

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 ' to refer to a specific slide in the DEMO-3 document mentioned above. In this notation, is the slide number that can be found at the bottom of the slide. We use 'Slide , ' to refer to slides and . We use the notation 'P:', to refer to a specific sentence in the EU-Rent description of slide 3. In this notation, identifies the paragraph number, and 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 'P:-' is used to refer to sentences through of paragraph

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 12:04:22, using Ampersand v3.0.2.1356, build time: 31-May-14 17:40:25 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.

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 1: 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 2: 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 3: 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 4: 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 5: 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 6: 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 7: 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 8: 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 9: 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 10: 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 11: 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.

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 12: The property 'Rental has started' is a property that every rental contract has for which the associated rental has 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.

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

Agreement 13: 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 ended. Other reasons include that from the time of the start of a rental, payment is due, and the rented car is no longer available for rent. *Slide 4, P4:2*

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 14: The property 'Rental has ended' is a property that every rental contract has for which the associated rental has 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 15: 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 16: 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*

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

2.2 Rental Contracts

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 19: 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 20: 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 21: 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 22: 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, *P3.2*
allowing amongst others that his driving license is checked.

Agreement 23: 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 *P3.3*
number of such a license will be registered. Registration must imply that the
license is valid.

Agreement 24: 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 *P3.3*
be checked for validity. If it is valid, the license number must be registered.

Agreement 25: Drivers must have a valid driving license.

2.3 Handling Rental Requests

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

Agreement 26: The rental has been promised

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

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

2.4 Issuing Rental Cars

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

The event where a rental starts is important for many reasons, a major one being that from that moment onward, payment is due. Therefore, for every rental it must be precisely known when this point in time occurs.

Starting a rental requires that the car is being picked up and the renter/driver has stated that he will return the car in time. Such actions are manual and therefore outside the scope of the system. However, before a renter/driver can pick up the car, the branch needs to decide which car it will issue and that the handover of keys has taken place. Such events can be registered in the system, and these events will then define the administrative start of the rental. *Slide 4-5, 18*

Agreement 30: A rental starts when the contract has been completely filled in, the responsibility for a car has been transferred from the pick-up branch to the renter, 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 31: Rentals may only be promised if a car of the type specified in the contract is available at the pick-up branch.

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

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

Agreement 33: 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

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 35: 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 36: 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 37: 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 38: Payments for rental contracts need to be accepted (or declined).

The event where a rental ends is important. Therefore, for every rental it must be precisely known when this point in time occurs.

Agreement 40: The car that is dropped off must be the one that has been issued.

2.6 Rental Payment

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

Agreement 41:

Agreement 42: Payment for a rental may only be accepted if the total amount of the rental charge is known.

2.7 Rental Billing

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

Agreement 43:

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

Agreement 44: 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 45:

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

Agreement 46: 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 47: 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 48: 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 49: 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 50: 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 51: 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 52: 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 53: 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: the basic rental charge, the penalty charge when the car is returned after the contracted drop-off date, and a penalty charge in case the car is dropped off at a different branch than contractually agreed. *P4:2-5*

2.8 Enforcing maximum rental duration

2.9 Compute total rental charge

2.10 Compute number of regular days (period)

**2.11 Compute tarified (regular or excess)
charge**

2.12 Compute number of excess days (period)

2.13 Distance computations

Agreement 68: For all combinations of (different) branches, the distance between them is known.

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
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	×

Concepts Branch, CarRentalCompany, Location, Car, CarType, Brand, Model, Amount, MaxRentalDuration, Date, RentalCase, Person, DrivingLicense, YesNo, Integer, DistanceBetweenLocations, CompRentalCharge, DateDifferencePlusOne, CompTariffedCharge, DateDifference, and Distance remain without a purpose.

