(contractedCarType;cont.
        (MAINTAINING -(contractedCarType;contractedCar
        (MAINTAINING -(contractedCarType;contractedCarType
        (MAINTAINING -(contractedCarType;contractedCarType~ /\
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
        THEN INSERT INTO contractedCarType[Renta
        SELECTFROM 'a' [RentalCase]*'b' [Car

        (TO MAINTAIN -(contractedCarType;c
        PICK a,b FROM contractedCarType~;('a' [Re
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
        THEN INSERT INTO rent
        SELECTFROM 'a' [

        (TO MAINTAIN -(
        PICK a,b FROM rentalT
        THEN INSERT INTO ctcD
        SELECTFROM 'b' [

        (TO MAINTAIN -(

```

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(MAINAINING -(contractedCarType;contractedCarType~ /\
NEW x:Amount;
ALL of INSERT INTO rentalTariff
SELECTFROM 'a' [CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
INSERT INTO ctcDailyAmount
SELECTFROM 'b' [ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
NEW x:CarType;
ALL of INSERT INTO contractedCarType[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO rentalTariff
SELECTFROM 'a' [CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
PICK a,b FROM rentalTariff
THEN INSERT INTO ctcDailyAmount
SELECTFROM 'b' [ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
NEW x:Amount;
ALL of INSERT INTO rentalTariff
SELECTFROM 'x' [CarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
INSERT INTO ctcDailyAmount
SELECTFROM 'b' [ContractedCarType]

(TO MAINTAIN -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
(MAINAINING -(contractedCarType;contractedCarType~ /\
PICK a,b FROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger
(MAINAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod

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ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDriver;rcDriver~ /\ rcBranch
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a'[RentalCase]*'b'[Person]

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes
PICK a,b FROM rcRenter~;(rcDriver;rcDriver~ /\ rcBranchRequestedQ;
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer]
INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra

(TO MAINTAIN -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];r
INSERT INTO Isn{dety=Branch}
SELECTFROM contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contrac
(MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[R
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (rent
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
(MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contr
(MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;pro
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
(MAINTAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR

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(MAINTAINING -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe

----- Derivation ----->

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
 THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
 SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
 PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'[YesNoAnsw
 THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
 SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
 (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
 NEW x:Branch;
 INSERT INTO contractedPickupBranch[RentalCase*Branch]
 SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
 (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
 ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
 THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
 SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
 PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'[YesNoAn
 THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
 SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
 (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
 ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
 THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
 SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
 PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes'[YesNoAns
 THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
 SELECTFROM 'b' [RentalCase]*'a' [Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
 (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
 ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
 THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
 SELECTFROM 'a' [RentalCase]*'b' [Branch]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ

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PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Rent
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Date;
      INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Rent
PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Rent
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Rent

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PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[R
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes'[YesNoAnswer];r
THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'b'[RentalCase]*'a'[CarType]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:CarType;
      INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'b'[RentalCase]*'a'[CarType]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[R
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequ
THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Person;
      INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R

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(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a'[RentalCase]*'b'[Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a'[RentalCase]*'b'[Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequ
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a'[RentalCase]*'b'[Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssig

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcA
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedPickupBranch~;(I[RentalCa
THEN INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM 'b'[Car]*'a'[Branch]

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHa
PICK a,b FROM carAvailableAt;(contractedPickupBranch~;(I[RentalCase] /\
THEN INSERT INTO carType[Car*CarType]
SELECTFROM 'a'[Car]*'b'[CarType]

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHa
(MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
NEW x:Car;

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ALL of INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'x'[Car]*(contractedCarType~;(I[RentalCase] /\ rentalHasBe

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBe
      INSERT INTO carType[Car*CarType]
      SELECTFROM 'x'[Car]*(contractedPickupBranch~;(I[RentalCase] /\ renta

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBe
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromis
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
      PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHan
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
      PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHan
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
      INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBra

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOf
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[YesNoAnswer];re
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM 'a'[RentalCase]*'b'[Amount]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
      PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsP
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM 'b'[RentalCase]*'a'[Amount]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase
      NEW x:Amount;
      INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase

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      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalC
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcMaxRentalDuration;rcMaxRentalDura
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
PICK a,b FROM contractedStartDate~;(rcMaxRentalDuration;rcMaxRentalDura
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Date]*'b' [Re
      THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM 'a' [Date]*'b' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRental
PICK a,b FROM dateIntervalCompTrigger~;('a' [Date]*'b'
THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b' [RentalCase]*'a' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRental
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
NEW x:Date;
      ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM 'a' [Date]*'b' [RentalCase]*'x' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDur
INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b' [RentalCase]*'a' [Date]*'x' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDur
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
      (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contrac
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalLocationPenaltyCharge;rentalL
      THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Renta
      THEN INSERT INTO rentalBasicCharge[RentalCase
      SELECTFROM 'a' [RentalCase]*'b' [Amount]

      (TO MAINTAIN  -(rentalLocationPenaltyCha
PICK a,b FROM rentalBasicCharge~;('a' [RentalC
THEN INSERT INTO arg1[CompRentalCharge*Amount]
      SELECTFROM 'b' [CompRentalCharge]*'a' [Am

      (TO MAINTAIN  -(rentalLocationPenaltyCha
(MAINAINING -(rentalLocationPenaltyCharge;rentalLoc
NEW x:Amount;
      ALL of INSERT INTO rentalBasicCharge[RentalCase*Am
      SELECTFROM 'a' [RentalCase]*'b' [CompRentalC

      (TO MAINTAIN  -(rentalLocationPenaltyCharge

```

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INSERT INTO arg1[CompRentalCharge*Amount]
SELECTFROM 'b' [CompRentalCharge]*'a' [RentalLocationPenaltyCharge]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
    THEN INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
        SELECTFROM 'a' [RentalCase]*'b' [Amount]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    PICK a,b FROM rentalPenaltyCharge-;('a' [RentalCase]
    THEN INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b' [CompRentalCharge]*'a' [RentalCase]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
NEW x:Amount;
    ALL of INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
        SELECTFROM 'a' [RentalCase]*'b' [CompRentalCharge]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b' [CompRentalCharge]*'a' [RentalCase]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
    THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
        SELECTFROM 'a' [RentalCase]*'b' [Amount]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    PICK a,b FROM rentalLocationPenaltyCharge-;('a' [RentalCase]
    THEN INSERT INTO arg3[CompRentalCharge*Amount]
        SELECTFROM 'b' [CompRentalCharge]*'a' [RentalCase]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
NEW x:Amount;
    ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
        SELECTFROM 'a' [RentalCase]*'b' [CompRentalCharge]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    INSERT INTO arg3[CompRentalCharge*Amount]
        SELECTFROM 'b' [CompRentalCharge]*'a' [RentalCase]

    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)

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(MAINAINING -(rentalLocationPenaltyCharge;rentalL
(MAINAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPe
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCh
PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\
THEN BLOCK
(CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger rental
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDroppedOffDate;rcDroppedOffDate~
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO contractedStartDate[RentalCa
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
PICK a,b FROM contractedStartDate~;('a'[Renta
THEN INSERT INTO earliestDate[DateDifferenceP
SELECTFROM 'b'[DateDifferencePlusOne]*'

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase*
SELECTFROM 'a'[RentalCase]*'b'[DateDiffere

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
INSERT INTO earliestDate[DateDifferencePlus
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO rcDroppedOffDate[RentalCase*
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
PICK a,b FROM rcDroppedOffDate~;('a'[RentalCa
THEN INSERT INTO latestDate[DateDifferencePlus
SELECTFROM 'b'[DateDifferencePlusOne]*'

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCase*Dat
SELECTFROM 'a'[RentalCase]*'b'[DateDiffere

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
INSERT INTO latestDate[DateDifferencePlusOn
SELECTFROM 'b'[DateDifferencePlusOne]*'a'[

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        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSta
        PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppe
        THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger re
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcAssignedCar;rcAssignedCar~ /\ ren
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rentalPeriod[RentalCase*Integer]
        SELECTFROM 'a'[RentalCase]*'b'[Integer]

        (TO MAINTAIN -(rcAssignedCar;rcAssigned
        PICK a,b FROM rentalPeriod~;('a'[RentalCase]*
        THEN INSERT INTO ctcNrOfDays[CompTariffedChar
        SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

        (TO MAINTAIN -(rcAssignedCar;rcAssigned
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
        NEW x:Integer;
        ALL of INSERT INTO rentalPeriod[RentalCase*Integer]
        SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

        (TO MAINTAIN -(rcAssignedCar;rcAssignedCar
        INSERT INTO ctcNrOfDays[CompTariffedCharge*
        SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

        (TO MAINTAIN -(rcAssignedCar;rcAssignedCar
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ ren
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
        (MAINTAINING -(rcAssignedCar;rcAssignedCar~ /\ rentalPeriod
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(rcAssignedCar;rcAssigned
        PICK a,b FROM rcAssignedCar~;('a'[RentalCase]
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
        THEN INSERT INTO carType[C
        SELECTFROM 'a'[Car]*

        (TO MAINTAIN -(rcAss
        PICK a,b FROM carType~;('a
        THEN ONE OF ONE NONEMPTY A
        THEN IN
        S

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THEN IN
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NEW x:Amount;
ALL of INSERT
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INSERT
SELE

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(MAINAINING
(MAINAINING -
(MAINAINING -(rcAssi
(MAINAINING -(rcAssignedCar;rcAs
NEW x:CarType;
ALL of INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rcAssign
ONE OF ONE NONEMPTY ALTE
THEN INSERT
SELE

(TO M
PICK a,b F
THEN INSERT
SELE

(TO M
(MAINAINING -(rc
NEW x:Amount;
ALL of INSERT I
SELECTF

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INSERT I
SELECTF

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(MAINAINING -(rc
(MAINAINING -(rcAssigne
(MAINAINING -(rcAssignedCar;rc
(MAINAINING -(rcAssignedCar;rcAs

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(MAINAINING -(rcAssignedCar;rcAssignedC
(MAINAINING -(rcAssignedCar;rcAssignedCar~ /\ renta
NEW x:Car;
  ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

  (TO MAINTAIN -(rcAssignedCar;rcAssignedCar
  ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN INSERT INTO carType[Car*
      SELECTFROM 'a'[Car]*'b'

      (TO MAINTAIN -(rcAssign
      PICK a,b FROM carType~;'x'[C
      THEN ONE OF ONE NONEMPTY ALTE
        THEN INSER
        SELE

        (TO M
        PICK a,b F
        THEN INSER
        SELE

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        (MAINAINING -(rc
        NEW x:Amount;
        ALL of INSERT I
        SELECTF

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        INSERT I
        SELECTF

        (TO MAIN
        (MAINAINING -(
        (MAINAINING -(rc
        (MAINAINING -(rcAssigne
        (MAINAINING -(rcAssignedCar;rcAssign
        NEW x:CarType;
        ALL of INSERT INTO carType[Car*Car
          SELECTFROM 'x'[Car]*'a'[Re

          (TO MAINTAIN -(rcAssignedC
          ONE OF ONE NONEMPTY ALTERNA
          THEN INSERT I
          SELECTF

          (TO MAIN
          PICK a,b FROM
          THEN INSERT I
          SELECTF

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(MAINAINING -(re
NEW x:Amount;
    ALL of INSERT I
        SELECTF

                                (TO MAIN
INSERT I
        SELECTF

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                                (MAINAINING -(re
                                (MAINAINING -(rentalExc
                                (MAINAINING -(rentalExcessPeri
                                (MAINAINING -(rentalExcessPeriod
                                (MAINAINING -(rentalExcessPeriod;rental
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod
NEW x:Car;
    ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

                                (TO MAINTAIN -(rentalExcessPeriod;rentalEx
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN INSERT INTO carType[Car*
        SELECTFROM 'a'[Car]*'b'

                                (TO MAINTAIN -(rentalEx
PICK a,b FROM carType~;'x'[C
    THEN ONE OF ONE NONEMPTY ALTE
        THEN INSER
            SELE

                                (TO M
PICK a,b F
    THEN INSER
        SELE

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NEW x:Amount;
    ALL of INSERT I
        SELECTF

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INSERT I
        SELECTF

                                (TO MAIN
                                (MAINAINING -(

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(MAINAINING -(re
(MAINAINING -(rentalExc
(MAINAINING -(rentalExcessPeriod;re
NEW x:CarType;
ALL of INSERT INTO carType[Car*Car
SELECTFROM 'x'[Car]*'a'[Re

(TO MAINTAIN -(rentalExces
ONE OF ONE NONEMPTY ALTERNA
THEN INSERT I
SELECTF

(TO MAIN
PICK a,b FROM
THEN INSERT I
SELECTF

(TO MAIN
(MAINAINING -(renta
NEW x:Amount;
ALL of INSERT INTO
SELECTFROM

(TO MAINTAI
INSERT INTO
SELECTFROM

(TO MAINTAI
(MAINAINING -(ren
(MAINAINING -(renta
(MAINAINING -(rentalExcess
(MAINAINING -(rentalExcessPeriod;
(MAINAINING -(rentalExcessPeriod;re
(MAINAINING -(rentalExcessPeriod;rentalExc
(MAINAINING -(rentalExcessPeriod;rentalExcessPeri
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalC
PICK a,b FROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excess
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger exces
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/( re
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDroppedOffDate;rcDroppedOffDate~
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO contractedEndDate[RentalCase
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
PICK a,b FROM contractedEndDate~;'a'[RentalC
THEN INSERT INTO firstDate[DateDifference*Dat

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SELECTFROM 'b' [DateDifference]*'a' [Date

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
ALL of INSERT INTO contractedEndDate[RentalCase*Da
SELECTFROM 'a' [RentalCase]*'b' [DateDiffere

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
INSERT INTO firstDate[DateDifference*Date]
SELECTFROM 'b' [DateDifference]*'a' [RentalC

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Renta
THEN INSERT INTO rcDroppedOffDate[RentalCase*
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
PICK a,b FROM rcDroppedOffDate~;'a' [RentalCa
THEN INSERT INTO lastDate[DateDifference*Date]
SELECTFROM 'b' [DateDifference]*'a' [Date

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCase*Dat
SELECTFROM 'a' [RentalCase]*'b' [DateDiffere

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
INSERT INTO lastDate[DateDifference*Date]
SELECTFROM 'b' [DateDifference]*'a' [RentalC

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEnd
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDat
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger excess pe
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contract
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedEndDate;contractedEndDate
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Renta
THEN INSERT INTO contractedStartDate[RentalCa
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(contractedEndDate;contra

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```

        PICK a,b FROM contractedStartDate~;('a'[RentalCase]
        THEN INSERT INTO earliestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate~
        NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        INSERT INTO earliestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate~
        (MAINTAINING -(contractedEndDate;contractedEndDate~
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        PICK a,b FROM contractedEndDate~;('a'[RentalCase]
        THEN INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate~
        NEW x:Date;
        ALL of INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        INSERT INTO latestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[RentalCase]

        (TO MAINTAIN -(contractedEndDate;contractedStartDate)
        (MAINTAINING -(contractedEndDate;contractedEndDate~
        (MAINTAINING -(contractedEndDate;contractedEndDate~
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate
        PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;contractedStartDate)
        THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger pr
        (MAINTAINING -(contractedEndDate;contractedEndDate~ /\ contractedStartDate;contractedStartDate)
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedCarType;contractedCarType)
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO projectedRentalPeriod[RentalCase*Integer]
        SELECTFROM 'a'[RentalCase]*'b'[Integer]

```

```

        (TO MAINTAIN -(contractedCarType;contra
PICK a,b FROM projectedRentalPeriod~;('a'[Ren
THEN INSERT INTO ctcNrOfDays[CompTariffedChar
        SELECTFROM 'b'[CompTariffedCharge]*'a'[

        (TO MAINTAIN -(contractedCarType;contra
(MAINTAINING -(contractedCarType;contractedCarType~
NEW x:Integer;
    ALL of INSERT INTO projectedRentalPeriod[RentalCas
        SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

        (TO MAINTAIN -(contractedCarType;contracte
INSERT INTO ctcNrOfDays[CompTariffedCharge*
        SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

        (TO MAINTAIN -(contractedCarType;contracte
        (MAINTAINING -(contractedCarType;contractedCarType~
        (MAINTAINING -(contractedCarType;contractedCarType~
(MAINTAINING -(contractedCarType;contractedCarType~ /\ proj
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO contractedCarType[RentalCase
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN -(contractedCarType;contra
PICK a,b FROM contractedCarType~;('a'[RentalC
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
        THEN INSERT INTO rentalTar
        SELECTFROM 'a'[CarTy

        (TO MAINTAIN -(contr
PICK a,b FROM rentalTariff
        THEN INSERT INTO ctcDailyA
        SELECTFROM 'b'[CompT

        (TO MAINTAIN -(contr
(MAINTAINING -(contractedCarType;
NEW x:Amount;
    ALL of INSERT INTO rentalTariff
        SELECTFROM 'a'[CarType]

        (TO MAINTAIN -(contract
INSERT INTO ctcDailyAmou
        SELECTFROM 'b'[CompTari

        (TO MAINTAIN -(contract
        (MAINTAINING -(contractedCarTyp
        (MAINTAINING -(contractedCarType;
        (MAINTAINING -(contractedCarType;contract
(MAINTAINING -(contractedCarType;contractedCarType~

```

```

NEW x:CarType;
  ALL of INSERT INTO contractedCarType[RentalCase*Ca
    SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

    (TO MAINTAIN -(contractedCarType;contracte
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
      THEN INSERT INTO rentalTariff
        SELECTFROM 'a'[CarType]

        (TO MAINTAIN -(contract
        PICK a,b FROM rentalTariffPer
        THEN INSERT INTO ctcDailyAmou
          SELECTFROM 'b'[CompTari

          (TO MAINTAIN -(contract
    (MAINTAINING -(contractedCarType;con
    NEW x:Amount;
      ALL of INSERT INTO rentalTariffPer
        SELECTFROM 'x'[CarType]*'a

        (TO MAINTAIN -(contractedC
        INSERT INTO ctcDailyAmount[
          SELECTFROM 'b'[CompTariffe

          (TO MAINTAIN -(contractedC
            (MAINTAINING -(contractedCarType;c
            (MAINTAINING -(contractedCarType;con
            (MAINTAINING -(contractedCarType;contracted
            (MAINTAINING -(contractedCarType;contractedCarType~
            (MAINTAINING -(contractedCarType;contractedCarType~ /\ proj
            (MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRe
    PICK a,b FROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount;ren
    THEN BLOCK
      (CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger proje
    (MAINTAINING -(contractedCarType;contractedCarType~ /\ projectedRentalPeriod;p
    ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDriver;rcDriver~ /\ rcBranchReque
      THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[Yes
        PICK a,b FROM rcRenter~;(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'
        THEN INSERT INTO rcRenter[RentalCase*Person]
          SELECTFROM 'b'[RentalCase]*'a'[Person]

          (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[Yes
    (MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
    INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe

```



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(TO MAINTAIN  -(sessionNewBranchRC~;sessionNewBranchRC) \ / I[RentalCase]
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM Delta;V[RentalCase*Date]

DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM Delta;V[RentalCase*Date]

DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM Delta;V[RentalCase*CarType]

DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM Delta;V[RentalCase*Branch]

DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM Delta;V[RentalCase*Branch]

DELETE FROM rcRenter[RentalCase*Person]
      SELECTFROM Delta;V[RentalCase*Person]

DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM Delta;V[RentalCase*Person]

DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM Delta;V[RentalCase*Car]

DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
      SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];De

DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];De

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];De

DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM Delta;V[RentalCase*Car]

DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM Delta;V[RentalCase*Date]

DELETE FROM rcDroppedOffBranch[RentalCase*Branch]