The purpose of relations *maxRentalDuration*, *rcUserRequestedQ*, *rcBranchRequestedQ*, *rcMaxRentalDuration*, *dateIntervalCompTrigger*, *arg1*, *arg2*, *arg3*, *computedRentalCharge*, *earliestDate*, *latestDate*, *computedRentalPeriod*, *ctcNrOfDays*, *ctcDailyAmount*, *computedTariffedCharge*, *firstDate*, *lastDate*, *computedNrOfExcessDays*, *distbranch*, and *distance* is not documented.

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

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

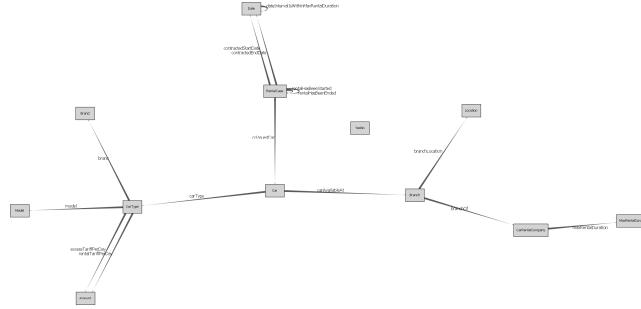


Figure 3.1: Concept diagram of the rules in EU-RentDiagnosisConceptualDiagram

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

On line numbers 210 and 228 of file `.\EURent Ontology.adl` and on line number 144 of file `.\EURent Computations.adl` rules are defined without documenting their purpose. On line numbers 57, 183, 194, and 286 of file `.\EURent Ontology.adl` rules are defined, the meaning of which is documented by means of computer generated language. On line number 132 of file `.\EURent Ontology.adl` and on line numbers 9, 24, 28, 44, 57, 61, 71, 83, 87, 95, 104, 120, and 130 of file `.\EURent Computations.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.

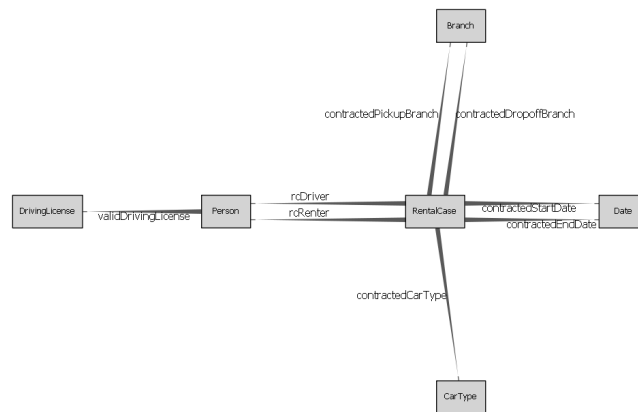


Figure 3.2: Concept diagram of the rules in Rental Contracts

Theme	Relations	With reference	%	Rules	With reference
EU-Rent	10	7	70%	4	2
Rental Contracts	8	8	100%	1	1
Handling Rental Requests	3	1	33%	2	1
Issuing Rental Cars	3	1	33%	5	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
Entire context	53	25	47%	36	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	20 Rentable cars, Rented car type integrity, Keys must be handled
Dropoff Handling	Dropped-off car type integrity, UNI rcDroppedOffCar::RentalCase
Rental Payment	Rental payment amount is known
Rental Billing	UNI rentalPeriod::RentalCase*Integer, UNI rentalBasicCharge
Enforcing maximum rental duration	UNI rcMaxRentalDuration::RentalCase*MaxRentalDuration
Compute total rental charge	Uniqueness of rental charge computations, UNI arc1uCompD

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.

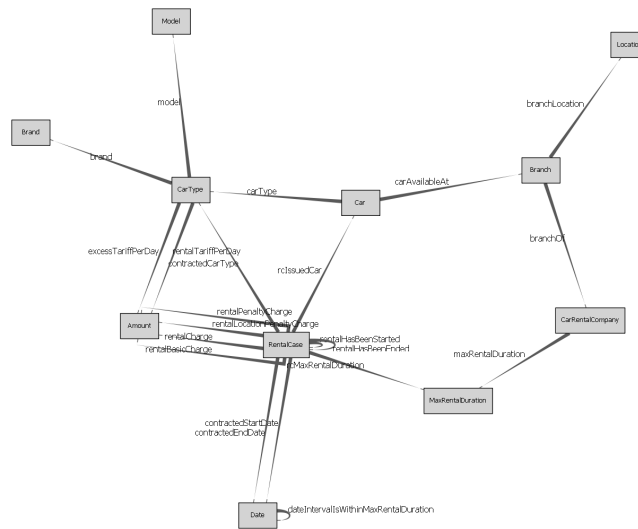
This document specifies automated support for the EU-Rent example as described in 'DEMO-3 Way of Working (version 3, 1 September 2009)' by Jan L.G. Dietz. The purpose of the effort that resulted in this document is to provide case material to support statements regarding the extent that the DEMO approach and the Ampersand approach interfere and/or support one another. We use the notation 'slide ' to refer to a specific slide in the DEMO-3 document mentioned above. In this notation, is the slide number that can be found at the bottom of the slide. We use 'Slide , ' to refer to slides and . We use the notation 'P:', to refer to a specific sentence in the EU-Rent description of slide 3. In this notation, identifies the paragraph number, and 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 'P:-' is used to refer to sentences through of paragraph

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 ?? shows a conceptual diagram of this pattern.



The definitions of concepts can be found in the glossary.

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

For this purpose, the following function has been defined

Every branch is part of a car rental company.

For this purpose, the following function has been defined

Every branch operates from a geographical location.

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

$$maxRentalDuration : CarRentalCompany \times MaxRentalDuration \quad (4.9)$$

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

$$dateIntervalIsWithinMaxRentalDuration : Date \times Date \quad (4.10)$$

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

$$rcIssuedCar : RentalCase \times Car \quad (4.11)$$

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

$$rentalHasBeenStarted : RentalCase \times RentalCase \quad (4.12)$$

The property 'Rental has started' is a property that every rental contract has for which the associated rental 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 from the time of the start of a rental, payment is due, and the rented car is no longer available for rent. Slide 4, P4:2

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

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

The property 'Rental has ended' is a property that every rental contract has for which the associated rental has ended.

In order to compute the correct charge for renting a car, the start date must P2:2

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.

For this purpose, the following univalent relation has been defined

$$\text{contractedStartDate} : \text{RentalCase} \times \text{Date} \quad (4.14)$$

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

$$\text{contractedEndDate} : \text{RentalCase} \times \text{Date} \quad (4.15)$$

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. 13:
 The system is limited to branches that are part of EU-Rent.
 This is formalized - using relations ?? - as

$$\text{branchOf} \vdash \text{branchOf};'t\text{EU} - \text{Rent}' \quad (4.16)$$

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. 14:
 All cars must either be rented, or in stock at one of the branches.

This is formalized - using relations ??, ??, ??, ?? - as

$$I_{\text{Car}} \vdash \text{rcIssuedCar}^\sim; (\text{rentalHasBeenStarted} \cap \overline{\text{rentalHasBeenEnded}}); \text{rcIssuedCar} \cup \text{carAvailableAt}; \text{carA} \quad (4.17)$$

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 ?? p. ??:
 This is formalized - using relations ??, ??, ?? - as

$$\text{contractedStartDate}^\sim; \text{contractedEndDate} \vdash \text{dateIntervalsWithinMaxRentalDuration} \quad (4.18)$$

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

This is formalized - using relations - as

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

4.2 Rental Contracts

Figure ?? shows a conceptual diagram of this pattern.