```

```

SELECTFROM Delta;V[RentalCase*Branch]

DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

(MAINAINING -(sessionNewUserRC~;sessionNewUserRC) \ / I[RentalCase] FROM UNI ses
(MAINAINING -(sessionNewBranchRC~;sessionNewBranchRC) \ / I[RentalCase] FROM UNI

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----- Derivation ----->

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ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM sessionNewUserRC;(-I[RentalCase] /\ sessionNewUserRC~;sessionNewUs

(TO MAINTAIN -(sessionNewUserRC~;sessionNewUserRC) \ / I[RentalCase] FROM UNI
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM sessionNewBranchRC;(-I[RentalCase] /\ sessionNewBranchRC~;sessionN

(TO MAINTAIN -(sessionNewBranchRC~;sessionNewBranchRC) \ / I[RentalCase] FROM
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM Delta;V[RentalCase*Date]

```

```

DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM Delta;V[RentalCase*Date]

DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM Delta;V[RentalCase*CarType]

DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM Delta;V[RentalCase*Branch]

DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM Delta;V[RentalCase*Branch]

DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM Delta;V[RentalCase*Person]

DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM Delta;V[RentalCase*Person]

DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM Delta;V[RentalCase*Car]

DELETE FROM rentalHasBeenPromised[RentalCase*RentalCase]
SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];Delta

DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];Delta

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM Delta;V[RentalCase*YesNoAnswer]

DELETE FROM rentalHasBeenEnded[RentalCase*RentalCase]
SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];Delta

DELETE FROM rcDroppedOffCar[RentalCase*Car]
SELECTFROM Delta;V[RentalCase*Car]

DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM Delta;V[RentalCase*Date]

DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM Delta;V[RentalCase*Branch]

DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
SELECTFROM Delta;V[RentalCase*YesNoAnswer]

```

```

DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM Delta;V[RentalCase*Integer]

DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM Delta;V[RentalCase*Amount]

(MAINTEINING -(sessionNewUserRC~;sessionNewUserRC) \/ I[RentalCase] FROM UNI sessionM
(MAINTEINING -(sessionNewBranchRC~;sessionNewBranchRC) \/ I[RentalCase] FROM UNI sess

<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=Date} EXECUTE -- (ECA rule 132)
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contrac

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserR

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserR

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contrac

```



```

DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;con

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchReq

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchReq

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;con

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchReq

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchReq

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
DELETE FROM sessionToday[SESSION*Date]
SELECTFROM sessionToday;(-I[Date] /\ sessionToday~;sessionToday)

(TO MAINTAIN -(sessionToday~;I[SESSION];sessionToday) \ I[Date] FROM In
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));s

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;rcAssignedCar

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
DELETE FROM Isn{detyp=Car}
SELECTFROM rcAssignedCar~;rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate

(TO MAINTAIN -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcAssignedCar~;rcDroppedOffDate
THEN INSERT INTO carAvailableAt[Car*Branch]

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SELECTFROM 'a'[Car]*'b'[Branch]

      (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(
PICK a,b FROM carAvailableAt~;rcAssignedCar~;rcDroppedOffDate;(-I[
THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(
(MAINTAINING -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableA
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (rcAssignedCar~;rcDroppedOffDate;(-I[Date] /\ rcDroppedOffD

      (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailab
(MAINTAINING -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableA
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM sessionToday;(-I[Date] /\ sessionToday~;sessionReturnedCar;(I

      (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
DELETE FROM sessionToday[SESSION*Date]
      SELECTFROM sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt

      (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailable
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;contract

      (TO MAINTAIN  -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;contractedE

      (TO MAINTAIN  -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;rcDroppedOffD

      (TO MAINTAIN  -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI r
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM earliestDate;(-I[Date] /\ earliestDate~;earliestDate)

      (TO MAINTAIN  -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestD
DELETE FROM latestDate[DateDifferencePlusOne*Date]
      SELECTFROM latestDate;(-I[Date] /\ latestDate~;latestDate)

      (TO MAINTAIN  -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::D
DELETE FROM firstDate[DateDifference*Date]
      SELECTFROM firstDate;(-I[Date] /\ firstDate~;firstDate)

      (TO MAINTAIN  -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::Date
DELETE FROM lastDate[DateDifference*Date]
      SELECTFROM lastDate;(-I[Date] /\ lastDate~;lastDate)

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      (TO MAINTAIN  -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDiff
DELETE FROM dateIntervalIsWithinMaxRentalDuration[Date*Date]
      SELECTFROM Delta;V[Date*Date]

DELETE FROM dateIntervalIsWithinMaxRentalDuration[Date*Date]
      SELECTFROM V[Date*Date];Delta

DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM V[RentalCase*Date];Delta

DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM V[RentalCase*Date];Delta

DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM V[RentalCase*Date];Delta

DELETE FROM dateIntervalCompTrigger[Date*Date]
      SELECTFROM Delta;V[Date*Date]

DELETE FROM dateIntervalCompTrigger[Date*Date]
      SELECTFROM V[Date*Date];Delta

DELETE FROM earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM V[DateDifferencePlusOne*Date];Delta

DELETE FROM latestDate[DateDifferencePlusOne*Date]
      SELECTFROM V[DateDifferencePlusOne*Date];Delta

DELETE FROM firstDate[DateDifference*Date]
      SELECTFROM V[DateDifference*Date];Delta

DELETE FROM lastDate[DateDifference*Date]
      SELECTFROM V[DateDifference*Date];Delta

DELETE FROM sessionToday[SESSION*Date]
      SELECTFROM V[SESSION*Date];Delta

(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINTAINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's d
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessi
(MAINTAINING -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI con
(MAINTAINING -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI contrac
(MAINTAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDropped
(MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::Dat
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT ea
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDiffe
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latest

```



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(MAINTEINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifferen
(MAINTEINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::Date
(MAINTEINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*
(MAINTEINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDif
(MAINTEINING -(sessionToday~;sessionToday) \/ I[Date] FROM UNI sessionToday::SES

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----- Derivation ----->

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ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contractedSt

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contractedSt

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;contract

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchRequ

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchRequ

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;contract

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB

```

```

DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchReq

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchReq

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contractedEn

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contractedEn

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;contract

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;contract

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

```

```

(TO MAINTAIN  -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN  -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBra
DELETE FROM sessionToday[SESSION*Date]
SELECTFROM sessionToday;(-I[Date] /\ sessionToday~;sessionToday)

(TO MAINTAIN  -(sessionToday~;I[SESSION];sessionToday) /\ I[Date] FROM Initial
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessio

(TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;rcAssignedCar;(I[C

(TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
DELETE FROM Isn{dety=Car}
SELECTFROM rcAssignedCar~;rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;rcA

(TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rcAssignedCar~;rcDroppedOffDate;(-I[
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

        (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAv
        PICK a,b FROM carAvailableAt~;rcAssignedCar~;rcDroppedOffDate;(-I[Date]
        THEN INSERT INTO carAvailableAt[Car*Branch]
            SELECTFROM 'b'[Car]*'a'[Branch]

            (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAv
(MAINTAINING -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;car
NEW x:Branch;
    INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (rcAssignedCar~;rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;

    (TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;
(MAINTAINING -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;car
DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM sessionToday;(-I[Date] /\ sessionToday~;sessionReturnedCar;(I[Car]

(TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
DELETE FROM sessionToday[SESSION*Date]
SELECTFROM sessionReturnedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));r

(TO MAINTAIN  -(rcDroppedOffDate~;rcAssignedCar;(I[Car] /\ -(carAvailableAt;ca
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;contractedSt

```

```

(TO MAINTAIN -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;contractedEndDat

(TO MAINTAIN -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI cont
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;rcDroppedOffDate)

(TO MAINTAIN -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDrop
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM earliestDate;(-I[Date] /\ earliestDate~;earliestDate)

(TO MAINTAIN -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM latestDate;(-I[Date] /\ latestDate~;latestDate)

(TO MAINTAIN -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDi
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM firstDate;(-I[Date] /\ firstDate~;firstDate)

(TO MAINTAIN -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDiffe
DELETE FROM lastDate[DateDifference*Date]
SELECTFROM lastDate;(-I[Date] /\ lastDate~;lastDate)

(TO MAINTAIN -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifferen
DELETE FROM dateIntervalsWithinMaxRentalDuration[Date*Date]
SELECTFROM Delta;V[Date*Date]

DELETE FROM dateIntervalsWithinMaxRentalDuration[Date*Date]
SELECTFROM V[Date*Date];Delta

DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM V[RentalCase*Date];Delta

DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM V[RentalCase*Date];Delta

DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM V[RentalCase*Date];Delta

DELETE FROM dateIntervalCompTrigger[Date*Date]
SELECTFROM Delta;V[Date*Date]

DELETE FROM dateIntervalCompTrigger[Date*Date]
SELECTFROM V[Date*Date];Delta

DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM V[DateDifferencePlusOne*Date];Delta

DELETE FROM latestDate[DateDifferencePlusOne*Date]

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```

SELECTFROM V[DateDifferencePlusOne*Date];Delta

DELETE FROM firstDate[DateDifference*Date]
SELECTFROM V[DateDifference*Date];Delta

DELETE FROM lastDate[DateDifference*Date]
SELECTFROM V[DateDifference*Date];Delta

DELETE FROM sessionToday[SESSION*Date]
SELECTFROM V[SESSION*Date];Delta

(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's date)
(MAINTAINING -(rcAssignedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~));sessionRet
(MAINTAINING -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI contract
(MAINTAINING -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI contractedEn
(MAINTAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDroppedOffDa
(MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDiff
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earlies
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifference
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate:
(MAINTAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference*Da
(MAINTAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::DateDiffe
(MAINTAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*Date)
(MAINTAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDifferen
(MAINTAINING -(sessionToday~;sessionToday) \/ I[Date] FROM UNI sessionToday::SESSION*

<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=Location} EXECUTE -- (ECA rule 134)
ONE OF DELETE FROM branchLocation[Branch*Location]
SELECTFROM branchLocation;(-I[Location] /\ branchLocation~;branchLocation)

(TO MAINTAIN -(branchLocation~;branchLocation) \/ I[Location] FROM UNI b
DELETE FROM branchLocation[Branch*Location]
SELECTFROM V[Branch*Location];Delta

(MAINTAINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLoc
(MAINTAINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation

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----- Derivation ----->

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ONE OF DELETE FROM branchLocation[Branch*Location]
SELECTFROM branchLocation;(-I[Location] /\ branchLocation~;branchLocation)

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```

      (TO MAINTAIN  -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocation
      DELETE FROM branchLocation[Branch*Location]
      SELECTFROM V[Branch*Location];Delta

      (MAINTAINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocation
      (MAINTAINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation::Branch)

<-----End Derivation --

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ON INSERT Delta IN Isn{dety=CarType} EXECUTE      -- (ECA rule 135)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(brand;brand~))
      THEN INSERT INTO brand[CarType*Brand]
      SELECTFROM 'a'[CarType]*'b'[Brand]

      (TO MAINTAIN  -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType
      PICK a,b FROM brand~;(I[CarType] /\ -(brand;brand~))
      THEN INSERT INTO brand[CarType*Brand]
      SELECTFROM 'b'[CarType]*'a'[Brand]

      (TO MAINTAIN  -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType
      (MAINTAINING -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType
      NEW x:Brand;
      INSERT INTO brand[CarType*Brand]
      SELECTFROM (I[CarType] /\ -(brand;brand~))*'x'[Brand]

      (TO MAINTAIN  -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType
      (MAINTAINING -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(model;model~))
      THEN INSERT INTO model[CarType*Model]
      SELECTFROM 'a'[CarType]*'b'[Model]

      (TO MAINTAIN  -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType
      PICK a,b FROM model~;(I[CarType] /\ -(model;model~))
      THEN INSERT INTO model[CarType*Model]
      SELECTFROM 'b'[CarType]*'a'[Model]

      (TO MAINTAIN  -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType
      (MAINTAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType
      NEW x:Model;
      INSERT INTO model[CarType*Model]
      SELECTFROM (I[CarType] /\ -(model;model~))*'x'[Model]

      (TO MAINTAIN  -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType
      (MAINTAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~))
      THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
      SELECTFROM 'a'[CarType]*'b'[Amount]

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```

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~;
        PICK a,b FROM rentalTariffPerDay~;(I[CarType] /\ -(rentalTariffPerDay~))
        THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
            SELECTFROM 'b'[CarType]*'a'[Amount]

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~;
        (MAINTAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~)
        NEW x:Amount;
        INSERT INTO rentalTariffPerDay[CarType*Amount]
            SELECTFROM (I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~))*'a'

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~;
        (MAINTAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~)
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(excessTariffPerDay~))
        THEN INSERT INTO excessTariffPerDay[CarType*Amount]
            SELECTFROM 'a'[CarType]*'b'[Amount]

        (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~;
        PICK a,b FROM excessTariffPerDay~;(I[CarType] /\ -(excessTariffPerDay~))
        THEN INSERT INTO excessTariffPerDay[CarType*Amount]
            SELECTFROM 'b'[CarType]*'a'[Amount]

        (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~;
        (MAINTAINING -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~)
        (MAINTAINING -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
        (MAINTAINING -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)
        (MAINTAINING -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
        (MAINTAINING -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)
        (MAINTAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTariffPerDay~)
        (MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTariffPerDay~)
        (MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI excessTariffPerDay~)
        (MAINTAINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT excessTariffPerDay~)

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----- Derivation ----->

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(brand;brand~));brand~
    THEN INSERT INTO brand[CarType*Brand]
        SELECTFROM 'a'[CarType]*'b'[Brand]

        (TO MAINTAIN -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Brand)
        PICK a,b FROM brand~;(I[CarType] /\ -(brand;brand~))
        THEN INSERT INTO brand[CarType*Brand]
            SELECTFROM 'b'[CarType]*'a'[Brand]

        (TO MAINTAIN -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Brand)
        (MAINTAINING -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Brand)
        NEW x:Brand;

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INSERT INTO brand[CarType*Brand]
  SELECTFROM (I[CarType] /\ -(brand;brand~))*'x'[Brand]

  (TO MAINTAIN -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Brand)
  (MAINTAINING -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Brand)
  ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(model;model~));model~
  THEN INSERT INTO model[CarType*Model]
    SELECTFROM 'a'[CarType]*'b'[Model]

    (TO MAINTAIN -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Model)
    PICK a,b FROM model~;(I[CarType] /\ -(model;model~))
    THEN INSERT INTO model[CarType*Model]
      SELECTFROM 'b'[CarType]*'a'[Model]

      (TO MAINTAIN -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Model)
      (MAINTAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Model)
      NEW x:Model;
      INSERT INTO model[CarType*Model]
        SELECTFROM (I[CarType] /\ -(model;model~))*'x'[Model]

        (TO MAINTAIN -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Model)
        (MAINTAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Model)
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~));
        THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
          SELECTFROM 'a'[CarType]*'b'[Amount]

          (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ FROM UNI model::CarType*Model)
          PICK a,b FROM rentalTariffPerDay~;(I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~))
          THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
            SELECTFROM 'b'[CarType]*'a'[Amount]

            (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ FROM UNI model::CarType*Model)
            (MAINTAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ FROM UNI model::CarType*Model)
            NEW x:Amount;
            INSERT INTO rentalTariffPerDay[CarType*Amount]
              SELECTFROM (I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~))*'x'[Amount]

              (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ FROM UNI model::CarType*Model)
              (MAINTAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ FROM UNI model::CarType*Model)
              ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(excessTariffPerDay;excessTariffPerDay~));
              THEN INSERT INTO excessTariffPerDay[CarType*Amount]
                SELECTFROM 'a'[CarType]*'b'[Amount]

                (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~ FROM UNI model::CarType*Model)
                PICK a,b FROM excessTariffPerDay~;(I[CarType] /\ -(excessTariffPerDay;excessTariffPerDay~))
                THEN INSERT INTO excessTariffPerDay[CarType*Amount]
                  SELECTFROM 'b'[CarType]*'a'[Amount]

                  (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~ FROM UNI model::CarType*Model)
                  (MAINTAINING -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~ FROM UNI model::CarType*Model)

```



```

(MAINAINING -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
(MAINAINING -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)
(MAINAINING -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
(MAINAINING -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)
(MAINAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTa
(MAINAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTar
(MAINAINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI excessTa
(MAINAINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT excessTar

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=CarType} EXECUTE      -- (ECA rule 136)
ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcAssignedCar;carType;(-I[CarType] /\ carType~;rcAssignedCar~

      (TO MAINTAIN  -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] F
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcAssign

      (TO MAINTAIN  -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] F
DELETE FROM carType[Car*CarType]
      SELECTFROM rcAssignedCar~;contractedCarType;(-I[CarType] /\ contractedCar

      (TO MAINTAIN  -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] F
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contrac

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRe

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRe

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contrac

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRe

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRe

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc

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DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;con

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranch

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranch

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;con

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranch

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranch

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer]);
DELETE FROM carType[Car*CarType]
SELECTFROM carType;(-I[CarType] /\ carType~;carType)

(TO MAINTAIN -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*Car
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;contract

(TO MAINTAIN -(contractedCarType~;contractedCarType) \/ I[CarType] FROM
DELETE FROM carType[Car*CarType]
SELECTFROM V[Car*CarType];Delta

DELETE FROM brand[CarType*Brand]
SELECTFROM Delta;V[CarType*Brand]

DELETE FROM model[CarType*Model]
SELECTFROM Delta;V[CarType*Model]

DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM Delta;V[CarType*Amount]

DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM Delta;V[CarType*Amount]

DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM V[RentalCase*CarType];Delta

```

```

(MAINAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type i
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINAINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)
(MAINAINING -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI cont

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----- Derivation ----->

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ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcAssignedCar;carType;(-I[CarType] /\ carType~;rcAssignedCar~;cont

      (TO MAINTAIN -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM R
DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcAssignedCar

      (TO MAINTAIN -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM R
DELETE FROM carType[Car*CarType]
      SELECTFROM rcAssignedCar~;contractedCarType;(-I[CarType] /\ contractedCarType

      (TO MAINTAIN -(contractedCarType~;rcAssignedCar;carType) \/ I[CarType] FROM R
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contractedCa

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;contractedCa

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

      (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserR
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;contract

```

```

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;contract

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
DELETE FROM carType[Car*CarType]
SELECTFROM carType;(-I[CarType] /\ carType~;carType)

(TO MAINTAIN  -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;contractedCar

(TO MAINTAIN  -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI c
DELETE FROM carType[Car*CarType]
SELECTFROM V[Car*CarType];Delta

DELETE FROM brand[CarType*Brand]
SELECTFROM Delta;V[CarType*Brand]

DELETE FROM model[CarType*Model]
SELECTFROM Delta;V[CarType*Model]

DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM Delta;V[CarType*Amount]

DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM Delta;V[CarType*Amount]

DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM V[RentalCase*CarType];Delta

(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr
(MAINTAINING -rcAssignedCar \/ contractedCarType;carType~ FROM Rented car type integr

```

```

(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINAINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)
(MAINAINING -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI contracte

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=Brand} EXECUTE      -- (ECA rule 138)
ONE OF DELETE FROM brand[CarType*Brand]
      SELECTFROM brand;(-I[Brand] /\ brand~;brand)

      (TO MAINTAIN -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
DELETE FROM brand[CarType*Brand]
      SELECTFROM V[CarType*Brand];Delta

(MAINAINING -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
(MAINAINING -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)

```

----- Derivation ----->

```

ONE OF DELETE FROM brand[CarType*Brand]
      SELECTFROM brand;(-I[Brand] /\ brand~;brand)

      (TO MAINTAIN -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
DELETE FROM brand[CarType*Brand]
      SELECTFROM V[CarType*Brand];Delta