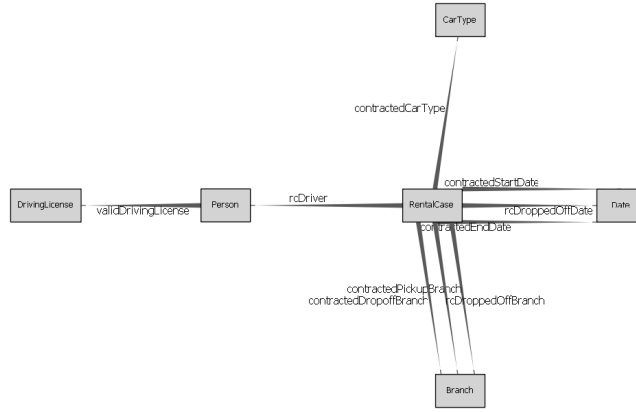


Figure 4.2: Concept diagram of Rental Contracts

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.

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

$$contractedStartDate : RentalCase \times Date \quad (4.20)$$

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.

For this purpose, the following relation has been defined

$$validDrivingLicense \quad : \quad Person \times DrivingLicense \quad (4.27)$$

A person may have a valid driving license.

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 2.1 p. 13: Drivers must have a valid driving license. This is formalized - using relations $??$, $??$ - as

$$rcDriver \vdash rcDriver; (I_{Person} \cap validDrivingLicense; validDrivingLicense^{\smile}) \quad (4.28)$$

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 ' to refer to a specific slide in the DEMO-3 document mentioned above. In this notation, is the slide number that can be found at the bottom of the slide. We use 'Slide , ' to refer to slides and . We use the notation 'P:', to refer to a specific sentence in the EU-Rent description of slide 3. In this notation, identifies the paragraph number, and 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 'P:-' is used to refer to sentences through of paragraph

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

5.1 Handling Rental Requests

Figure ?? shows the process model.

Figure 5.1: Process model of Handling Rental RequeststxtProcess

The conceptual diagram of figure ?? 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 of having 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 5.4, 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:

$$I_{\text{RentalCase}} \cap (\text{rcUserRequestedQ};'tYes'; \text{rcUserRequestedQ} \cup \text{rcBranchRequestedQ};'tYes'; \text{rcBranchRe} \quad (5.8)$$

This corresponds to ‘Promising rental requests’ (2.1 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 5.21, the following two relations are introduced.

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

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

We also use definitions ?? (*contractedPickupBranch*) and ?? (*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

Figure ?? shows the process model.

Figure 5.3: Process model of Issuing Rental CarstxtProcess

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

Figure 5.4: Basic sentences of Issuing Rental CarsConceptualProcess

Starting the rental The event where a rental starts is important for many reasons, a major one being that from that moment onward, payment is due. Therefore, for every rental it must be precisely known when this point in time occurs.

Starting a rental requires that the car is being picked up and the renter/driver has stated that he will return the car in time. Such actions are manual and therefore outside the scope of the system. However, before a renter/driver can pick up the car, the branch needs to decide which car it will issue and that the handover of keys has taken place. Such events can be registered in the system, and these events will then define the administrative start of the rental. Slide 4-5,18

We use definitions ?? (*contractedPickupBranch*), ?? (*contractedDropoffBranch*), ?? (*contractedStartDate*), ?? (*contractedEndDate*), ?? (*contractedCarType*)

), $??$ ($rentalHasBeenStarted$), $??$ ($rcKeysHandedOverQ$), and $??$ ($rcIssuedCar$).

Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap contractedStartDate; contractedStartDate \smile \cap contractedEndDate; contractedEndDate \smile \cap contractedPickupBranch \quad (5.12)$$

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 5.5, the following two relations are introduced.

$$carAvailableAt : Car \times Branch \quad (5.13)$$

$$carType : Car \rightarrow CarType \quad (5.14)$$

We also use definitions $??$ ($contractedPickupBranch$), $??$ ($contractedCarType$), and $??$ ($rentalHasBeenPromised$).

This means:

$$contractedPickupBranch \smile; (I_{RentalCase} \cap rentalHasBeenPromised); contractedCarType \vdash carAvailableAt \quad (5.15)$$

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.

Rented car type integrity 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.

We use definitions $??$ ($carType$), $??$ ($contractedCarType$), and $??$ ($rcIssuedCar$).

This means:

$$rcIssuedCar \vdash contractedCarType; carType \smile \quad (5.16)$$

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 $??$ ($rcDriver$) and $??$ ($rcKeysHandedOverQ$).

This means:

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

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 $??(rcDriver)$, $??(rcRenter)$, 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

Figure ?? shows the process model.

Figure 5.5: Process model of Dropoff HandlingtxtProcess

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

Figure 5.6: Basic sentences of Dropoff HandlingConceptualProcess

Ending the rental The event where a rental ends is important. Therefore, for every rental it must be precisely known when this point in time occurs.

We use definitions $??(rentalHasBeenStarted)$, $??(rentalHasBeenEnded)$, $??(rcDroppedOffCar)$, $??(rcDroppedOffDate)$, $??(rcDroppedOffBranch)$, and $??(rentalIsPaidQ)$.

Activities that are defined by this rule are finished when:

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

Dropped-off car type integrity We use definitions $??(rcIssuedCar)$ and $??(rcDroppedOffCar)$.

This means:

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

5.4 Rental Payment

Figure ?? shows the process model.

Figure 5.7: Process model of Rental PaymenttxtProcess

The conceptual diagram of figure ?? 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

Figure ?? shows the process model.

Figure 5.9: Process model of Rental BillingtxtProcess

The conceptual diagram of figure ?? 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 P4.3
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).
We use definitions ?? (*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 P4.3
period of the actual rental times the daily tariff that is valid for the type of car that was rented.
For every car type there is a particular rental tariff per day. P1:2b
In order to formalize this, a function rentalTariffPerDay is introduced (??):

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

We also use definitions $??$ ($carType$), $??$ ($rcIssuedCar$), $??$ ($rentalPeriod$), $??$ ($rentalBasicCharge$), $??$ ($ctcNrOfDays$), $??$ ($ctcDailyAmount$), and $??$ ($computedTariffedCharge$) to formalize requirement 2.1 (page 15):
Activities that are defined by this rule are finished when:

$$(rentalPeriod; ctcNrOfDays \sim \cap rcIssuedCar; carType; rentalTariffPerDay; ctcDailyAmount \sim); computedTariffedCharge \vdash rentalBasicCharge \quad (5.24)$$

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

We use definitions $??$ ($contractedEndDate$), $??$ ($rcDroppedOffDate$), $??$ ($rentalExcessPeriod$), $??$ ($firstDate$), $??$ ($lastDate$), 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 $P4.4$
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.

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 ($??$):

$$excessTariffPerDay : CarType \rightarrow Amount \quad (5.26)$$

We also use definitions $??$ ($carType$), $??$ ($rcIssuedCar$), $??$ ($rentalExcessPeriod$), $??$ ($rentalPenaltyCharge$), $??$ ($ctcNrOfDays$), $??$ ($ctcDailyAmount$), and $??$ ($computedTariffedCharge$) to formalize requirement 2.1 (page 15):

Activities that are defined by this rule are finished when:

$$(rentalExcessPeriod; ctcNrOfDays \sim \cap rcIssuedCar; carType; excessTariffPerDay; ctcDailyAmount \sim); computedTariffedCharge \vdash rentalPenaltyCharge \quad (5.27)$$

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

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

Activities that are defined by this rule are finished when:

$$(rcDroppedOffBranch; distbranch \sim \cap contractedDropoffBranch; distbranch \sim); computedLocationPenaltyCharge \vdash rentalLocationPenaltyCharge \quad (5.28)$$

Rental charge computation The rental charge consists of three amounts: the basic rental charge, the penalty charge when the car is returned after the contracted drop-off date, and a penalty charge in case the car is dropped off at a different branch than contractually agreed. P4:2-5
 We use definitions ?? (*rentalBasicCharge*), ?? (*rentalPenaltyCharge*), ?? (*rentalLocationPenaltyCharge*), ?? (*rentalCharge*), ?? (*arg1*), ?? (*arg2*), ?? (*arg3*), and ?? (*computedRentalCharge*).
 Activities that are defined by this rule are finished when:

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

5.6 Enforcing maximum rental duration

Figure ?? shows the process model.