(MAINAINING -(brand~;brand) \/ I[Brand] FROM UNI brand::CarType*Brand)
(MAINAINING -I[CarType] \/ brand;brand~ FROM TOT brand::CarType*Brand)

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=Model} EXECUTE      -- (ECA rule 140)
ONE OF DELETE FROM model[CarType*Model]
      SELECTFROM model;(-I[Model] /\ model~;model)

      (TO MAINTAIN -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
DELETE FROM model[CarType*Model]
      SELECTFROM V[CarType*Model];Delta

(MAINAINING -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
(MAINAINING -I[CarType] \/ model;model~ FROM TOT model::CarType*Model)

```

----- Derivation ----->

```

ONE OF DELETE FROM model[CarType*Model]
      SELECTFROM model;(-I[Model] /\ model~;model)

      (TO MAINTAIN -(model~;model) /\ I[Model] FROM UNI model::CarType*Model)
DELETE FROM model[CarType*Model]
      SELECTFROM V[CarType*Model];Delta

(MAINTAINING -(model~;model) /\ I[Model] FROM UNI model::CarType*Model)
(MAINTAINING -I[CarType] /\ model;model~ FROM TOT model::CarType*Model)

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=Amount} EXECUTE      -- (ECA rule 142)
ONE OF DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;rentalCharge;

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;rentalCharge;

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPa
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTar

      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssign
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPe

      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssign
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
      SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

```

```

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPerDay[CarType*Amount]

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariffPerDay[CarType*Amount]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar[RentalCase*Car]

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DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessTari

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ :
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;di

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenal

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocation

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenal

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocation

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM (distbranch;rcDroppedOffBranch~ /\ distbranch;contractedDropo

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rent

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(ar

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(ar

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;

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(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(ar

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\ arg3

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;com

(TO MAINTAIN -(computedRentalCharge~;I[CompRentalCharge];computedRentalC
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN -(computedTariffedCharge~;I[CompTariffedCharge];computedTar
DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rent

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM projectedBasicCharge;(-I[Amount] /\ projectedBasicCharge~;(pr

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM projectedBasicCharge;(-I[Amount] /\ projectedBasicCharge~;(pr

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM contractedCarType~;projectedBasicCharge;(-I[Amount] /\ projec

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount;rentalT

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM rentalTariffPerDay;(-I[Amount] /\ rentalTariffPerDay~;rentalT

(TO MAINTAIN -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM

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DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM excessTariffPerDay;(-I[Amount] /\ excessTariffPerDay~;excessT

(TO MAINTAIN -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;rentalBas

(TO MAINTAIN -(rentalBasicCharge~;rentalBasicCharge) \/ I[Amount] FROM U
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;rental

(TO MAINTAIN -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FR
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocation

(TO MAINTAIN -(computedLocationPenaltyCharge~;computedLocationPenaltyCha
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenal

(TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge)
DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalCharge)

(TO MAINTAIN -(rentalCharge~;rentalCharge) \/ I[Amount] FROM UNI rentalC
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM arg1;(-I[Amount] /\ arg1~;arg1)

(TO MAINTAIN -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM arg2;(-I[Amount] /\ arg2~;arg2)

(TO MAINTAIN -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM arg3;(-I[Amount] /\ arg3~;arg3)

(TO MAINTAIN -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM ctcDailyAmount;(-I[Amount] /\ ctcDailyAmount~;ctcDailyAmount)

(TO MAINTAIN -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctc
DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM projectedBasicCharge;(-I[Amount] /\ projectedBasicCharge~;pro

(TO MAINTAIN -(projectedBasicCharge~;projectedBasicCharge) \/ I[Amount]
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM V[CarType*Amount];Delta

DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM V[CarType*Amount];Delta

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DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM V[DistanceBetweenLocations*Amount];Delta

DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM V[CompTariffedCharge*Amount];Delta

DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM V[CompTariffedCharge*Amount];Delta

DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffP
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessT
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCh
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTa
(MAINAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI ren
(MAINAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rent
(MAINAINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI exc
(MAINAINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT exce
(MAINAINING -(rentalBasicCharge~;rentalBasicCharge) \/ I[Amount] FROM UNI renta
(MAINAINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UNI r

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(MAINAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;compu
(MAINAINING -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I[Am
(MAINAINING -(rentalCharge~;rentalCharge) \/ I[Amount] FROM UNI rentalCharge::R
(MAINAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*
(MAINAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*
(MAINAINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*
(MAINAINING -(computedRentalCharge~;computedRentalCharge) \/ I[Amount] FROM UNI
(MAINAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmo
(MAINAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT c
(MAINAINING -(computedTariffedCharge~;computedTariffedCharge) \/ I[Amount] FROM
(MAINAINING -(projectedBasicCharge~;projectedBasicCharge) \/ I[Amount] FROM UNI

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----- Derivation ----->

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ONE OF DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;rentalCharge;(-I[A

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesM

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesM

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;rentalCharge;(-I[A

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesM

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesM

      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPe

      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;

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(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBas

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPerDay~;c

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTa

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM rcAssignedCar[RentalCase*Car]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM carType[Car*CarType]
SELECTFROM rcAssignedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCha

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcAssignedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalP

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss

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DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctcNrOfDays;rentalExcessPeriod~ /\ rcAss

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessTariffPer

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcAss
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbra

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenaltyCh

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocationPenal

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenaltyCh

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocationPenal

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM (distbranch;rcDroppedOffBranch~ /\ distbranch;contractedDropoffBra

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\
DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;arg1~

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(arg1;re

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;arg1~

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(arg1;re

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(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;arg1~

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(arg1;re

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\ arg3;rent

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;computed

(TO MAINTAIN -(computedRentalCharge~;I[CompRentalCharge];computedRentalCharge
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;comp

(TO MAINTAIN -(computedTariffedCharge~;I[CompTariffedCharge];computedTariffed
DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM (projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTar

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM projectedBasicCharge;(-I[Amount] /\ projectedBasicCharge~;(project

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM projectedBasicCharge;(-I[Amount] /\ projectedBasicCharge~;(project

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM contractedCarType~;projectedBasicCharge;(-I[Amount] /\ projectedBa

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;projectedRentalPeriod~ /\ ctcDailyAmount;rentalTariff

(TO MAINTAIN -(projectedBasicCharge~;(projectedRentalPeriod;ctcNrOfDays~ /\ c

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DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM rentalTariffPerDay;(-I[Amount] /\ rentalTariffPerDay~;rentalTariff

(TO MAINTAIN -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM excessTariffPerDay;(-I[Amount] /\ excessTariffPerDay~;excessTariff

(TO MAINTAIN -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;rentalBasicCha

(TO MAINTAIN -(rentalBasicCharge~;rentalBasicCharge) \/ I[Amount] FROM UNI re
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;rentalPena

(TO MAINTAIN -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UN
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocationPenal

(TO MAINTAIN -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge)
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenaltyCh

(TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I
DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalCharge)

(TO MAINTAIN -(rentalCharge~;rentalCharge) \/ I[Amount] FROM UNI rentalCharge
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM arg1;(-I[Amount] /\ arg1~;arg1)

(TO MAINTAIN -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM arg2;(-I[Amount] /\ arg2~;arg2)

(TO MAINTAIN -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM arg3;(-I[Amount] /\ arg3~;arg3)

(TO MAINTAIN -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM ctcDailyAmount;(-I[Amount] /\ ctcDailyAmount~;ctcDailyAmount)

(TO MAINTAIN -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDaily
DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM projectedBasicCharge;(-I[Amount] /\ projectedBasicCharge~;projecte

(TO MAINTAIN -(projectedBasicCharge~;projectedBasicCharge) \/ I[Amount] FROM
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM V[CarType*Amount];Delta

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DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM V[CarType*Amount];Delta

DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM V[DistanceBetweenLocations*Amount];Delta

DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM V[CompRentalCharge*Amount];Delta

DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM V[CompTariffedCharge*Amount];Delta

DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM V[CompTariffedCharge*Amount];Delta

DELETE FROM projectedBasicCharge[RentalCase*Amount]
SELECTFROM V[RentalCase*Amount];Delta

(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]) \/\ r
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;rentalTariffPerDay
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcAssignedCar;carType;excessTariff
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINAINING -I[CompRentalCharge] \/\ computedRentalCharge;computedRentalCharge~ FROM
(MAINAINING -I[CompTariffedCharge] \/\ computedTariffedCharge;computedTariffedCharge~
(MAINAINING -((projectedRentalPeriod;ctcNrOfDays~ /\ contractedCarType;rentalTariffP
(MAINAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/\ I[Amount] FROM UNI rentalTa
(MAINAINING -I[CarType] \/\ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTar

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(MAINTEINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI excessTa
(MAINTEINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT excessTar
(MAINTEINING -(rentalBasicCharge~;rentalBasicCharge) \/ I[Amount] FROM UNI rentalBasi
(MAINTEINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UNI rental
(MAINTEINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ I[Amo
(MAINTEINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLo
(MAINTEINING -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I[Amount]
(MAINTEINING -(rentalCharge~;rentalCharge) \/ I[Amount] FROM UNI rentalCharge::Rental
(MAINTEINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount
(MAINTEINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*Amount
(MAINTEINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*Amount
(MAINTEINING -(computedRentalCharge~;computedRentalCharge) \/ I[Amount] FROM UNI comp
(MAINTEINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount::
(MAINTEINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDai
(MAINTEINING -(computedTariffedCharge~;computedTariffedCharge) \/ I[Amount] FROM UNI
(MAINTEINING -(projectedBasicCharge~;projectedBasicCharge) \/ I[Amount] FROM UNI proj

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<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=Integer} EXECUTE      -- (ECA rule 144)
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
      SELECTFROM contractedPickupBranch;branchOf;maxRentalDuration;(-I[Integer]

      (TO MAINTAIN  -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM rcMaxRentalDuration;(-I[Integer] /\ rcMaxRentalDuration~;cont

      (TO MAINTAIN  -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
DELETE FROM branchOf [Branch*CarRentalCompany]
      SELECTFROM contractedPickupBranch~;rcMaxRentalDuration;(-I[Integer] /\ r

      (TO MAINTAIN  -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
      SELECTFROM branchOf~;contractedPickupBranch~;rcMaxRentalDuration;(-I[Int

      (TO MAINTAIN  -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latest

      (TO MAINTAIN  -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;(contractedStartDa

      (TO MAINTAIN  -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
DELETE FROM earliestDate[DateDifferencePlusOne*Date]

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SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(e

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;(contractedStartDa

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(e

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOff

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;(rcDro

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
DELETE FROM lastDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;(rcDro

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~);

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;com

(TO MAINTAIN -(computedRentalPeriod~;I[DateDifferencePlusOne];computedRe
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays

(TO MAINTAIN -(computedNrOfExcessDays~;I[DateDifference];computedNrOfExc
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;earliestDate~ /\ contractedEndDate;lates

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(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM projectedRentalPeriod;(-I[Integer] /\ projectedRentalPeriod~;

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(e

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM projectedRentalPeriod;(-I[Integer] /\ projectedRentalPeriod~;

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(e

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;contractedEn

(TO MAINTAIN -(projectedRentalPeriod~;(contractedStartDate;earliestDate~
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;rentalPeriod)

(TO MAINTAIN -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rental
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;rental

(TO MAINTAIN -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM rcMaxRentalDuration;(-I[Integer] /\ rcMaxRentalDuration~;rcMa

(TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[Integer] F
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM ctcNrOfDays;(-I[Integer] /\ ctcNrOfDays~;ctcNrOfDays)

(TO MAINTAIN -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfD
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM projectedRentalPeriod;(-I[Integer] /\ projectedRentalPeriod~;

(TO MAINTAIN -(projectedRentalPeriod~;projectedRentalPeriod) \/ I[Intege
DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
SELECTFROM V[CarRentalCompany*Integer];Delta

DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

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DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM V[DateDifferencePlusOne*Integer];Delta

DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM V[CompTariffedCharge*Integer];Delta

DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM V[DateDifference*Integer];Delta

DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

(MAINAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRental
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPer
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays
(MAINAINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate
(MAINAINING -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPeriod::
(MAINAINING -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM UNI re
(MAINAINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[Integer] FROM UNI
(MAINAINING -(computedRentalPeriod~;computedRentalPeriod) \/ I[Integer] FROM UNI
(MAINAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::Comp
(MAINAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOf
(MAINAINING -(computedNrOfExcessDays~;computedNrOfExcessDays) \/ I[Integer] FROM
(MAINAINING -(projectedRentalPeriod~;projectedRentalPeriod) \/ I[Integer] FROM

```

----- Derivation ----->

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ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM contractedPickupBranch;branchOf;maxRentalDuration;(-I[Integer] /\

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM rcMaxRentalDuration;(-I[Integer] /\ rcMaxRentalDuration~;contracte

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
DELETE FROM branchOf[Branch*CarRentalCompany]
SELECTFROM contractedPickupBranch~;rcMaxRentalDuration;(-I[Integer] /\ rcMaxR

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
SELECTFROM branchOf~;contractedPickupBranch~;rcMaxRentalDuration;(-I[Integer]

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental

```

```

DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;(contractedStartDate;ea

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(earlie

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;(contractedStartDate;ea

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(earlie

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate~

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);compu

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;(rcDroppedO

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
DELETE FROM lastDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays~;(la

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;(rcDroppedO

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays~;(la

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~);renta

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;compute

```

```

(TO MAINTAIN  -(computedRentalPeriod~;I[DateDifferencePlusOne];computedRentalP
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays~;com

(TO MAINTAIN  -(computedNrOfExcessDays~;I[DateDifference];computedNrOfExcessDa
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate

(TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM projectedRentalPeriod;(-I[Integer] /\ projectedRentalPeriod~;(cont

(TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(earlie

(TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM projectedRentalPeriod;(-I[Integer] /\ projectedRentalPeriod~;(cont

(TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(earlie

(TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;contractedEndDate

(TO MAINTAIN  -(projectedRentalPeriod~;(contractedStartDate;earliestDate~ /\ c
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;rentalPeriod)

(TO MAINTAIN  -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPerio
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;rentalExces

(TO MAINTAIN  -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM UNI
DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM rcMaxRentalDuration;(-I[Integer] /\ rcMaxRentalDuration~;rcMaxRent

(TO MAINTAIN  -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[Integer] FROM U
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM ctcNrOfDays;(-I[Integer] /\ ctcNrOfDays~;ctcNrOfDays)

(TO MAINTAIN  -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::
DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM projectedRentalPeriod;(-I[Integer] /\ projectedRentalPeriod~;proje

(TO MAINTAIN  -(projectedRentalPeriod~;projectedRentalPeriod) \/ I[Integer] FR

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DELETE FROM maxRentalDuration[CarRentalCompany*Integer]
SELECTFROM V[CarRentalCompany*Integer];Delta

DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

DELETE FROM rcMaxRentalDuration[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM V[DateDifferencePlusOne*Integer];Delta

DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM V[CompTariffedCharge*Integer];Delta

DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM V[DateDifference*Integer];Delta

DELETE FROM projectedRentalPeriod[RentalCase*Integer]
SELECTFROM V[RentalCase*Integer];Delta

(MAINTEINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat
(MAINTEINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTEINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTEINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~
(MAINTEINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~ FROM
(MAINTEINING -((contractedStartDate;earliestDate~ /\ contractedEndDate;latestDate~);c
(MAINTEINING -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPeriod::Renta
(MAINTEINING -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM UNI rentalE
(MAINTEINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[Integer] FROM UNI rcMax
(MAINTEINING -(computedRentalPeriod~;computedRentalPeriod) \/ I[Integer] FROM UNI com
(MAINTEINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTari
(MAINTEINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays:
(MAINTEINING -(computedNrOfExcessDays~;computedNrOfExcessDays) \/ I[Integer] FROM UNI
(MAINTEINING -(projectedRentalPeriod~;projectedRentalPeriod) \/ I[Integer] FROM UNI p

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<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=Person} EXECUTE -- (ECA rule 146)
ONE OF DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM -(rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicen

(TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;val
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-(validDrivi

```



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(TO MAINTAIN  -(rcDriver~;rcDriver) /\ (I[Person] /\ validDrivingLicense;
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesN

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesN

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesN

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesN

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesN

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcD

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[Ye

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[Ye

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcD

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[Ye

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[Ye

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR

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DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~;rcDriver

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```

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~;rcDri

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~;rcRen

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~;rcRen

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Yes]

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcDriver;rcDriver~;rcRenter;(-I[Person] /\ rcRenter~;rcDriver

(TO MAINTAIN  -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBran

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DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcDriver;rcDriver~;rcRenter;(-I[Person] /\ rcRenter~;rcDriver

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~;rcR

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~;rcR

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcRan
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcRenter)

(TO MAINTAIN -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::Renta
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcDriver)

(TO MAINTAIN -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::Renta
DELETE FROM sessionUser[SESSION*Person]
SELECTFROM sessionUser;(-I[Person] /\ sessionUser~;sessionUser)

(TO MAINTAIN -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUs
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM V[RentalCase*Person];Delta

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DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM V[RentalCase*Person];Delta

DELETE FROM validDrivingLicense[Person*DrivingLicense]
SELECTFROM Delta;V[Person*DrivingLicense]

DELETE FROM sessionUser[SESSION*Person]
SELECTFROM V[SESSION*Person];Delta

(MAINTEINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)
(MAINTEINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)
(MAINTEINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase*Person]
(MAINTEINING -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase*Person]
(MAINTEINING -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person]
(MAINTEINING -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUser::SESSION*Person]