Figure 5.11: Process model of Enforcing maximum rental durationtxtProcess

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

Figure 5.12: Basic sentences of Enforcing maximum rental durationConceptual-Process

Trigger interval computation We use definitions ?? (*contractedStartDate*), ?? (*contractedEndDate*), ?? (*rcMaxRentalDuration*), and ?? (*dateIntervalCompTrigger*).
 Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap contractedStartDate; contractedStartDate^{\sim} \cap contractedEndDate; contractedEndDate^{\sim} \cap rc \quad (5.30)$$

5.7 Compute total rental charge

Figure ?? shows the process model.

Figure 5.13: Process model of Compute total rental chargetxtProcess

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

Figure 5.14: Basic sentences of Compute total rental chargeConceptualProcess

Uniqueness of rental charge computations We use definitions ?? (*arg1*), ?? (*arg2*), and ?? (*arg3*).
This means:

$$arg1; arg1^{\sim} \cap arg2; arg2^{\sim} \cap arg3; arg3^{\sim} \vdash I_{CompRentalCharge} \quad (5.31)$$

Trigger rental charge computation We use definitions ?? (*rentalBasicCharge*), ?? (*rentalPenaltyCharge*), ?? (*rentalLocationPenaltyCharge*), ?? (*arg1*), ?? (*arg2*), and ?? (*arg3*).
Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rentalBasicCharge; rentalBasicCharge^{\sim} \cap rentalPenaltyCharge; rentalPenaltyCharge^{\sim} \cap rentalLocationPenaltyCharge; rentalLocationPenaltyCharge^{\sim} \cap arg1; arg1^{\sim} \cap arg2; arg2^{\sim} \cap arg3; arg3^{\sim} \vdash I_{CompRentalCharge} \quad (5.32)$$

Compute rental charge We use definitions ?? (*arg1*), ?? (*arg2*), ?? (*arg3*), and ?? (*computedRentalCharge*).
Activities that are defined by this rule are finished when:

$$I_{CompRentalCharge} \vdash computedRentalCharge; computedRentalCharge^{\sim} \quad (5.33)$$

5.8 Compute number of regular days (period)

Figure ?? shows the process model.

Figure 5.15: Process model of Compute number of regular days (period)txtProcess

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

Figure 5.16: Basic sentences of Compute number of regular days (period)ConceptualProcess

Uniqueness of period computations We use definitions ?? (*earliestDate*) and ?? (*latestDate*).
This means:

$$latestDate; latestDate \sim \cap earliestDate; earliestDate \sim \vdash I_{DateDifferencePlusOne} \quad (5.34)$$

Trigger rental period computation We use definitions ?? (*contractedStartDate*), ?? (*rcDroppedOffDate*), ?? (*earliestDate*), and ?? (*latestDate*). Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap contractedStartDate; contractedStartDate \sim \cap rcDroppedOffDate; rcDroppedOffDate \sim \vdash (con \quad (5.35)$$

Compute number of days in period We use definitions ?? (*earliestDate*), ?? (*latestDate*), and ?? (*computedRentalPeriod*). Activities that are defined by this rule are finished when:

$$I_{DateDifferencePlusOne} \vdash computedRentalPeriod; computedRentalPeriod \sim \quad (5.36)$$

5.9 Compute tariffed (regular or excess) charge

Figure ?? shows the process model.