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----- Derivation ----->

```

ONE OF DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM -(rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)

(TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense)
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-(validDrivingLicense;validDrivingLicense)

(TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;validDrivingLicense)
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rcDriver;(-I[Person] /\ rcDriver~;rcDriver)

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(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnsw

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnsw

(TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~;rcDriver

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAn

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAn

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~;rcDriver

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAn

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAn

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAn

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReques
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~;rcRenter;(-I

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnsw

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnsw

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~;rcRenter;(-I

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ

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DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnsw

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnsw

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAn

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAn

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAn

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAn

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~;rcDriver;(

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOve
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAns

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOve
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAns

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOve
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~;rcDriver;(

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOve
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAns

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DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter /\ r

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq
DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter /\ r

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~;rcRenter

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter /\ r

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcDriver;rcDriver~;rcRenter /\ r

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcRenter)

(TO MAINTAIN -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcDriver)

(TO MAINTAIN -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase
DELETE FROM sessionUser[SESSION*Person]
SELECTFROM sessionUser;(-I[Person] /\ sessionUser~;sessionUser)

(TO MAINTAIN -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUser::S
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM V[RentalCase*Person];Delta

DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM V[RentalCase*Person];Delta

DELETE FROM validDrivingLicense[Person*DrivingLicense]
SELECTFROM Delta;V[Person*DrivingLicense]

DELETE FROM sessionUser[SESSION*Person]
SELECTFROM V[SESSION*Person];Delta

(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC

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(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINAINING -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase*Person)
(MAINAINING -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person)
(MAINAINING -(sessionUser~;sessionUser) \/ I[Person] FROM UNI sessionUser::SESSION*P

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<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=DrivingLicense} EXECUTE      -- (ECA rule 148)
DELETE FROM validDrivingLicense[Person*DrivingLicense]
SELECTFROM V[Person*DrivingLicense];Delta

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----- Derivation ----->

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DELETE FROM validDrivingLicense[Person*DrivingLicense]
SELECTFROM V[Person*DrivingLicense];Delta

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<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=YesNoAnswer} EXECUTE      -- (ECA rule 149)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAn
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'[YesN
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Branch}
      SELECTFROM contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];r

      (TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnsw

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ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNo
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'[Yes
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
INSERT INTO Isn{dety=Branch}
    SELECTFROM contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNoAns
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAns
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes'[Yes
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Branch}
    SELECTFROM contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];

(TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAns
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNo
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes'[Y
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
INSERT INTO Isn{dety=Branch}
    SELECTFROM contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer]

(TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNoAns
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAns
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq

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        PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes'[YesNoAns
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Date;
        INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Date}
        SELECTFROM contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUs

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNo
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
        PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes'[YesNo
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
INSERT INTO Isn{dety=Date}
        SELECTFROM contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rc

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer]
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAns
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
        PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes'[YesNoAns
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserReq
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Date}
        SELECTFROM contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNo
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'a'[RentalCase]*'b'[Date]

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        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
INSERT INTO Isn{dety=Date}
        SELECTFROM contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~

(TO MAINTAIN  -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~
PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=CarType}
        SELECTFROM contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnswer]
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~
INSERT INTO Isn{dety=CarType}
        SELECTFROM contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

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        (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUser
THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b' [RentalCase]*'a' [Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Person}
        SELECTFROM rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\

        (TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a' [RentalCase]*'b' [Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcB
THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b' [RentalCase]*'a' [Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\
INSERT INTO Isn{dety=Person}
        SELECTFROM rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\

        (TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchR
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAn
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a' [RentalCase]*'b' [Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUser
THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b' [RentalCase]*'a' [Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I
INSERT INTO Isn{dety=Person}
        SELECTFROM rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\

        (TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo
        THEN INSERT INTO rcRenter[RentalCase*Person]

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SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcB
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~
INSERT INTO Isn{dety=Person}
SELECTFROM rcRenter~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchReque

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchR
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\ rc

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes' [YesNoA
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHa
PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKe
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHa
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\
INSERT INTO Isn{dety=Person}
SELECTFROM rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes' [YesNoA
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHa
PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKe
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHa
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOverQ~ /\
INSERT INTO Isn{dety=Person}
SELECTFROM rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHandedOv

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNoAnswer];rcKeysHand
INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
SELECTFROM rentalIsPaidQ;'Yes' [YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedO

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(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDrop
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM 'a'[RentalCase]*'b'[Amount]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM 'b'[RentalCase]*'a'[Amount]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
NEW x:Amount;
      INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase]
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~

(TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'
PICK a,b FROM rcRenter~;(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcDriver~
INSERT INTO Isn{detyp=Person}
      SELECTFROM rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchRequestedQ;'Yes'

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchRequestedQ;'Yes'
INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcDriver~;rcRenter

(TO MAINTAIN -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcDriver~;rcRenter
INSERT INTO Isn{detyp=Branch}
      SELECTFROM contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]

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(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssi
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Rent
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBr
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase])
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rental
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
(MAINAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR
(MAINAINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR

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----- Derivation ----->

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'[YesNoAnsw
THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'b'[RentalCase]*'a'[Branch]

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        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Branch;
    INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{detyp=Branch}
    SELECTFROM contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUser

(TO MAINTAIN  -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];rc
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'[YesNoAn
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
INSERT INTO Isn{detyp=Branch}
    SELECTFROM contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBr

(TO MAINTAIN  -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNoAnswer];
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes'[YesNoAns
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{detyp=Branch}
    SELECTFROM contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUse

(TO MAINTAIN  -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNoAnswer];r
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes'[YesNoA
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]

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SELECTFROM 'b' [RentalCase]*'a' [Branch]

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequ
(MAINAINING  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I [
INSERT INTO Isn{dety=Branch}
      SELECTFROM contractedDropoffBranch~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcB

(TO MAINTAIN  -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes' [YesNoAnswer]
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAnswer]
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes' [YesNoAnswer]
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'b' [RentalCase]*'a' [Date]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequeste
(MAINAINING  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I [Rent
NEW x:Date;
      INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM (rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I [Rent

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I [R
(MAINAINING  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I [Rent
INSERT INTO Isn{dety=Date}
      SELECTFROM contractedStartDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReq

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUse
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNoAnsw
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequ
PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes' [YesNoAnsw
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
            SELECTFROM 'b' [RentalCase]*'a' [Date]

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequ
(MAINAINING  -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I [
INSERT INTO Isn{dety=Date}
      SELECTFROM contractedStartDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranc

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcB
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAnswer]
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
            SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes' [YesNoAnswer];r

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THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=Date}
SELECTFROM contractedEndDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserR
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequ
PICK a,b FROM contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequestedQ~ /\ I[
INSERT INTO Isn{dety=Date}
SELECTFROM contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchR

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBra
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'a' [RentalCase]*'b' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequeste
PICK a,b FROM contractedCarType~;rcUserRequestedQ;'Yes' [YesNoAnswer];r
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b' [RentalCase]*'a' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:CarType;
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM (rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=CarType}
SELECTFROM contractedCarType~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserReque

(TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes' [YesNoAnswer];rcUserR
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNoAnswer]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'a' [RentalCase]*'b' [CarType]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchRequ

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PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes'[YesNoAnswer]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'b'[RentalCase]*'a'[CarType]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
INSERT INTO Isn{dety=CarType}
      SELECTFROM contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchR

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBra
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequ
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
NEW x:Person;
      INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[R
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Rent
INSERT INTO Isn{dety=Person}
      SELECTFROM rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rc

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[
INSERT INTO Isn{dety=Person}
      SELECTFROM rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNoAnswer]
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

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        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequ
THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequeste
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[Re
INSERT INTO Isn{detyp=Person}
        SELECTFROM rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~;rc

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[YesNoAnsw
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequ
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[Re
INSERT INTO Isn{detyp=Person}
        SELECTFROM rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
        SELECTFROM rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssig

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcA
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHan
THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
INSERT INTO Isn{detyp=Person}
        SELECTFROM rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~;

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesNoAnswer
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO

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PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHan
THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedO
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[Re
INSERT INTO Isn{detyp=Person}
      SELECTFROM rcRenter~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~;

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOve
INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBra

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOf
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[YesNoAnswer];re
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[Amount]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsP
      THEN INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM 'b'[RentalCase]*'a'[Amount]

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase
NEW x:Amount;
      INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM (rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalC
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;rent

(TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~;
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcDriver;rcDriver~ /\ rcBranchReque
      THEN INSERT INTO rcRenter[RentalCase*Person]
            SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[Yes
PICK a,b FROM rcRenter~;(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'
      THEN INSERT INTO rcRenter[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[Yes
(MAINAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcB
INSERT INTO Isn{detyp=Person}
      SELECTFROM rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchRequest

(TO MAINTAIN -(rcRenter~;rcDriver;rcDriver~;rcRenter /\ rcRenter~;rcBranchReq

```

```

INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe

(TO MAINTAIN -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
INSERT INTO Isn{detyp=Branch}
SELECTFROM contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'

(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ~ /\ I[RentalC
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ rcAssignedC
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNoAnswer];rcKeysHandedOverQ~ /\ I[RentalCas
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ rcDroppedOffBranch;
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase)) \/ r
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNoAnswer];rentalIsPaidQ~ /\ I[RentalCase)) \/ r
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNoAnswer];rcUserRequestedQ~ /\ I[RentalCase]
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINTAINING -(rcDriver;rcDriver~ /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe
(MAINTAINING -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(MAINTAINING -(I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques

```


<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=YesNoAnswer} EXECUTE    -- (ECA rule 150)
ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]
    SELECTFROM '_SESSION' [SESSION];(-(sessionNewUserRC;rcUserRequestedQ;'Yes

(TO MAINTAIN  -('_SESSION' [SESSION];sessionNewUserRC) \ / sessionNewUserRC
ONE OF DELETE FROM sessionNewUserRC[SESSION*RentalCase]
    SELECTFROM '_SESSION' [SESSION];sessionNewUserRC;(-(V[RentalCase*Y

(TO MAINTAIN  -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUs
DELETE FROM sessionNewUserRC[SESSION*RentalCase]
    SELECTFROM '_SESSION' [SESSION];sessionNewUserRC;(-(rcUserRequeste

(TO MAINTAIN  -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUs
(MAINTAINING  -(sessionNewUserRC~;'_SESSION' [SESSION];sessionNewUserRC) \ /
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM '_SESSION' [SESSION];(-(sessionNewBranchRC;rcBranchRequestedQ;

(TO MAINTAIN  -('_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC
ONE OF DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM '_SESSION' [SESSION];sessionNewBranchRC;(-(V[RentalCase

(TO MAINTAIN  -(sessionNewBranchRC~;'_SESSION' [SESSION];sessionNew
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM '_SESSION' [SESSION];sessionNewBranchRC;(-(rcBranchRequ

(TO MAINTAIN  -(sessionNewBranchRC~;'_SESSION' [SESSION];sessionNew
(MAINTAINING  -(sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC
ONE OF DELETE FROM sessionReturnedCar [SESSION*Car]
    SELECTFROM '_SESSION' [SESSION];(-(sessionReturnedCar;rcAssignedCar

(TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
DELETE FROM Isn{dety=Car}
    SELECTFROM sessionReturnedCar~;'_SESSION' [SESSION];(-(sessionRetu

(TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
    THEN INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM 'a' [Car]*'b' [Branch]

(TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
    THEN INSERT INTO carAvailableAt [Car*Branch]
        SELECTFROM 'b' [Car]*'a' [Branch]

(TO MAINTAIN  -('_SESSION' [SESSION];sessionReturnedCar
(MAINTAINING  -('_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -
NEW x:Branch;

```

```

INSERT INTO carAvailableAt[Car*Branch]
SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionR

      (TO MAINTAIN -(('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\
      (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -
      (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAva
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(car

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedCar

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
DELETE FROM Isn{detyP=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturne

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRet
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SE
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'a'[Car]*'b'[Branch]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION
PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionR
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
      (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUserR
(MAINTAINING -('_SESSION'[SESSION];sessionNewUserRC) \ sessionNewUserRC;rcUserR

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(MAINTEINING -( '_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC;rcB
(MAINTEINING -( '_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC;rcB
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA

```

----- Derivation ----->

```

ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]
    SELECTFROM ' _SESSION' [SESSION];(-(sessionNewUserRC;rcUserRequestedQ;'Yes'[Yes

(TO MAINTAIN -( '_SESSION' [SESSION];sessionNewUserRC) \ / sessionNewUserRC;rcUs
ONE OF DELETE FROM sessionNewUserRC[SESSION*RentalCase]
    SELECTFROM ' _SESSION' [SESSION];sessionNewUserRC;(-(V[RentalCase*YesNoA

    (TO MAINTAIN -(sessionNewUserRC~;' _SESSION' [SESSION];sessionNewUserRC)
    DELETE FROM sessionNewUserRC[SESSION*RentalCase]
    SELECTFROM ' _SESSION' [SESSION];sessionNewUserRC;(-(rcUserRequestedQ;'Y

    (TO MAINTAIN -(sessionNewUserRC~;' _SESSION' [SESSION];sessionNewUserRC)
(MAINTEINING -(sessionNewUserRC~;' _SESSION' [SESSION];sessionNewUserRC) \ / rcUs
DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM ' _SESSION' [SESSION];(-(sessionNewBranchRC;rcBranchRequestedQ;'Yes'

(TO MAINTAIN -( '_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC;
ONE OF DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM ' _SESSION' [SESSION];sessionNewBranchRC;(-(V[RentalCase*YesM

    (TO MAINTAIN -(sessionNewBranchRC~;' _SESSION' [SESSION];sessionNewBranch
    DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
    SELECTFROM ' _SESSION' [SESSION];sessionNewBranchRC;(-(rcBranchRequested

    (TO MAINTAIN -(sessionNewBranchRC~;' _SESSION' [SESSION];sessionNewBranch
(MAINTEINING -(sessionNewBranchRC~;' _SESSION' [SESSION];sessionNewBranchRC) \ /
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
    SELECTFROM ' _SESSION' [SESSION];(-(sessionReturnedCar;rcAssignedCar~;(r

    (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(car
    DELETE FROM Isn{detyP=Car}
    SELECTFROM sessionReturnedCar~;' _SESSION' [SESSION];(-(sessionReturnedC

    (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(car
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;' _SESSION'
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

        (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar;(I[C
        PICK a,b FROM carAvailableAt~;sessionReturnedCar~;' _SESSION' [SES
        THEN INSERT INTO carAvailableAt[Car*Branch]

```

```

SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -( '_SESSION'[SESSION];sessionReturnedCar;(I[C
(MAINAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];(-(sessionReturn

      (TO MAINTAIN -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(c
      (MAINAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carA
(MAINAINING -( '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
ONE OF DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvai

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
DELETE FROM sessionReturnedCar[SESSION*Car]
      SELECTFROM '_SESSION'[SESSION];sessionReturnedCar;(-(rcAssignedCar~;(r

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
DELETE FROM Isn{dety=Car}
      SELECTFROM sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturned
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM sessionReturnedCar~;'_SESSION
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'a'[Car]*'b'[Branch]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
      PICK a,b FROM carAvailableAt~;sessionReturnedCar~;'_SESSION'[SES
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];ses
(MAINAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturn
      (MAINAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
(MAINAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar;(I[C
DELETE FROM rcUserRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

DELETE FROM rcBranchRequestedQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNoAnswer]
      SELECTFROM V[RentalCase*YesNoAnswer];Delta

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```

DELETE FROM rentalIsPaidQ[RentalCase*YesNoAnswer]
SELECTFROM V[RentalCase*YesNoAnswer];Delta

(MAINTAINING -( '_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReques
(MAINTAINING -( '_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReques
(MAINTAINING -( '_SESSION' [SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranch
(MAINTAINING -( '_SESSION' [SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranch
(MAINTAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car
(MAINTAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableAt;car

<-----End Derivation --

ON INSERT Delta IN Isn{dety=DateDifferencePlusOne} EXECUTE      -- (ECA rule 151)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(
      THEN INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
      SELECTFROM 'a'[DateDifferencePlusOne]*'b'[Integer]

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeri
PICK a,b FROM computedRentalPeriod~;(I[DateDifferencePlusOne] /\ -
      THEN INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
      SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Integer]

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeri
(MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRe
NEW x:Integer;
      INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
      SELECTFROM (I[DateDifferencePlusOne] /\ -(computedRentalPeriod;compute

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;compute
(MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRe
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(
      THEN INSERT INTO earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM 'a'[DateDifferencePlusOne]*'b'[Date]

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Dat
PICK a,b FROM earliestDate~;(I[DateDifferencePlusOne] /\ -(earlies
      THEN INSERT INTO earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Dat
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDa
NEW x:Date;
      INSERT INTO earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM (I[DateDifferencePlusOne] /\ -(earliestDate;earliestDate~))

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earlies
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDa
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(

```

```

THEN INSERT INTO latestDate[DateDifferencePlusOne*Date]
    SELECTFROM 'a'[DateDifferencePlusOne]*'b'[Date]

    (TO MAINTAIN -I[DateDifferencePlusOne] \/ latestDate;I[Date]
PICK a,b FROM latestDate~;(I[DateDifferencePlusOne] /\ -(latestDate~
THEN INSERT INTO latestDate[DateDifferencePlusOne*Date]
    SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

    (TO MAINTAIN -I[DateDifferencePlusOne] \/ latestDate;I[Date]
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~
(MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPer
(MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::Date
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT ea
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDiffe
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latest

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(compu
    THEN INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
        SELECTFROM 'a'[DateDifferencePlusOne]*'b'[Integer]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;co
PICK a,b FROM computedRentalPeriod~;(I[DateDifferencePlusOne] /\ -(comp
    THEN INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Integer]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;co
(MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalP
NEW x:Integer;
    INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
        SELECTFROM (I[DateDifferencePlusOne] /\ -(computedRentalPeriod;computedRent

    (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRent
(MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalP
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(earli
    THEN INSERT INTO earliestDate[DateDifferencePlusOne*Date]
        SELECTFROM 'a'[DateDifferencePlusOne]*'b'[Date]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];ea
PICK a,b FROM earliestDate~;(I[DateDifferencePlusOne] /\ -(earliestDate
    THEN INSERT INTO earliestDate[DateDifferencePlusOne*Date]
        SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Date]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];ea
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~ F
NEW x:Date;
    INSERT INTO earliestDate[DateDifferencePlusOne*Date]

```

```

SELECTFROM (I[DateDifferencePlusOne] /\ -(earliestDate;earliestDate~))*'x' [

    (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate
    (MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~ F
    ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(lates
    THEN INSERT INTO latestDate[DateDifferencePlusOne*Date]
        SELECTFROM 'a' [DateDifferencePlusOne]*'b' [Date]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ latestDate;I[Date];late
        PICK a,b FROM latestDate~;(I[DateDifferencePlusOne] /\ -(latestDate;lat
        THEN INSERT INTO latestDate[DateDifferencePlusOne*Date]
            SELECTFROM 'b' [DateDifferencePlusOne]*'a' [Date]

            (TO MAINTAIN -I[DateDifferencePlusOne] \/ latestDate;I[Date];late
            (MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~ FROM
            (MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~
            (MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDiff
            (MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earlies
            (MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifference
            (MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate:

<-----End Derivation --

```

```

ON DELETE Delta FROM Isn{dety=DateDifferencePlusOne} EXECUTE -- (ECA rule 15)
ALL of ONE OF DELETE FROM earliestDate[DateDifferencePlusOne*Date]
    SELECTFROM (-I[DateDifferencePlusOne] /\ earliestDate;earliestDate~

    (TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~
    DELETE FROM latestDate[DateDifferencePlusOne*Date]
        SELECTFROM (-I[DateDifferencePlusOne] /\ earliestDate;earliestDate~

        (TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~
        (MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I
        DELETE FROM earliestDate[DateDifferencePlusOne*Date]
            SELECTFROM Delta;V[DateDifferencePlusOne*Date]

        DELETE FROM latestDate[DateDifferencePlusOne*Date]
            SELECTFROM Delta;V[DateDifferencePlusOne*Date]

        DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
            SELECTFROM Delta;V[DateDifferencePlusOne*Integer]

        (MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDi

----- Derivation ----->

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```

ALL of ONE OF DELETE FROM earliestDate[DateDifferencePlusOne*Date]

```

```

SELECTFROM (-I[DateDifferencePlusOne] /\ earliestDate;earliestDate~ /\
(TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM (-I[DateDifferencePlusOne] /\ earliestDate;earliestDate~ /\

(TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \
(MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[Date
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM Delta;V[DateDifferencePlusOne*Date]

DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM Delta;V[DateDifferencePlusOne*Date]

DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM Delta;V[DateDifferencePlusOne*Integer]

(MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDiffere

<-----End Derivation --

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```

ON INSERT Delta IN Isn{dety=CompTariffedCharge} EXECUTE -- (ECA rule 153)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(com
THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM 'a'[CompTariffedCharge]*'b'[Amount]

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge
PICK a,b FROM computedTariffedCharge~;(I[CompTariffedCharge] /\ -(com
THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM 'b'[CompTariffedCharge]*'a'[Amount]

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge
(MAINTAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge
NEW x:Amount;
INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (I[CompTariffedCharge] /\ -(computedTariffedCharge;computedTariffedCharge

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge
(MAINTAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(ctcNrOfDays
THEN INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM 'a'[CompTariffedCharge]*'b'[Integer]

(TO MAINTAIN -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer]
PICK a,b FROM ctcNrOfDays~;(I[CompTariffedCharge] /\ -(ctcNrOfDays
THEN INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM 'b'[CompTariffedCharge]*'a'[Integer]

```