Figure 5.17: Process model of Compute tariffed (regular or excess) charge

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

Figure 5.18: Basic sentences of Compute tariffed (regular or excess) charge

Uniqueness of tariffed charge computations We use definitions ?? (*ctcNrOfDays*) and ?? (*ctcDailyAmount*). This means:

$$ctcNrOfDays; ctcNrOfDays \sim \cap ctcDailyAmount; ctcDailyAmount \sim \vdash I_{CompTariffedCharge} \quad (5.37)$$

Trigger regular charge computation We use definitions ?? (*rentalTariffPerDay*), ?? (*carType*), ?? (*rcIssuedCar*), ?? (*rentalPeriod*), ?? (*ctcNrOfDays*), and ?? (*ctcDailyAmount*). Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rentalPeriod; rentalPeriod^\sim \cap rcIssuedCar; rcIssuedCar^\sim \vdash (rentalPeriod; ctcNrOfDays^\sim \cap rcIssuedCar; rcIssuedCar^\sim) \quad (5.38)$$

Trigger excess charge computation We use definitions ?? (*excessTariffPerDay*), ?? (*carType*), ?? (*rcIssuedCar*), ?? (*rentalExcessPeriod*), ?? (*ctcNrOfDays*), and ?? (*ctcDailyAmount*). Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap rentalExcessPeriod; rentalExcessPeriod^\sim \vdash (rentalExcessPeriod; ctcNrOfDays^\sim \cap rcIssuedCar; rcIssuedCar^\sim) \quad (5.39)$$

Compute charge based on number of days We use definitions ?? (*ctcNrOfDays*), ?? (*ctcDailyAmount*), and ?? (*computedTariffedCharge*). Activities that are defined by this rule are finished when:

$$I_{CompTariffedCharge} \vdash computedTariffedCharge; computedTariffedCharge^\sim \quad (5.40)$$

5.10 Compute number of excess days (period)

Figure ?? shows the process model.

Figure 5.19: Process model of Compute number of excess days (period)txtProcess

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

Figure 5.20: Basic sentences of Compute number of excess days (period)ConceptualProcess

Uniqueness of period computations We use definitions ?? (*firstDate*) and ?? (*lastDate*). This means:

$$firstDate; firstDate^\sim \cap lastDate; lastDate^\sim \vdash I_{DateDifference} \quad (5.41)$$

Trigger excess period computation We use definitions ?? (*contractedEndDate*), ?? (*rcDroppedOffDate*), ?? (*firstDate*), and ?? (*lastDate*). Activities that are defined by this rule are finished when:

$$I_{RentalCase} \cap contractedEndDate; contractedEndDate^\sim \cap rcDroppedOffDate; rcDroppedOffDate^\sim \vdash (contractedEndDate; rcDroppedOffDate^\sim \cap rcDroppedOffDate; rcDroppedOffDate^\sim) \quad (5.42)$$

Compute number of excess period days We use definitions ?? (*firstDate*), ?? (*lastDate*), and ?? (*computedNrOfExcessDays*). Activities that are defined by this rule are finished when:

$$I_{DateDifference} \vdash computedNrOfExcessDays; computedNrOfExcessDays^{\smile} \quad (5.43)$$

5.11 Distance computations

Figure ?? shows the process model.

Figure 5.21: Process model of Distance computationstxtProcess

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

Figure 5.22: Basic sentences of Distance computationsConceptualProcess

Completeness of distance table We use definition ?? (*distbranch*). This means:

$$\overline{I_{Branch}} \vdash distbranch^{\smile}; distbranch \quad (5.44)$$

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 : *CarType* \times *Brand* A cartype has a specific brand.
Properties: UNI, TOT

model : *CarType* \times *Model* A cartype has a specific model.
Properties: UNI, TOT

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

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

maxRentalDuration : *CarRentalCompany* \times *MaxRentalDuration*
Rental companies must have specified the maximum duration of a rental.
Properties: --

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

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

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

contractedCarType : *RentalCase* \times *CarType* Rental contracts may specify the car type of the rental.
Properties: UNI

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

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

rcRenter : *RentalCase* \times *Person* The person who rents the car is called the renter.
Properties: UNI

rcDriver : *RentalCase* \times *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: --

rentalHasBeenPromised : *RentalCase* \times *RentalCase* The rental has been promised

Properties: --

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

Properties: --

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

Properties: --

rentalHasBeenStarted : *RentalCase* \times *RentalCase* The property 'Rental has started' is a property that every rental contract has for which the associated rental has started.