```

        (TO MAINTAIN -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer]
(MAINAINING -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays
NEW x:Integer;
        INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
        SELECTFROM (I[CompTariffedCharge] /\ -(ctcNrOfDays;ctcNrOfDays~))*'x' [

        (TO MAINTAIN -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfD
(MAINAINING -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(ctc
        THEN INSERT INTO ctcDailyAmount[CompTariffedCharge*Amount]
        SELECTFROM 'a' [CompTariffedCharge]*'b' [Amount]

        (TO MAINTAIN -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amou
        PICK a,b FROM ctcDailyAmount~;(I[CompTariffedCharge] /\ -(ctcDaily
        THEN INSERT INTO ctcDailyAmount[CompTariffedCharge*Amount]
        SELECTFROM 'b' [CompTariffedCharge]*'a' [Amount]

        (TO MAINTAIN -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amou
        (MAINAINING -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDailyA
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCh
(MAINAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::Comp
(MAINAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOf
(MAINAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmo
(MAINAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT c

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(computed
        THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
        SELECTFROM 'a' [CompTariffedCharge]*'b' [Amount]

        (TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;compu
        PICK a,b FROM computedTariffedCharge~;(I[CompTariffedCharge] /\ -(compu
        THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
        SELECTFROM 'b' [CompTariffedCharge]*'a' [Amount]

        (TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;compu
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffed
NEW x:Amount;
        INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
        SELECTFROM (I[CompTariffedCharge] /\ -(computedTariffedCharge;computedTarif

        (TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTarif
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffed
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(ctcNrOfD
        THEN INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
        SELECTFROM 'a' [CompTariffedCharge]*'b' [Integer]

```

```

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctc
PICK a,b FROM ctcNrOfDays~;(I[CompTariffedCharge] /\ -(ctcNrOfDays;ctcN
THEN INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
        SELECTFROM 'b'[CompTariffedCharge]*'a'[Integer]

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctc
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays~ FRO
NEW x:Integer;
        INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
        SELECTFROM (I[CompTariffedCharge] /\ -(ctcNrOfDays;ctcNrOfDays~))*'x'[Integ

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays~
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays~ FRO
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(ctcDaily
        THEN INSERT INTO ctcDailyAmount[CompTariffedCharge*Amount]
        SELECTFROM 'a'[CompTariffedCharge]*'b'[Amount]

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];c
PICK a,b FROM ctcDailyAmount~;(I[CompTariffedCharge] /\ -(ctcDailyAmount
THEN INSERT INTO ctcDailyAmount[CompTariffedCharge*Amount]
        SELECTFROM 'b'[CompTariffedCharge]*'a'[Amount]

        (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];c
(MAINTAINING -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDailyAmount
(MAINTAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge~
(MAINTAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTari
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays:
(MAINTAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount::
(MAINTAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDai

<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=CompTariffedCharge} EXECUTE      -- (ECA rule 154)
ALL of ONE OF DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
        SELECTFROM (-I[CompTariffedCharge] /\ ctcDailyAmount;ctcDailyAmount~

        (TO MAINTAIN  -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
        SELECTFROM (-I[CompTariffedCharge] /\ ctcDailyAmount;ctcDailyAmount~

        (TO MAINTAIN  -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
        SELECTFROM Delta;V[CompTariffedCharge*Integer]

DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
        SELECTFROM Delta;V[CompTariffedCharge*Amount]

```

```

DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM Delta;V[CompTariffedCharge*Amount]

(MAINAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[

----- Derivation ----->

ALL of ONE OF DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM (-I[CompTariffedCharge] /\ ctcDailyAmount;ctcDailyAmount~ /

(TO MAINTAIN -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDa
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM (-I[CompTariffedCharge] /\ ctcDailyAmount;ctcDailyAmount~ /

(TO MAINTAIN -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDa
(MAINAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM Delta;V[CompTariffedCharge*Integer]

DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM Delta;V[CompTariffedCharge*Amount]

DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM Delta;V[CompTariffedCharge*Amount]

(MAINAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[CompT

<-----End Derivation --

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```

ON INSERT Delta IN Isn{dety=DateDifference} EXECUTE -- (ECA rule 155)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(computedNrOfExcessDays[DateDifference*Integer]
THEN INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM 'a'[DateDifference]*'b'[Integer]

(TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~)
PICK a,b FROM computedNrOfExcessDays~;(I[DateDifference] /\ -(computedNrOfExcessDays[DateDifference*Integer]
THEN INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM 'b'[DateDifference]*'a'[Integer]

(TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~)
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~)
NEW x:Integer;
INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (I[DateDifference] /\ -(computedNrOfExcessDays;computedNrOfExcessDays~)

(TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~)
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~)

```

```

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(firstDate
    THEN INSERT INTO firstDate[DateDifference*Date]
        SELECTFROM 'a'[DateDifference]*'b'[Date]

        (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate
PICK a,b FROM firstDate~;(I[DateDifference] /\ -(firstDate;firstDate
    THEN INSERT INTO firstDate[DateDifference*Date]
        SELECTFROM 'b'[DateDifference]*'a'[Date]

        (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate
(MAINTAINING -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI
NEW x:Date;
    INSERT INTO firstDate[DateDifference*Date]
        SELECTFROM (I[DateDifference] /\ -(firstDate;firstDate~))*'x'[Date]

        (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI
(MAINTAINING -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(lastDate
    THEN INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'a'[DateDifference]*'b'[Date]

        (TO MAINTAIN -I[DateDifference] \/ lastDate;I[Date];lastDate
PICK a,b FROM lastDate~;(I[DateDifference] /\ -(lastDate;lastDate~
    THEN INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'b'[DateDifference]*'a'[Date]

        (TO MAINTAIN -I[DateDifference] \/ lastDate;I[Date];lastDate
(MAINTAINING -I[DateDifference] \/ lastDate;I[Date];lastDate~ FROM UNI la
(MAINTAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays
(MAINTAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifferen
(MAINTAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::Date
(MAINTAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*
(MAINTAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDif

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(computedNrOf
    THEN INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
        SELECTFROM 'a'[DateDifference]*'b'[Integer]

        (TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;compute
PICK a,b FROM computedNrOfExcessDays~;(I[DateDifference] /\ -(computedN
    THEN INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
        SELECTFROM 'b'[DateDifference]*'a'[Integer]

        (TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;compute
(MAINTAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDa
NEW x:Integer;

```

```

INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (I[DateDifference] /\ -(computedNrOfExcessDays;computedNrOfExces

    (TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExces
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDa
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(firstDate;fi
    THEN INSERT INTO firstDate[DateDifference*Date]
        SELECTFROM 'a' [DateDifference]*'b' [Date]

        (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate~ F
        PICK a,b FROM firstDate~;(I[DateDifference] /\ -(firstDate;firstDate~))
        THEN INSERT INTO firstDate[DateDifference*Date]
            SELECTFROM 'b' [DateDifference]*'a' [Date]

        (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate~ F
(MAINAINING -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI first
NEW x:Date;
    INSERT INTO firstDate[DateDifference*Date]
        SELECTFROM (I[DateDifference] /\ -(firstDate;firstDate~))*'x' [Date]

    (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI fi
(MAINAINING -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI first
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(lastDate;las
    THEN INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'a' [DateDifference]*'b' [Date]

        (TO MAINTAIN -I[DateDifference] \/ lastDate;I[Date];lastDate~ FRO
        PICK a,b FROM lastDate~;(I[DateDifference] /\ -(lastDate;lastDate~))
        THEN INSERT INTO lastDate[DateDifference*Date]
            SELECTFROM 'b' [DateDifference]*'a' [Date]

        (TO MAINTAIN -I[DateDifference] \/ lastDate;I[Date];lastDate~ FRO
        (MAINAINING -I[DateDifference] \/ lastDate;I[Date];lastDate~ FROM UNI lastDat
(MAINAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~ FRO
(MAINAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference*Da
(MAINAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::DateDiffe
(MAINAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*Date)
(MAINAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDifferen

<-----End Derivation --

ON DELETE Delta FROM Isn{dety=DateDifference} EXECUTE -- (ECA rule 156)
ALL of ONE OF DELETE FROM lastDate[DateDifference*Date]
    SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate

    (TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[D
DELETE FROM firstDate[DateDifference*Date]
    SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate

```

```

        (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[D
(MAINAINING  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDiffe
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM Delta;V[DateDifference*Date]

DELETE FROM lastDate[DateDifference*Date]
SELECTFROM Delta;V[DateDifference*Date]

DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM Delta;V[DateDifference*Integer]

(MAINAINING  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference]

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM lastDate[DateDifference*Date]
SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate;firstDate~)

        (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateD
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate;firstDate~)

        (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateD
(MAINAINING  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM Delta;V[DateDifference*Date]

DELETE FROM lastDate[DateDifference*Date]
SELECTFROM Delta;V[DateDifference*Date]

DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM Delta;V[DateDifference*Integer]

(MAINAINING  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference] FROM

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=DistanceBetweenLocations} EXECUTE  -- (ECA rule 1
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DistanceBetweenLocations] /\
        THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations]
        SELECTFROM 'a'[DistanceBetweenLocations]*'b'[Amount]

        (TO MAINTAIN  -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge
PICK a,b FROM computedLocationPenaltyCharge~;(I[DistanceBetweenLocations] /\
        THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations]
        SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

```

```

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge
NEW x:Amount;
    INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
    SELECTFROM (I[DistanceBetweenLocations] /\ -(computedLocationPenaltyCharge))
    (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DistanceBetweenLocations] /\
    THEN INSERT INTO distbranch[DistanceBetweenLocations*Branch]
    SELECTFROM 'a'[DistanceBetweenLocations]*'b'[Branch]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distbranch;distbranch~
PICK a,b FROM distbranch~;(I[DistanceBetweenLocations] /\ -(distbranch;distbranch~))
    THEN INSERT INTO distbranch[DistanceBetweenLocations*Branch]
    SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Branch]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distbranch;distbranch~
(MAINAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT distbranch
NEW x:Branch;
    INSERT INTO distbranch[DistanceBetweenLocations*Branch]
    SELECTFROM (I[DistanceBetweenLocations] /\ -(distbranch;distbranch~))*
    (TO MAINTAIN -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT distbranch
(MAINAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT distbranch
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DistanceBetweenLocations] /\
    THEN INSERT INTO distance[DistanceBetweenLocations*Distance]
    SELECTFROM 'a'[DistanceBetweenLocations]*'b'[Distance]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;I[Distance]
PICK a,b FROM distance~;(I[DistanceBetweenLocations] /\ -(distance;I[Distance]
    THEN INSERT INTO distance[DistanceBetweenLocations*Distance]
    SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Distance]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;I[Distance]
(MAINAINING -I[DistanceBetweenLocations] \/ distance;I[Distance];distance
NEW x:Distance;
    INSERT INTO distance[DistanceBetweenLocations*Distance]
    SELECTFROM (I[DistanceBetweenLocations] /\ -(distance;distance~))*'x'[Distance]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;I[Distance];distance
(MAINAINING -I[DistanceBetweenLocations] \/ distance;I[Distance];distance
(MAINAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/
(MAINAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLocationPenaltyCharge
(MAINAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT distbranch
(MAINAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenLocations
(MAINAINING -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DistanceBetweenLocations] /\ -(co
      THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations]
        SELECTFROM 'a' [DistanceBetweenLocations]*'b' [Amount]

      (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;
      PICK a,b FROM computedLocationPenaltyCharge~;(I[DistanceBetweenLocations] /\ -(co
      THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations]
        SELECTFROM 'b' [DistanceBetweenLocations]*'a' [Amount]

      (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;
      (MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;I[A
      NEW x:Amount;
      INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
        SELECTFROM (I[DistanceBetweenLocations] /\ -(computedLocationPenaltyCharge;

      (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;
      (MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;I[A
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DistanceBetweenLocations] /\ -(di
        THEN INSERT INTO distbranch[DistanceBetweenLocations*Branch]
          SELECTFROM 'a' [DistanceBetweenLocations]*'b' [Branch]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distbranch;distbranch~
        PICK a,b FROM distbranch~;(I[DistanceBetweenLocations] /\ -(distbranch;
        THEN INSERT INTO distbranch[DistanceBetweenLocations*Branch]
          SELECTFROM 'b' [DistanceBetweenLocations]*'a' [Branch]

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distbranch;distbranch~
        (MAINTAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT d
        NEW x:Branch;
        INSERT INTO distbranch[DistanceBetweenLocations*Branch]
          SELECTFROM (I[DistanceBetweenLocations] /\ -(distbranch;distbranch~))*'x' [B

        (TO MAINTAIN -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT d
        (MAINTAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT d
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DistanceBetweenLocations] /\ -(di
          THEN INSERT INTO distance[DistanceBetweenLocations*Distance]
            SELECTFROM 'a' [DistanceBetweenLocations]*'b' [Distance]

          (TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;I[Distance]
          PICK a,b FROM distance~;(I[DistanceBetweenLocations] /\ -(distance;dist
          THEN INSERT INTO distance[DistanceBetweenLocations*Distance]
            SELECTFROM 'b' [DistanceBetweenLocations]*'a' [Distance]

          (TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;I[Distance]
          (MAINTAINING -I[DistanceBetweenLocations] \/ distance;I[Distance];distance~ FR
          NEW x:Distance;
          INSERT INTO distance[DistanceBetweenLocations*Distance]
            SELECTFROM (I[DistanceBetweenLocations] /\ -(distance;distance~))*'x' [Dista

```



```

        (TO MAINTAIN  -I[DistanceBetweenLocations] \/ distance;I[Distance];distance~
        (MAINTAINING -I[DistanceBetweenLocations] \/ distance;I[Distance];distance~ FR
(MAINTAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ I[Amo
(MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLo
(MAINTAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT distbran
(MAINTAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenL
(MAINTAINING -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance::Di

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=DistanceBetweenLocations} EXECUTE  -- (ECA rule
ALL of DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
        SELECTFROM Delta;V[DistanceBetweenLocations*Amount]

DELETE FROM distbranch[DistanceBetweenLocations*Branch]
        SELECTFROM Delta;V[DistanceBetweenLocations*Branch]

DELETE FROM distance[DistanceBetweenLocations*Distance]
        SELECTFROM Delta;V[DistanceBetweenLocations*Distance]

```

----- Derivation ----->

```

ALL of DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
        SELECTFROM Delta;V[DistanceBetweenLocations*Amount]

DELETE FROM distbranch[DistanceBetweenLocations*Branch]
        SELECTFROM Delta;V[DistanceBetweenLocations*Branch]

DELETE FROM distance[DistanceBetweenLocations*Distance]
        SELECTFROM Delta;V[DistanceBetweenLocations*Distance]

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=CompRentalCharge} EXECUTE  -- (ECA rule 159)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(compu
        THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
                SELECTFROM 'a'[CompRentalCharge]*'b'[Amount]

        (TO MAINTAIN  -I[CompRentalCharge] \/ computedRentalCharge;com
PICK a,b FROM computedRentalCharge~;(I[CompRentalCharge] /\ -(comp
THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

```

```

        (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;com
(MAINAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalC
NEW x:Amount;
    INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
    SELECTFROM (I[CompRentalCharge] /\ -(computedRentalCharge;computedRent

    (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRent
(MAINAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalC
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(arg1;
    THEN INSERT INTO arg1[CompRentalCharge*Amount]
    SELECTFROM 'a'[CompRentalCharge]*'b'[Amount]

    (TO MAINTAIN -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM
PICK a,b FROM arg1~;(I[CompRentalCharge] /\ -(arg1;arg1~))
    THEN INSERT INTO arg1[CompRentalCharge*Amount]
    SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

    (TO MAINTAIN -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM
(MAINAINING -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1::
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(arg2;
    THEN INSERT INTO arg2[CompRentalCharge*Amount]
    SELECTFROM 'a'[CompRentalCharge]*'b'[Amount]

    (TO MAINTAIN -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM
PICK a,b FROM arg2~;(I[CompRentalCharge] /\ -(arg2;arg2~))
    THEN INSERT INTO arg2[CompRentalCharge*Amount]
    SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

    (TO MAINTAIN -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM
(MAINAINING -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UNI arg2::
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(arg3;
    THEN INSERT INTO arg3[CompRentalCharge*Amount]
    SELECTFROM 'a'[CompRentalCharge]*'b'[Amount]

    (TO MAINTAIN -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM
PICK a,b FROM arg3~;(I[CompRentalCharge] /\ -(arg3;arg3~))
    THEN INSERT INTO arg3[CompRentalCharge*Amount]
    SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

    (TO MAINTAIN -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM
(MAINAINING -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UNI arg3::
(MAINAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~
(MAINAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*
(MAINAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*
(MAINAINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*

```

----- Derivation ----->

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(computedRe
      THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
        SELECTFROM 'a' [CompRentalCharge]*'b' [Amount]

      (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;compute
      PICK a,b FROM computedRentalCharge~;(I[CompRentalCharge] /\ -(computedR
      THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
        SELECTFROM 'b' [CompRentalCharge]*'a' [Amount]

      (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;compute
      (MAINTAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge
      NEW x:Amount;
      INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
        SELECTFROM (I[CompRentalCharge] /\ -(computedRentalCharge;computedRentalCha

      (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCha
      (MAINTAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge
      ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(arg1;arg1~
        THEN INSERT INTO arg1[CompRentalCharge*Amount]
          SELECTFROM 'a' [CompRentalCharge]*'b' [Amount]

        (TO MAINTAIN -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UN
        PICK a,b FROM arg1~;(I[CompRentalCharge] /\ -(arg1;arg1~))
        THEN INSERT INTO arg1[CompRentalCharge*Amount]
          SELECTFROM 'b' [CompRentalCharge]*'a' [Amount]

        (TO MAINTAIN -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UN
        (MAINTAINING -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1::CompR
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(arg2;arg2~
          THEN INSERT INTO arg2[CompRentalCharge*Amount]
            SELECTFROM 'a' [CompRentalCharge]*'b' [Amount]

          (TO MAINTAIN -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UN
          PICK a,b FROM arg2~;(I[CompRentalCharge] /\ -(arg2;arg2~))
          THEN INSERT INTO arg2[CompRentalCharge*Amount]
            SELECTFROM 'b' [CompRentalCharge]*'a' [Amount]

          (TO MAINTAIN -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UN
          (MAINTAINING -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UNI arg2::CompR
          ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(arg3;arg3~
            THEN INSERT INTO arg3[CompRentalCharge*Amount]
              SELECTFROM 'a' [CompRentalCharge]*'b' [Amount]

            (TO MAINTAIN -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UN
            PICK a,b FROM arg3~;(I[CompRentalCharge] /\ -(arg3;arg3~))
            THEN INSERT INTO arg3[CompRentalCharge*Amount]
              SELECTFROM 'b' [CompRentalCharge]*'a' [Amount]

            (TO MAINTAIN -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UN

```

```

(MAINAINING -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UNI arg3::CompR
(MAINAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM
(MAINAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount
(MAINAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*Amount
(MAINAINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*Amount

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=CompRentalCharge} EXECUTE      -- (ECA rule 160)
ALL of ONE OF DELETE FROM arg3[CompRentalCharge*Amount]
    SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ a

    (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompR
DELETE FROM arg2[CompRentalCharge*Amount]
    SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ a

    (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompR
DELETE FROM arg1[CompRentalCharge*Amount]
    SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ a

    (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompR
(MAINAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCha
DELETE FROM arg1[CompRentalCharge*Amount]
    SELECTFROM Delta;V[CompRentalCharge*Amount]

DELETE FROM arg2[CompRentalCharge*Amount]
    SELECTFROM Delta;V[CompRentalCharge*Amount]

DELETE FROM arg3[CompRentalCharge*Amount]
    SELECTFROM Delta;V[CompRentalCharge*Amount]

DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
    SELECTFROM Delta;V[CompRentalCharge*Amount]

(MAINAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FR

```

----- Derivation ----->

```

ALL of ONE OF DELETE FROM arg3[CompRentalCharge*Amount]
    SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ arg1;a

    (TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRental
DELETE FROM arg2[CompRentalCharge*Amount]
    SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ arg1;a

```

```

        (TO MAINTAIN  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge*Amount]
DELETE FROM arg1[CompRentalCharge*Amount]
        SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~)

        (TO MAINTAIN  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge*Amount]
(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge*Amount]
DELETE FROM arg1[CompRentalCharge*Amount]
        SELECTFROM Delta;V[CompRentalCharge*Amount]

DELETE FROM arg2[CompRentalCharge*Amount]
        SELECTFROM Delta;V[CompRentalCharge*Amount]

DELETE FROM arg3[CompRentalCharge*Amount]
        SELECTFROM Delta;V[CompRentalCharge*Amount]

DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
        SELECTFROM Delta;V[CompRentalCharge*Amount]

(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM Uni

<-----End Derivation --

```

```

ON DELETE Delta FROM Isn{dety=Distance} EXECUTE      -- (ECA rule 162)
ONE OF DELETE FROM distance[DistanceBetweenLocations*Distance]
        SELECTFROM distance;(-I[Distance] /\ distance~;distance)

        (TO MAINTAIN  -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenLocations
DELETE FROM distance[DistanceBetweenLocations*Distance]
        SELECTFROM V[DistanceBetweenLocations*Distance];Delta

(MAINTAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenLocations
(MAINTAINING -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance::DistanceBetweenLocations

----- Derivation ----->

```

```

ONE OF DELETE FROM distance[DistanceBetweenLocations*Distance]
        SELECTFROM distance;(-I[Distance] /\ distance~;distance)

        (TO MAINTAIN  -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenLocations
DELETE FROM distance[DistanceBetweenLocations*Distance]
        SELECTFROM V[DistanceBetweenLocations*Distance];Delta

(MAINTAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenLocations
(MAINTAINING -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance::DistanceBetweenLocations

<-----End Derivation --

```

```

ON INSERT Delta IN Isn{dety=SESSION} EXECUTE    -- (ECA rule 163)
ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[SESSION] /\ -(session
    THEN INSERT INTO sessionToday[SESSION*Date]
        SELECTFROM 'a' [SESSION]*'b' [Date]

        (TO MAINTAIN -I[SESSION] \/ sessionToday;sessionToday
PICK a,b FROM sessionToday~;(I[SESSION] /\ -(sessionToday;s
    THEN INSERT INTO sessionToday[SESSION*Date]
        SELECTFROM 'b' [SESSION]*'a' [Date]

        (TO MAINTAIN -I[SESSION] \/ sessionToday;sessionToday
(MAINTEINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initia
NEW x:Date;
    INSERT INTO sessionToday[SESSION*Date]
        SELECTFROM (I[SESSION] /\ -(sessionToday;sessionToday~))*'x' [Da

        (TO MAINTAIN -I[SESSION] \/ sessionToday;sessionToday~ FROM Ini
        (MAINTAINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initia
(MAINTEINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize to
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];ses
    THEN INSERT INTO sessionNewUserRC[SESSION*RentalCase]
        SELECTFROM 'a' [SESSION]*'b' [RentalCase]

        (TO MAINTAIN -('_SESSION'[SESSION];sessionNewUserRC)
PICK a,b FROM sessionNewUserRC~;('_SESSION'[SESSION];session
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [
        THEN INSERT INTO rcUserRequestedQ[Rental
            SELECTFROM 'a' [RentalCase]*'b' [Yes

            (TO MAINTAIN -('_SESSION'[SESSION]
PICK a,b FROM rcUserRequestedQ~;('a' [Ren
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
        THEN BLOCK
            (CANNOT CHANGE '
PICK a,b FROM 'Yes' [Y
        THEN BLOCK
            (CANNOT CHANGE V
(MAINTEINING -('_SESSION'[SE
NEW x:YesNoAnswer;
    ALL of BLOCK
        (CANNOT CHANGE 'Yes
        BLOCK
            (CANNOT CHANGE V[Ye
            (MAINTAINING -('_SESSION'[
            (MAINTAINING -('_SESSION'[SE
            (MAINTAINING -('_SESSION'[SESSION];
(MAINTEINING -('_SESSION'[SESSION];sessionNewUs
NEW x:YesNoAnswer;
    ALL of INSERT INTO rcUserRequestedQ[RentalCas

```



```

(MAINTEINING -(sessionNewUserRC~;'_SESSION'[SESSION];sess
(MAINTEINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNewU
(MAINTEINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNewUse
(MAINTEINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNewUserRC) \
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sess
THEN INSERT INTO sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM 'a'[SESSION]*'b'[RentalCase]

(TO MAINTAIN -('_SESSION'[SESSION];sessionNewBranchRC
PICK a,b FROM sessionNewBranchRC~;'_SESSION'[SESSION];sess
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO rcBranchRequestedQ[Rent
SELECTFROM 'a'[RentalCase]*'b'[Yes

(TO MAINTAIN -('_SESSION'[SESSION]
PICK a,b FROM rcBranchRequestedQ~;'a'[R
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF
THEN BLOCK
(CANNOT CHANGE '
PICK a,b FROM 'Yes'[Y
THEN BLOCK
(CANNOT CHANGE V
(MAINTEINING -('_SESSION'[SE
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes
BLOCK
(CANNOT CHANGE V[Yes
(MAINTEINING -('_SESSION'[
(MAINTEINING -('_SESSION'[SE
(MAINTEINING -('_SESSION'[SESSION];
(MAINTEINING -('_SESSION'[SESSION];sessionNewBr
NEW x:YesNoAnswer;
ALL of INSERT INTO rcBranchRequestedQ[RentalC
SELECTFROM 'a'[RentalCase]*'b'[Rental

(TO MAINTAIN -('_SESSION'[SESSION];se
ONE OF ONE NONEMPTY ALTERNATIVE OF PIC
THEN BLOCK
(CANNOT CHANGE 'Yes
PICK a,b FROM 'Yes'[YesN
THEN BLOCK
(CANNOT CHANGE V[Yes
(MAINTEINING -('_SESSION'[SESI
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes'[Y
BLOCK
(CANNOT CHANGE V[YesNo
(MAINTEINING -('_SESSION'[SES

```



```

(MAINTAINING -('_SESSION'[SESSION];sessionNewBranchRC) \ / sessionNewBranchRC
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
THEN INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM 'a'[RentalCase]*'b'[YesNoAnswer]

(TO MAINTAIN -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
PICK a,b FROM rcBranchRequestedQ~;(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]*'b'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM Submit
PICK a,b FROM 'Yes'[YesNoAnswer];('a'[RentalCase]*'b'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM Submit
BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
NEW x:YesNoAnswer;
ALL of INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
SELECTFROM (sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)

(TO MAINTAIN -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE 'Yes'[YesNoAnswer] FROM Submit
PICK a,b FROM 'Yes'[YesNoAnswer];('x'[YesNoAnswer])
THEN BLOCK
(CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Submit
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
(MAINTAINING -(sessionNewBranchRC~;'_SESSION'[SESSION];sessionNewBranchRC)
INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ)

(TO MAINTAIN -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRequestedQ)
INSERT INTO Isn{detyp=Branch}
SELECTFROM contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ)

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sessionNewBranchRC)
THEN INSERT INTO sessionReturnedCar[SESSION*Car]
SELECTFROM 'a'[SESSION]*'b'[Car]

```

```

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionReturnedCar
PICK a,b FROM sessionReturnedCar~;(' _SESSION' [SESSION];sess
THEN ALL of INSERT INTO Isn{detyp=Car}
      SELECTFROM 'a' [Car]*'b' [Car]

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionRetu
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
      THEN INSERT INTO rcAssignedCar[Re
      SELECTFROM 'b' [RentalCase]*

      (TO MAINTAIN -( '_SESSION' [S
PICK a,b FROM rcAssignedCar;('a' [
THEN ONE OF ONE NONEMPTY ALTERNAT
      THEN ALL of IN
      S

      (TO
DE
S

      (TO
(MAINTAIN
PICK a,b FROM
THEN INSERT IN
SELECTFR

      (TO MAINT.
(MAINTAINING -( '_SESS
NEW x:RentalCase;
      ALL of ALL of INSERT
      SELE

      (TO M.
DELET
SELE

      (TO M.
(MAINTAINING
INSERT INTO :
SELECTFROM

      (TO MAINTAIN
      (MAINTAINING -( '_SE
      (MAINTAINING -( '_SESS
      (MAINTAINING -( '_SESSION' [SE
(MAINTAINING -( '_SESSION' [SESSION];sessi
NEW x:RentalCase;
      ALL of INSERT INTO rcAssignedCar[Renta
      SELECTFROM 'x' [RentalCase]*'b'

```

```

(TO MAINTAIN -('_SESSION'[SESS
ONE OF ONE NONEMPTY ALTERNATIVE
      THEN ALL of INSERT
      SELECT

      (TO MA
      DELET
      SELE

      (TO MA
      (MAINTAINING
      PICK a,b FROM (re
      THEN INSERT INTO
      SELECTFROM

      (TO MAINTAIN
      (MAINTAINING -('_SESSION
      NEW x:RentalCase;
      ALL of ALL of INSERT I
      SELECTF

      (TO MAIN
      DELETE F
      SELECTF

      (TO MAIN
      (MAINTAINING -('
      INSERT INTO rcA
      SELECTFROM 'x'

      (TO MAINTAIN -
      (MAINTAINING -('_SESSI
      (MAINTAINING -('_SESSI
      (MAINTAINING -('_SESSION'[SESSION]
      (MAINTAINING -('_SESSION'[SESSION];ses
      (MAINTAINING -('_SESSION'[SESSION];sessi
      (MAINTAINING -('_SESSION'[SESSION];sessionRetur
      (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar)
      (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) /\ sessionR
      NEW x:Car;
      ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
      SELECTFROM ('_SESSION'[SESSION];sessionReturnedCar /\ -(

      (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \
      INSERT INTO Isn{dety=Car}
      SELECTFROM 'x'[Car]*('_SESSION'[SESSION];sessionReturned

      (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Car]
      THEN INSERT INTO rcAssignedCar[RentalCase*C

```

```

SELECTFROM 'b'[RentalCase]*'a'[Car]

(TO MAINTAIN -('_SESSION'[SESSION];se
PICK a,b FROM rcAssignedCar;('x'[Car]*('_SE
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN ALL of INSERT INTO :
SELECTFROM

(TO MAINTAIN
DELETE FROM :
SELECTFROM

(TO MAINTAIN
(MAINTAINING -('_SE
PICK a,b FROM (rentalHas
THEN INSERT INTO rcAssign
SELECTFROM 'a'[Ren

(TO MAINTAIN -('_S
(MAINTAINING -('__SESSION'[SESSI
NEW x:RentalCase;
ALL of ALL of INSERT INTO ren
SELECTFROM 'a'

(TO MAINTAIN -
DELETE FROM ren
SELECTFROM 'a'

(TO MAINTAIN -
(MAINTAINING -('__SESSI
INSERT INTO rcAssigned
SELECTFROM 'x'[Rental

(TO MAINTAIN -('__SESS
(MAINTAINING -('__SESSION'[SES
(MAINTAINING -('__SESSION'[SESSI
(MAINTAINING -('__SESSION'[SESSION];ses
(MAINTAINING -('__SESSION'[SESSION];sessionReturned
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*(sessionRetur

(TO MAINTAIN -('__SESSION'[SESSION];sessi
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a
THEN ALL of INSERT INTO ren
SELECTFROM 'a'

(TO MAINTAIN -
DELETE FROM ren
SELECTFROM 'a'

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                                (TO MAINTAIN
                                (MAINTAINING -('_SESSION
                                PICK a,b FROM (rentalHasBeen
                                THEN INSERT INTO rcAssigned
                                SELECTFROM 'a'[Rental

                                (TO MAINTAIN -('_SESS
                                (MAINTAINING -('_SESSION'[SESSION]
                                NEW x:RentalCase;
                                ALL of INSERT INTO rentalHasBeen
                                SELECTFROM 'x'[RentalCas

                                (TO MAINTAIN -('_SESSION
                                DELETE FROM rentalHasBeen
                                SELECTFROM 'x'[RentalCas

                                (TO MAINTAIN -('_SESSION
                                INSERT INTO rcAssignedCar
                                SELECTFROM 'x'[RentalCas

                                (TO MAINTAIN -('_SESSION
                                (MAINTAINING -('_SESSION'[SESSION]
                                (MAINTAINING -('_SESSION'[SESSION]
                                (MAINTAINING -('_SESSION'[SESSION];session
                                (MAINTAINING -('_SESSION'[SESSION];sessionReturn
                                (MAINTAINING -('_SESSION'[SESSION];sessionReturned
                                (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \
                                (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \
                                (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \
                                (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar) \
                                INSERT INTO Isn{dety=Car}
                                SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar /

                                (TO MAINTAIN -((sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar
                                ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((sessionReturnedCar~;'_
                                THEN INSERT INTO rcAssignedCar[RentalCase*Car]
                                SELECTFROM 'b'[RentalCase]*'a'[Car]

                                (TO MAINTAIN -((sessionReturnedCar~;'_SESSION'[SESSION]
                                PICK a,b FROM rcAssignedCar;((sessionReturnedCar~;'_SESSION
                                THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
                                THEN ALL of INSERT INTO rentalHasBeenSta
                                SELECTFROM 'a'[RentalCase]*

                                (TO MAINTAIN -((sessionReturr
                                DELETE FROM rentalHasBeenEnd
                                SELECTFROM 'a'[RentalCase]*

                                (TO MAINTAIN -((sessionReturr

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        (MAINTAINING -(sessionReturnedCar~;
PICK a,b FROM (rentalHasBeenStarted~ /\
THEN INSERT INTO rcAssignedCar[RentalCase*
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(sessionReturnedCar~
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[S
NEW x:RentalCase;
        ALL of ALL of INSERT INTO rentalHasBeenStarted
        SELECTFROM 'a'[RentalCase]*'b'

        (TO MAINTAIN -(sessionReturned
DELETE FROM rentalHasBeenEnded[
        SELECTFROM 'a'[RentalCase]*'b'

        (TO MAINTAIN -(sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_S
INSERT INTO rcAssignedCar[RentalCase*C
        SELECTFROM 'x'[RentalCase]*'a'[Rental

        (TO MAINTAIN -(sessionReturnedCar~;'_
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[S
        (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:RentalCase;
        ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*((sessionReturnedCar~;'_SESSI

        (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];s
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Ren
        THEN ALL of INSERT INTO rentalHasBeenStarted
        SELECTFROM 'a'[RentalCase]*'b'

        (TO MAINTAIN -(sessionReturned
DELETE FROM rentalHasBeenEnded[
        SELECTFROM 'a'[RentalCase]*'b'

        (TO MAINTAIN -(sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_S
PICK a,b FROM (rentalHasBeenStarted~ /\ -re
THEN INSERT INTO rcAssignedCar[RentalCase*C
        SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -(sessionReturnedCar~;'_
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESS
NEW x:RentalCase;
        ALL of INSERT INTO rentalHasBeenStarted[RentalCar
        SELECTFROM 'x'[RentalCase]*((sessionRetu

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        (TO MAINTAIN -(sessionReturnedCar~; '_SESSION' [SESSION];
        DELETE FROM rentalHasBeenEnded[RentalCase*Car]
        SELECTFROM 'x' [RentalCase]*((sessionReturnedCar~; '_SESSION' [SESSION];

        (TO MAINTAIN -(sessionReturnedCar~; '_SESSION' [SESSION];
        INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x' [RentalCase]*'x' [RentalCase];

        (TO MAINTAIN -(sessionReturnedCar~; '_SESSION' [SESSION];
        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION];
        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION];
        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION];
        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION];
        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION];
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION' [SESSION];
        THEN INSERT INTO sessionReturnedCar[SESSION*Car]
        SELECTFROM 'a' [SESSION]*'b' [Car]

        (TO MAINTAIN -(('_SESSION' [SESSION];
        PICK a,b FROM sessionReturnedCar~; ('_SESSION' [SESSION];
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Car];
        THEN INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'b' [RentalCase]*'a' [Car];

        (TO MAINTAIN -(('_SESSION' [SESSION];
        PICK a,b FROM rcAssignedCar; ('a' [Car]*'b' [Car];
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Car];
        THEN ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'b' [RentalCase]*'a' [Car];

        (TO MAINTAIN -(('_SESSION' [SESSION];
        DELETE FROM rcAssignedCar[RentalCase*Car]
        SELECTFROM 'b' [RentalCase]*'a' [Car];

        (TO MAINTAIN -(('_SESSION' [SESSION];
        (MAINTAINING -(('_SESSION' [SESSION];
        PICK a,b FROM (rentalHasBeenEnded[RentalCase*Car]
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalHasBeenEnded[RentalCase*Car]
        THEN

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NEW x:RentalCase;
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ONE OF ONE NONEMPTY
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NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*C
SELECTFROM 'x'[RentalCase]*'b'[Car]*'
(TO MAINTAIN -('_SESSION' [SESSION];se
ONE OF ONE NONEMPTY ALTERNATIVE OF PIC
THEN ALL of INSERT INTO :

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PICK a,b FROM (rentalHas
THEN ONE OF ONE NONEMPTY
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NEW x:RentalCase;
ALL of ALL of INSERT INTO ren
SELECTFROM 'x'

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DELETE FROM ren
SELECTFROM 'x'

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ONE OF ONE NONEMPTY AL
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NEW x:YesNoAnsw
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NEW x:RentalCase;
ALL of ALL of INSERT INTO ren
SELECTFROM 'a'

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DELETE FROM ren
SELECTFROM 'a'

(TO MAINTAIN -
(MAINTAINING -('_SESSI
ONE OF ONE NONEMPTY AL
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NEW x:YesNoAnsw
ALL of INSERT
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(MAINTAINING -('_SESSION' [SESSION';ses
(MAINTAINING -('_SESSION' [SESSION];sessionReturned
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x' [RentalCase]*((I[Car] /\ -

(TO MAINTAIN -('_SESSION' [SESSION];sessi
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a


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THEN ALL of INSERT INTO ren
SELECTFROM 'a'

      (TO MAINTAIN -
DELETE FROM ren
SELECTFROM 'a'

      (TO MAINTAIN -
      (MAINTAINING -('_SESSI
PICK a,b FROM (rentalHasBee
THEN ONE OF ONE NONEMPTY AL
      THEN INS
      SE

      (TO
PICK a,b
THEN ONE

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      (MAINTAINING -
NEW x:YesNoAnsw
      ALL of INSERT
      SELEC

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ONE OF

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(MAINT.
(MAINTAINING -(
(MAINTAINING -(('_SESSION
(MAINTAINING -('_SESSION'[SESSION]
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeen
SELECTFROM 'x'[RentalCas

(TO MAINTAIN -('_SESSION
DELETE FROM rentalHasBeen
SELECTFROM 'x'[RentalCas

(TO MAINTAIN -('_SESSION
ONE OF ONE NONEMPTY ALTER
THEN INSERT
SELEC

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PICK a,b FR
THEN ONE OF

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NEW x:YesNoAnswer;
ALL of INSERT IN
SELECTFR

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ONE NONEM
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(MAINTAIN
(MAINTAINING -('

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NEW x:YesNoAnswer;
  ALL of INSERT INTO rentalIsPa
    SELECTFROM 'a'[RentalIsPa]

    (TO MAINTAIN -(sessionReturnedCar~;
    ONE OF ONE NONEMPTY
    THEN

    PICK a
    THEN

    (MAINTAINING
    NEW x:YesNoAnswer;
    ALL of BLO
    (CA
    BLO
    (CA
    (MAINTAINING
    (MAINTAINING
    (MAINTAINING -(sessionReturnedCar~;
    (MAINTAINING -(sessionReturnedCar~;
    (MAINTAINING -(sessionReturnedCar~;
    (MAINTAINING -(sessionReturnedCar~;'_SESSION'[S
NEW x:RentalCase;
  ALL of ALL of INSERT INTO rentalHasBeenStarted
    SELECTFROM 'a'[RentalCase]*'b'

    (TO MAINTAIN -(sessionReturnedCar~;
    DELETE FROM rentalHasBeenEnded[
    SELECTFROM 'a'[RentalCase]*'b'

    (TO MAINTAIN -(sessionReturnedCar~;
    (MAINTAINING -(sessionReturnedCar~;'_SESSION'[S
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPa
    THEN INSERT INTO rentalIsPa
    SELECTFROM 'a'[RentalIsPa]

    (TO MAINTAIN -(sessionReturnedCar~;
    PICK a,b FROM rentalIsPa
    THEN ONE OF ONE NONEMPTY
    THEN

    PICK a
    THEN

    (MAINTAINING
    NEW x:YesNoAnswer;
    ALL of BLO
    (CA

```

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BLOC
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(MAINTAINING -(sess
(MAINTAINING -(sessionReturnedC
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPa
SELECTFROM 'x'[Rental

(TO MAINTAIN -(session
ONE OF ONE NONEMPTY AL
THEN BLOC
(CA
PICK a,b
THEN BLOC
(CA
(MAINTAINING -(
NEW x:YesNoAnsw
ALL of BLOCK
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BLOCK
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(MAINTAINING -(session
(MAINTAINING -(sessionReturne
(MAINTAINING -(sessionReturnedC
(MAINTAINING -(sessionReturnedCar~;'_S
(MAINTAINING -(sessionReturnedCar~;'_SESSION'
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[S
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
(MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionRetu
NEW x:RentalCase;
ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*((I[Car] /\ -(carAvailableAt;

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];s
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Ren
THEN ALL of INSERT INTO rentalHasBeenStarte
SELECTFROM 'a'[RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
DELETE FROM rentalHasBeenEnded[
SELECTFROM 'a'[RentalCase]*'b'

(TO MAINTAIN -(sessionReturned
(MAINTAINING -(sessionReturnedCar~;'_S
PICK a,b FROM (rentalHasBeenStarted~ /\ -re
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK

```



```

(MAINAINING -( '_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC;rcB
(MAINAINING -( '_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC;rcB
(MAINAINING -( (I[RentalCase] /\ rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchR
(MAINAINING -( (I[RentalCase] /\ rcBranchRequestedQ;'Yes' [YesNoAnswer];rcBranchR
(MAINAINING -( '_SESSION' [SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[
(MAINAINING -( '_SESSION' [SESSION];sessionReturnedCar) \ / sessionReturnedCar;(I[
(MAINAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA
(MAINAINING -( '_SESSION' [SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailableA

```

----- Derivation ----->

```

ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[SESSION] /\ -(sessionToday
      THEN INSERT INTO sessionToday[SESSION*Date]
        SELECTFROM 'a' [SESSION]*'b' [Date]

      (TO MAINTAIN -I[SESSION] \ / sessionToday;sessionToday~ FROM
      PICK a,b FROM sessionToday~;(I[SESSION] /\ -(sessionToday;sessio
      THEN INSERT INTO sessionToday[SESSION*Date]
        SELECTFROM 'b' [SESSION]*'a' [Date]

      (TO MAINTAIN -I[SESSION] \ / sessionToday;sessionToday~ FROM
(MAINAINING -I[SESSION] \ / sessionToday;sessionToday~ FROM Initialize
NEW x:Date;
      INSERT INTO sessionToday[SESSION*Date]
        SELECTFROM (I[SESSION] /\ -(sessionToday;sessionToday~))*'x' [Date]

      (TO MAINTAIN -I[SESSION] \ / sessionToday;sessionToday~ FROM Initiali
      (MAINAINING -I[SESSION] \ / sessionToday;sessionToday~ FROM Initialize
(MAINAINING -I[SESSION] \ / sessionToday;sessionToday~ FROM Initialize today's
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ( '_SESSION' [SESSION];sessionN
      THEN INSERT INTO sessionNewUserRC[SESSION*RentalCase]
        SELECTFROM 'a' [SESSION]*'b' [RentalCase]

      (TO MAINTAIN -( '_SESSION' [SESSION];sessionNewUserRC) \ / se
      PICK a,b FROM sessionNewUserRC~;(' _SESSION' [SESSION];sessionNewU
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Renta
        THEN INSERT INTO rcUserRequestedQ[RentalCase*
          SELECTFROM 'a' [RentalCase]*'b' [YesNoAns

      (TO MAINTAIN -( '_SESSION' [SESSION];sess
      PICK a,b FROM rcUserRequestedQ~;('a' [RentalCa
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
        THEN BLOCK
          (CANNOT CHANGE 'Yes' [
          PICK a,b FROM 'Yes' [YesNoA
          THEN BLOCK
          (CANNOT CHANGE V[YesN
(MAINAINING -( '_SESSION' [SESSION

```



```

NEW x:YesNoAnswer;
ALL of BLOCK
    (CANNOT CHANGE 'Yes' [Yes
    BLOCK
    (CANNOT CHANGE V [YesNoAn
    (MAINTAINING -(' _SESSION' [SESSI
    (MAINTAINING -(' _SESSION' [SESSION
    (MAINTAINING -(' _SESSION' [SESSION];sessi
    (MAINTAINING -(' _SESSION' [SESSION];sessionNewUserRC)
NEW x:YesNoAnswer;
    ALL of INSERT INTO rcUserRequestedQ[RentalCase*Yes
        SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

    (TO MAINTAIN -(' _SESSION' [SESSION];session
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN BLOCK
        (CANNOT CHANGE 'Yes' [Yes
        PICK a,b FROM 'Yes' [YesNoAnsw
        THEN BLOCK
        (CANNOT CHANGE V [YesNoAn
    (MAINTAINING -(' _SESSION' [SESSION];s
NEW x:YesNoAnswer;
    ALL of BLOCK
        (CANNOT CHANGE 'Yes' [YesNoA
        BLOCK
        (CANNOT CHANGE V [YesNoAnsw
        (MAINTAINING -(' _SESSION' [SESSION]
        (MAINTAINING -(' _SESSION' [SESSION];s
        (MAINTAINING -(' _SESSION' [SESSION];sessionN
        (MAINTAINING -(' _SESSION' [SESSION];sessionNewUserR
        (MAINTAINING -(' _SESSION' [SESSION];sessionNewUserRC)
    (MAINTAINING -(' _SESSION' [SESSION];sessionNewUserRC) \/\ ses
    (MAINTAINING -(' _SESSION' [SESSION];sessionNewUserRC) \/\ sessionNewUserR
NEW x:RentalCase;
    ALL of INSERT INTO sessionNewUserRC[SESSION*RentalCase]
        SELECTFROM (' _SESSION' [SESSION];sessionNewUserRC /\ - (session

    (TO MAINTAIN -(' _SESSION' [SESSION];sessionNewUserRC) \/\ sessi
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [RentalCa
    THEN INSERT INTO rcUserRequestedQ[RentalCase*Yes
        SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer

    (TO MAINTAIN -(' _SESSION' [SESSION];session
    PICK a,b FROM rcUserRequestedQ~;('x' [RentalCase]
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN BLOCK
        (CANNOT CHANGE 'Yes' [Yes
        PICK a,b FROM 'Yes' [YesNoAnsw
        THEN BLOCK
        (CANNOT CHANGE V [YesNoAn

```

```

(MAINAINING -(' _SESSION' [SESSION];s
NEW x:YesNoAnswer;
    ALL of BLOCK
        (CANNOT CHANGE 'Yes' [YesNoA
        BLOCK
        (CANNOT CHANGE V[YesNoAnsw
        (MAINAINING -(' _SESSION' [SESSION]
        (MAINAINING -(' _SESSION' [SESSION];s
        (MAINAINING -(' _SESSION' [SESSION];sessionN
(MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC) \ /
NEW x:YesNoAnswer;
    ALL of INSERT INTO rcUserRequestedQ[RentalCase*YesNoA
        SELECTFROM 'x' [RentalCase]*(' _SESSION' [SESSIO

(TO MAINTAIN -(' _SESSION' [SESSION];sessionNew
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'
    THEN BLOCK
        (CANNOT CHANGE 'Yes' [YesNoAnswer]
        PICK a,b FROM 'Yes' [YesNoAnswer];('x' [Y
    THEN BLOCK
        (CANNOT CHANGE V[YesNoAnswer*Renta
        (MAINAINING -(' _SESSION' [SESSION];sessionNewU
        (MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC)
        (MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC) \ /
        (MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC) \ / sessio
        (MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC) \ / sessionNewUse
        (MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC) \ / sessionNewUserR
(MAINAINING -(' _SESSION' [SESSION];sessionNewUserRC) \ / sessionNewUserRC;rcUse
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionNewUserRC~;' _SESSION'
    THEN INSERT INTO rcUserRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer]

(TO MAINTAIN -(sessionNewUserRC~;' _SESSION' [SESSION];sessi
PICK a,b FROM rcUserRequestedQ~;(sessionNewUserRC~;' _SESSION' [SE
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [YesNo
    THEN BLOCK
        (CANNOT CHANGE 'Yes' [YesNoAnswer] FROM S
        PICK a,b FROM 'Yes' [YesNoAnswer];('a' [YesNoAn
    THEN BLOCK
        (CANNOT CHANGE V[YesNoAnswer*RentalCase]
        (MAINAINING -(sessionNewUserRC~;' _SESSION' [SESSION]
NEW x:YesNoAnswer;
    ALL of BLOCK
        (CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Subm
        BLOCK
        (CANNOT CHANGE V[YesNoAnswer*RentalCase] FR
        (MAINAINING -(sessionNewUserRC~;' _SESSION' [SESSIO
        (MAINAINING -(sessionNewUserRC~;' _SESSION' [SESSION]
        (MAINAINING -(sessionNewUserRC~;' _SESSION' [SESSION];sessio
(MAINAINING -(sessionNewUserRC~;' _SESSION' [SESSION];sessionNewUserRC)

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NEW x:YesNoAnswer;
  ALL of INSERT INTO rcUserRequestedQ[RentalCase*YesNoAnswer]
    SELECTFROM (sessionNewUserRC~;'_SESSION'[SESSION];sessionNewU

    (TO MAINTAIN -(sessionNewUserRC~;'_SESSION'[SESSION];sessionN
    ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[YesNoAnswer]*(s
      THEN BLOCK
        (CANNOT CHANGE 'Yes'[YesNoAnswer] FROM Submit rent
        PICK a,b FROM 'Yes'[YesNoAnswer];('x'[YesNoAnswer]*(ses
      THEN BLOCK
        (CANNOT CHANGE V[YesNoAnswer*RentalCase] FROM Subm
    (MAINTAINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNe
    (MAINTAINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNewUserRC
    (MAINTAINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNewUserRC)
    (MAINTAINING -(sessionNewUserRC~;'_SESSION'[SESSION];sessionNewUserRC) \ / rcUs
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sessionN
      THEN INSERT INTO sessionNewBranchRC[SESSION*RentalCase]
        SELECTFROM 'a'[SESSION]*'b'[RentalCase]

      (TO MAINTAIN -('_SESSION'[SESSION];sessionNewBranchRC) \ /
      PICK a,b FROM sessionNewBranchRC~;'_SESSION'[SESSION];sessionNe
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rcBranchRequestedQ[RentalCas
          SELECTFROM 'a'[RentalCase]*'b'[YesNoAns

          (TO MAINTAIN -('_SESSION'[SESSION];sess
          PICK a,b FROM rcBranchRequestedQ~;'_SESSION'[SESSION];sess
          THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
            THEN BLOCK
              (CANNOT CHANGE 'Yes'[
              PICK a,b FROM 'Yes'[YesNoA
            THEN BLOCK
              (CANNOT CHANGE V[YesN
          (MAINTAINING -('_SESSION'[SESSION
          NEW x:YesNoAnswer;
            ALL of BLOCK
              (CANNOT CHANGE 'Yes'[Yes
              BLOCK
              (CANNOT CHANGE V[YesNoAn
          (MAINTAINING -('_SESSION'[SESSI
          (MAINTAINING -('_SESSION'[SESSION
          (MAINTAINING -('_SESSION'[SESSION];sessi
          (MAINTAINING -('_SESSION'[SESSION];sessionNewBranchR
          NEW x:YesNoAnswer;
            ALL of INSERT INTO rcBranchRequestedQ[RentalCase*Y
              SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

            (TO MAINTAIN -('_SESSION'[SESSION];session
            ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
              THEN BLOCK

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(CANNOT CHANGE 'Yes' [Yes
PICK a,b FROM 'Yes' [YesNoAnsw
THEN BLOCK
(CANNOT CHANGE V [YesNoAn
(MAINTEINING -(' _SESSION' [SESSION];s
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes' [YesNoA
BLOCK
(CANNOT CHANGE V [YesNoAnsw
(MAINTEINING -(' _SESSION' [SESSION]
(MAINTEINING -(' _SESSION' [SESSION];s
(MAINTEINING -(' _SESSION' [SESSION];sessionN
(MAINTEINING -(' _SESSION' [SESSION];sessionNewBranch
(MAINTEINING -(' _SESSION' [SESSION];sessionNewBranchRC) \ / s
(MAINTEINING -(' _SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBra
NEW x:RentalCase;
ALL of INSERT INTO sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM (' _SESSION' [SESSION];sessionNewBranchRC /\ -(sessi

(TO MAINTAIN -(' _SESSION' [SESSION];sessionNewBranchRC) \ / ses
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [RentalCa
THEN INSERT INTO rcBranchRequestedQ[RentalCase*Y
SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer

(TO MAINTAIN -(' _SESSION' [SESSION];session
PICK a,b FROM rcBranchRequestedQ~;('x' [RentalCas
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN BLOCK
(CANNOT CHANGE 'Yes' [Yes
PICK a,b FROM 'Yes' [YesNoAnsw
THEN BLOCK
(CANNOT CHANGE V [YesNoAn
(MAINTEINING -(' _SESSION' [SESSION];s
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHANGE 'Yes' [YesNoA
BLOCK
(CANNOT CHANGE V [YesNoAnsw
(MAINTEINING -(' _SESSION' [SESSION]
(MAINTEINING -(' _SESSION' [SESSION];s
(MAINTEINING -(' _SESSION' [SESSION];sessionN
(MAINTEINING -(' _SESSION' [SESSION];sessionNewBranchRC)
NEW x:YesNoAnswer;
ALL of INSERT INTO rcBranchRequestedQ[RentalCase*YesN
SELECTFROM 'x' [RentalCase]*(' _SESSION' [SESSIO

(TO MAINTAIN -(' _SESSION' [SESSION];sessionNew
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'

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THEN BLOCK
    (CANNOT CHANGE 'Yes' [YesNoAnswer]
PICK a,b FROM 'Yes' [YesNoAnswer]; ('x' [Y
THEN BLOCK
    (CANNOT CHANGE V [YesNoAnswer*Renta
    (MAINTAINING -('_SESSION' [SESSION];sessionNewB
    (MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC
    (MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC)
    (MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC) \ / sess
    (MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewB
    (MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBra
    (MAINTAINING -('_SESSION' [SESSION];sessionNewBranchRC) \ / sessionNewBranchRC;r
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionNewBranchRC~;'_SESSIO
    THEN INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM 'a' [RentalCase]*'b' [YesNoAnswer]

    (TO MAINTAIN - (sessionNewBranchRC~;'_SESSION' [SESSION];ses
PICK a,b FROM rcBranchRequestedQ~;(sessionNewBranchRC~;'_SESSION
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [YesNo
    THEN BLOCK
        (CANNOT CHANGE 'Yes' [YesNoAnswer] FROM S
    PICK a,b FROM 'Yes' [YesNoAnswer]; ('a' [YesNoAn
    THEN BLOCK
        (CANNOT CHANGE V [YesNoAnswer*RentalCase]
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSIO
NEW x:YesNoAnswer;
    ALL of BLOCK
        (CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Subm
    BLOCK
        (CANNOT CHANGE V [YesNoAnswer*RentalCase] FR
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESS
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    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSION];sess
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranch
NEW x:YesNoAnswer;
    ALL of INSERT INTO rcBranchRequestedQ[RentalCase*YesNoAnswer]
        SELECTFROM (sessionNewBranchRC~;'_SESSION' [SESSION];sessionNe

    (TO MAINTAIN - (sessionNewBranchRC~;'_SESSION' [SESSION];sessio
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [YesNoAnswer]*(s
    THEN BLOCK
        (CANNOT CHANGE 'Yes' [YesNoAnswer] FROM Submit bran
    PICK a,b FROM 'Yes' [YesNoAnswer]; ('x' [YesNoAnswer]*(ses
    THEN BLOCK
        (CANNOT CHANGE V [YesNoAnswer*RentalCase] FROM Subm
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSION];session
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranch
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranch
    (MAINTAINING - (sessionNewBranchRC~;'_SESSION' [SESSION];sessionNewBranchRC) \ /
INSERT INTO contractedPickupBranch[RentalCase*Branch]

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SELECTFROM (I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchRe

(TO MAINTAIN -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranch
INSERT INTO Isn{dety=Branch}
SELECTFROM contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'Yes'

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rcBranchRequestedQ;'
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION'[SESSION];sessionR
THEN INSERT INTO sessionReturnedCar[SESSION*Car]
SELECTFROM 'a'[SESSION]*'b'[Car]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \
PICK a,b FROM sessionReturnedCar~;('_SESSION'[SESSION];sessionR
THEN ALL of INSERT INTO Isn{dety=Car}
SELECTFROM 'a'[Car]*'b'[Car]

(TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedC
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a
THEN INSERT INTO rcAssignedCar[RentalC
SELECTFROM 'b'[RentalCase]*'a'[C

(TO MAINTAIN -('_SESSION'[SESSIO
PICK a,b FROM rcAssignedCar;('a'[Car]*
THEN ONE OF ONE NONEMPTY ALTERNATIVE O
THEN ALL of INSERT
SELECT

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SELECT

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PICK a,b FROM (rent
THEN INSERT INTO rc
SELECTFROM 'a

(TO MAINTAIN
(MAINTAINING -('_SESSION'[
NEW x:RentalCase;
ALL of ALL of INSERT INT
SELECTFRO

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INSERT INTO rcAss

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SELECTFROM 'x'[R

      (TO MAINTAIN -(
      (MAINTAINING -(('_SESSION'
      (MAINTAINING -(('_SESSION'[
      (MAINTAINING -(('_SESSION'[SESSION
      (MAINTAINING -(('_SESSION'[SESSION];sessionRet
NEW x:RentalCase;
      ALL of INSERT INTO rcAssignedCar[RentalCase
      SELECTFROM 'x'[RentalCase]*'b'[Car]

      (TO MAINTAIN -(('_SESSION'[SESSION];
      ONE OF ONE NONEMPTY ALTERNATIVE OF P
      THEN ALL of INSERT INTO
      SELECTFROM

      (TO MAINTAIN
      DELETE FROM
      SELECTFROM

      (TO MAINTAIN
      (MAINTAINING -(('_
      PICK a,b FROM (rentalH
      THEN INSERT INTO rcAss
      SELECTFROM 'a'[R

      (TO MAINTAIN -(
      (MAINTAINING -(('_SESSION'[SES
NEW x:RentalCase;
      ALL of ALL of INSERT INTO r
      SELECTFROM '

      (TO MAINTAIN
      DELETE FROM r
      SELECTFROM '

      (TO MAINTAIN
      (MAINTAINING -(('_SES
      INSERT INTO rcAssign
      SELECTFROM 'x'[Rent

      (TO MAINTAIN -(('_SE
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      (MAINTAINING -(('_SESSION'[SES
      (MAINTAINING -(('_SESSION'[SESSION];s
      (MAINTAINING -(('_SESSION'[SESSION];sessionR
      (MAINTAINING -(('_SESSION'[SESSION];sessionRet
      (MAINTAINING -(('_SESSION'[SESSION];sessionReturnedCa
      (MAINTAINING -(('_SESSION'[SESSION];sessionReturnedCar) \ / s
      (MAINTAINING -(('_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturn

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NEW x:Car;
  ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
    SELECTFROM ('_SESSION'[SESSION];sessionReturnedCar /\ -(sessi

    (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \ / ses
  INSERT INTO Isn{dety=Car}
    SELECTFROM 'x'[Car]*('_SESSION'[SESSION];sessionReturnedCar /

    (TO MAINTAIN -('_SESSION'[SESSION];sessionReturnedCar) \ / ses
  ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Car]*('_
    THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN -('_SESSION'[SESSION];session
    PICK a,b FROM rcAssignedCar;('x'[Car]*('_SESSION
    THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
      THEN ALL of INSERT INTO renta
        SELECTFROM 'a'[R

        (TO MAINTAIN -('
        DELETE FROM renta
        SELECTFROM 'a'[R

        (TO MAINTAIN -('
        (MAINTAINING -('_SESSION
        PICK a,b FROM (rentalHasBeenS
        THEN INSERT INTO rcAssignedCa
        SELECTFROM 'a'[RentalCa

        (TO MAINTAIN -('_SESSIO
        (MAINTAINING -('_SESSION'[SESSION];s
  NEW x:RentalCase;
    ALL of ALL of INSERT INTO rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -('_SE
      DELETE FROM rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -('_SE
      (MAINTAINING -('_SESSION'[S
    INSERT INTO rcAssignedCar[R
    SELECTFROM 'x'[RentalCase]

    (TO MAINTAIN -('_SESSION'[
    (MAINTAINING -('_SESSION'[SESSION]
    (MAINTAINING -('_SESSION'[SESSION];s
    (MAINTAINING -('_SESSION'[SESSION];sessionR
    (MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar)
  NEW x:RentalCase;

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ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'x'[RentalCase]*(sessionReturnedCar

      (TO MAINTAIN -( '_SESSION'[SESSION];sessionRet
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
      THEN ALL of INSERT INTO rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -( '_SE
DELETE FROM rentalHa
      SELECTFROM 'a'[Rent

      (TO MAINTAIN -( '_SE
      (MAINTAINING -( '_SESSION'[S
PICK a,b FROM (rentalHasBeenStar
      THEN INSERT INTO rcAssignedCar[R
      SELECTFROM 'a'[RentalCase]

      (TO MAINTAIN -( '_SESSION'[
      (MAINTAINING -( '_SESSION'[SESSION];sess
NEW x:RentalCase;
      ALL of INSERT INTO rentalHasBeenStart
      SELECTFROM 'x'[RentalCase]*'x

      (TO MAINTAIN -( '_SESSION'[SES
DELETE FROM rentalHasBeenEnded
      SELECTFROM 'x'[RentalCase]*'x

      (TO MAINTAIN -( '_SESSION'[SES
INSERT INTO rcAssignedCar[Rent
      SELECTFROM 'x'[RentalCase]*'x

      (TO MAINTAIN -( '_SESSION'[SES
      (MAINTAINING -( '_SESSION'[SESSION];se
      (MAINTAINING -( '_SESSION'[SESSION];sess
      (MAINTAINING -( '_SESSION'[SESSION];sessionRetu
      (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar
      (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sess
      (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionRetu
      (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturn
      (MAINTAINING -( '_SESSION'[SESSION];sessionReturnedCar) \ / sessionReturnedCar;
INSERT INTO Isn{dety=Car}
      SELECTFROM (sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar /\ -I[

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedCar) \ /
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((sessionReturnedCar~;'_SESSI
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

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        (TO MAINTAIN  -(sessionReturnedCar~; '_SESSION' [SESSION]; sess
PICK a,b FROM rcAssignedCar; ((sessionReturnedCar~; '_SESSION' [SES
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Renta
        THEN ALL of INSERT INTO rentalHasBeenStarted[
                SELECTFROM 'a' [RentalCase]*'b' [R

        (TO MAINTAIN  -(sessionReturnedCa
DELETE FROM rentalHasBeenEnded[Re
        SELECTFROM 'a' [RentalCase]*'b' [R

        (TO MAINTAIN  -(sessionReturnedCa
        (MAINTAINING -(sessionReturnedCar~; '_SES
PICK a,b FROM (rentalHasBeenStarted~ /\ -rent
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'a' [RentalCase]*'b' [Car]

        (TO MAINTAIN  -(sessionReturnedCar~; '_SE
(MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSIO
NEW x:RentalCase;
        ALL of ALL of INSERT INTO rentalHasBeenStarted[Ren
                SELECTFROM 'a' [RentalCase]*'b' [Car]

        (TO MAINTAIN  -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
        SELECTFROM 'a' [RentalCase]*'b' [Car]

        (TO MAINTAIN  -(sessionReturnedCar~;
        (MAINTAINING -(sessionReturnedCar~; '_SESSIO
INSERT INTO rcAssignedCar[RentalCase*Car]
        SELECTFROM 'x' [RentalCase]*'a' [RentalCase]

        (TO MAINTAIN  -(sessionReturnedCar~; '_SESSI
        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESS
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        (MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION]; sess
(MAINTAINING -(sessionReturnedCar~; '_SESSION' [SESSION]; sessionReturnedC
NEW x:RentalCase;
        ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
                SELECTFROM 'x' [RentalCase]*((sessionReturnedCar~; '_SESSION' [S

        (TO MAINTAIN  -(sessionReturnedCar~; '_SESSION' [SESSION]; sessio
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [RentalCa
        THEN ALL of INSERT INTO rentalHasBeenStarted[Ren
                SELECTFROM 'a' [RentalCase]*'b' [Rent

        (TO MAINTAIN  -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
        SELECTFROM 'a' [RentalCase]*'b' [Rent

        (TO MAINTAIN  -(sessionReturnedCar~;

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      (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION]);
      PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded)
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'a' [RentalCase]*'b' [Car]

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION]);
      (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION]);
      NEW x:RentalCase;
      ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM 'x' [RentalCase]*((sessionReturnedCar~;'_SESSION' [SESSION]);

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION]);
      DELETE FROM rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM 'x' [RentalCase]*((sessionReturnedCar~;'_SESSION' [SESSION]);

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION]);
      INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'x' [RentalCase]*'x' [RentalCase]*((sessionReturnedCar~;'_SESSION' [SESSION]);

      (TO MAINTAIN -(sessionReturnedCar~;'_SESSION' [SESSION]);
      (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];
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      (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      (MAINTAINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      THEN INSERT INTO sessionReturnedCar[SESSION*Car]
      SELECTFROM 'a' [SESSION]*'b' [Car]

      (TO MAINTAIN -(('_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      PICK a,b FROM sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Car]*'b' [Car]
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b' [RentalCase]*'a' [Car]

      (TO MAINTAIN -(('_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      PICK a,b FROM rcAssignedCar~;'_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Car]*'b' [Car]
      THEN ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'a' [RentalCase]*'b' [Car]

      (TO MAINTAIN -(('_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      DELETE FROM rcAssignedCar[RentalCase*Car]
      SELECTFROM 'a' [RentalCase]*'b' [Car]

      (TO MAINTAIN -(('_SESSION' [SESSION];sessionReturnedCar~;'_SESSION' [SESSION];
      PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded)
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Car]*'b' [Car]
      THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b' [RentalCase]*'a' [Car]

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NEW x:RentalCase;
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    SELECTFROM 'x'[RentalCase]*'b'[Car]*'a'[Ca

  (TO MAINTAIN -( '_SESSION'[SESSION];session
  ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN ALL of INSERT INTO renta
      SELECTFROM 'a'[R

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      (MAINTAINING -('_SESSION' [SESSION];sessionReturned
      (MAINTAINING -('_SESSION' [SESSION];sessionReturnedCa
      (MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;I[Ca
      (MAINTAINING -('_SESSION' [SESSION];sessionReturnedCar;I[Car] /\ - (carA
NEW x:Car;
  ALL of INSERT INTO sessionReturnedCar[SESSION*Car]
    SELECTFROM ('_SESSION' [SESSION];sessionReturnedCar;I[Car] /\

  (TO MAINTAIN -('_SESSION' [SESSION];sessionReturnedCar;I[Car]
  ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Car]*(''_SESSION'
    THEN INSERT INTO rcAssignedCar[RentalCase*Car]
      SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN -('_SESSION' [SESSION];session
      PICK a,b FROM rcAssignedCar;('x'[Car]*(''_SESSION'
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
        THEN ALL of INSERT INTO renta
          SELECTFROM 'a'[R

      (TO MAINTAIN -('
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NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHa
SELECTFROM 'a' [Rent

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DELETE FROM rentalHa
SELECTFROM 'a' [Rent

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(MAINTEINING -('_SESSION' [SESSION];sessionReturnedCar;(
NEW x:RentalCase;
  ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'x'[RentalCase]*((I[Car] /\ -(carA

(TO MAINTAIN -('_SESSION' [SESSION];sessionRet
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FR
  THEN ALL of INSERT INTO rentalHa
    SELECTFROM 'a'[Rent

(TO MAINTAIN -('_SE
DELETE FROM rentalHa
SELECTFROM 'a'[Rent

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PICK a,b FROM (rentalHasBeenStar
THEN ONE OF ONE NONEMPTY ALTERNA
  THEN INSERT I
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NEW x:YesNoAnswer;
  ALL of INSERT INTO
    SELECTFROM

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(MAINTAINING -('_SESSION' [SESSION]);session
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStart
SELECTFROM 'x' [RentalCase]*'x'

(TO MAINTAIN -('_SESSION' [SESSION]
DELETE FROM rentalHasBeenEnded
SELECTFROM 'x' [RentalCase]*'x'

(TO MAINTAIN -('_SESSION' [SESSION]
ONE OF ONE NONEMPTY ALTERNATIVE
THEN INSERT INTO
SELECTFROM

(TO MAINTAIN
PICK a,b FROM rentalHasBeenEnd
THEN ONE OF ONE

(MAINTAINING -('_SESSION' [SESSION];session
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalHasBeenEnd
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SELECTFROM 'x

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(MAINTAINING -('_SESSION'[SESSION];sessionReturnedCar;(I[Car] /\ -(carAvailabl
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (sessionReturnedCar~;'_SESSIO
THEN INSERT INTO rcAssignedCar[RentalCase*Car]
SELECTFROM 'b'[RentalCase]*'a'[Car]

(TO MAINTAIN - (sessionReturnedCar~;'_SESSION'[SESSION];ses
PICK a,b FROM rcAssignedCar;(sessionReturnedCar~;'_SESSION'[SESS
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN ALL of INSERT INTO rentalHasBeenStarted[
SELECTFROM 'a'[RentalCase]*'b'[R

(TO MAINTAIN - (sessionReturnedCa
DELETE FROM rentalHasBeenEnded[Re
SELECTFROM 'a'[RentalCase]*'b'[R

(TO MAINTAIN - (sessionReturnedCa
(MAINTAINING - (sessionReturnedCar~;'_SES
PICK a,b FROM (rentalHasBeenStarted~ /\ -rent
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO rentalIsP
SELECTFROM 'a'[Renta

(TO MAINTAIN - (sessi
PICK a,b FROM rentalIsPaid
THEN ONE OF ONE NONEMPTY A
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NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaid
SELECTFROM 'a'[RentalCa

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ONE OF ONE NONEMPTY ALTE
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NEW x:YesNoAnswer
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(MAINAINING -(sessionReturnedCar
(MAINAINING -(sessionReturnedCar~;'_SES
(MAINAINING -(sessionReturnedCar~;'_SESSION'[SESSIO
NEW x:RentalCase;
ALL of ALL of INSERT INTO rentalHasBeenStarted[Ren
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[Renta
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -(sessionReturnedCar~;
(MAINAINING -(sessionReturnedCar~;'_SESSIO
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO rentalIsPaid
SELECTFROM 'a'[RentalCa

(TO MAINTAIN -(sessionR

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PICK a,b FROM rentalIsPaidQ~;
THEN ONE OF ONE NONEMPTY ALTE
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    (MAINTAINING -(sessionReturnedCar~;'
    NEW x:YesNoAnswer;
    ALL of INSERT INTO rentalIsPaidQ[R
    SELECTFROM 'x'[RentalCase]

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    ONE OF ONE NONEMPTY ALTERNA
    THEN BLOCK
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    PICK a,b FROM
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    (MAINTAINING -(sessi
    NEW x:YesNoAnswer;
    ALL of BLOCK
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    BLOCK
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    (MAINTAINING -(sessionReturnedCar~
    (MAINTAINING -(sessionReturnedCar~;'
    (MAINTAINING -(sessionReturnedCar~;'_SESSION
    (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESS
    (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION]
    (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sess
    (MAINTAINING -(sessionReturnedCar~;'_SESSION'[SESSION];sessionReturnedC
    NEW x:RentalCase;
    ALL of INSERT INTO rcAssignedCar[RentalCase*Car]
    SELECTFROM 'x'[RentalCase]*((I[Car] /\ -(carAvailableAt;carAv

    (TO MAINTAIN -(sessionReturnedCar~;'_SESSION'[SESSION];sessio
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[RentalCa

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```

THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;
DELETE FROM rentalHasBeenEnded[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded~
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO rentalIsPaidQ[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;
PICK a,b FROM rentalIsPaidQ[RentalCase];
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
PICK a,b FROM rentalIsPaidQ[RentalCase];
THEN BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ[RentalCase]
SELECTFROM 'a' [RentalCase]*'b' [RentalCase]

(TO MAINTAIN -(sessionReturnedCar~;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM rentalIsPaidQ[RentalCase]
THEN BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
PICK a,b FROM rentalIsPaidQ[RentalCase];
THEN BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;
NEW x:YesNoAnswer;
ALL of BLOCK
(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
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(CANNOT CHOOSE a,b FROM rentalIsPaidQ[RentalCase]
(MAINTAINING -(sessionReturnedCar~;'_SESSIONID~;

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(MAINTEINING -(sessi
(MAINTEINING -(sessionRetur
(MAINTEINING -(sessionReturnedCar~
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(MAINTEINING -(sessionReturnedCar~;'_SESSION
(MAINTEINING -(sessionReturnedCar~;'_SESSION' [SESSION];
NEW x:RentalCase;
ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Re
SELECTFROM 'x' [RentalCase]*(sessionReturnedCa

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
DELETE FROM rentalHasBeenEnded[RentalCase*Rent
SELECTFROM 'x' [RentalCase]*(sessionReturnedCa

(TO MAINTAIN -(sessionReturnedCar~;'_SESSION'
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FR
THEN INSERT INTO rentalIsPaidQ[R
SELECTFROM 'a' [RentalCase]

(TO MAINTAIN -(sessionRetu
PICK a,b FROM rentalIsPaidQ~;'x
THEN ONE OF ONE NONEMPTY ALTERNA
THEN BLOCK
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PICK a,b FROM
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(MAINTEINING -(sessionReturnedCar~;'_SE
NEW x:YesNoAnswer;
ALL of INSERT INTO rentalIsPaidQ[Rent
SELECTFROM 'x' [RentalCase]*'x

(TO MAINTAIN -(sessionReturne
ONE NONEMPTY ALTERNATIVE OF PI
THEN BLOCK
(CANNOT CHANGE 'Ye
PICK a,b FROM 'Yes'[Yes
THEN BLOCK
(CANNOT CHANGE V[Y
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(MAINTEINING -(sessionReturnedCar~;'_

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(MAINTEINING -(sessionReturnedCar~;'_SESSION' [SESSION];
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(MAINTEINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturne
(MAINTEINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedC
(MAINTEINING -(sessionReturnedCar~;'_SESSION' [SESSION];sessionReturnedCar; (I[C
(MAINTEINING -I[SESSION] \/ sessionToday;sessionToday~ FROM Initialize today's date)
(MAINTEINING -( '_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReques
(MAINTEINING -( '_SESSION' [SESSION];sessionNewUserRC) \/ sessionNewUserRC;rcUserReques
(MAINTEINING -( '_SESSION' [SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranch
(MAINTEINING -( '_SESSION' [SESSION];sessionNewBranchRC) \/ sessionNewBranchRC;rcBranch
(MAINTEINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(MAINTEINING -((I[RentalCase] /\ rcBranchRequestedQ;'Yes'[YesNoAnswer];rcBranchReques
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar; (I[Car]
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar) \/ sessionReturnedCar; (I[Car]
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar; (I[Car] /\ -(carAvailableAt;car
(MAINTEINING -( '_SESSION' [SESSION];sessionReturnedCar; (I[Car] /\ -(carAvailableAt;car

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=SESSION} EXECUTE -- (ECA rule 164)
ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]
SELECTFROM (-I[SESSION] /\ sessionNewUserRC;sessionNewUserRC~);sessionNew

(TO MAINTAIN -(sessionNewUserRC;sessionNewUserRC~) \/ I[SESSION] FROM INJ
DELETE FROM sessionUser[SESSION*Person]
SELECTFROM Delta;V[SESSION*Person]

DELETE FROM sessionToday[SESSION*Date]
SELECTFROM Delta;V[SESSION*Date]

DELETE FROM sessionBranch[SESSION*Branch]
SELECTFROM Delta;V[SESSION*Branch]

DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM Delta;V[SESSION*RentalCase]

DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM Delta;V[SESSION*Car]

(MAINTEINING -(sessionNewUserRC;sessionNewUserRC~) \/ I[SESSION] FROM INJ session

```

----- Derivation ----->

```

ALL of DELETE FROM sessionNewUserRC[SESSION*RentalCase]

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```

SELECTFROM (-I[SESSION] /\ sessionNewUserRC;sessionNewUserRC~);sessionNewUser

(TO MAINTAIN -(sessionNewUserRC;sessionNewUserRC~) \/ I[SESSION] FROM INJ ses
DELETE FROM sessionUser[SESSION*Person]
SELECTFROM Delta;V[SESSION*Person]

DELETE FROM sessionToday[SESSION*Date]
SELECTFROM Delta;V[SESSION*Date]

DELETE FROM sessionBranch[SESSION*Branch]
SELECTFROM Delta;V[SESSION*Branch]

DELETE FROM sessionNewBranchRC[SESSION*RentalCase]
SELECTFROM Delta;V[SESSION*RentalCase]

DELETE FROM sessionReturnedCar[SESSION*Car]
SELECTFROM Delta;V[SESSION*Car]

(MAINTAINING -(sessionNewUserRC;sessionNewUserRC~) \/ I[SESSION] FROM INJ sessionNewU

<-----End Derivation --

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Glossary

Amount a sum of money, expressed in 'Euro'.. 6

Branch an office of a car rental company at a specific location.. 5

Brand the brand of a car.. 6

CarRentalCompany a company whose business is renting cars.. 5

CarType the brand and model of a car.. 6

DrivingLicense the identification number of a (valid) driving license.. 11

Location a city (at which a branch office is located).. 6

Model the model of a car.. 6

RentalCase an information object that contains all information about a rental, including contractual items, rental items, billing items etc.. 6

YesNoAnswer the answer to a question that must be 'Yes' or 'No'.. 13