Properties: --

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

Properties: --

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

Properties: UNI, SUR

rentalHasBeenEnded : *RentalCase* \times *RentalCase* The property 'Rental has ended' is a property that every rental contract has for which the associated rental has 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 *YesNo* 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 *MaxRentalDuration* Rental contracts may specify the maximum rental duration.
Properties: UNI

dateIntervalCompTrigger : *Date* \times *Date* Properties: --

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

distance : *DistanceBetweenLocations* \times *Distance* There may be a distance between locations.
Properties: UNI, TOT

6.3 Logical datamodel

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

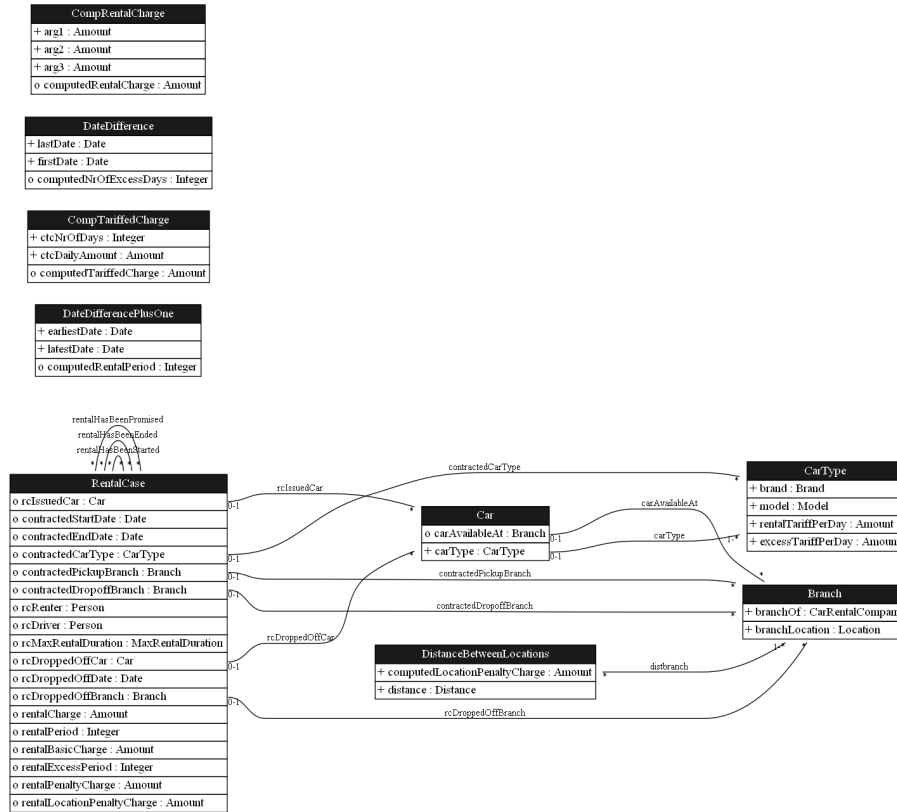


Figure 6.1: Logical data model of EURent

There are 9 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*.

6.3.2 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* ‘rcIssuedCar’ 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*.

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
distance	Distance	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
rcIssuedCar	Car	Optional
contractedStartDate	Date	Optional
contractedEndDate	Date	Optional
contractedCarType	CarType	Optional
contractedPickupBranch	Branch	Optional
contractedDropoffBranch	Branch	Optional
rcRenter	Person	Optional
rcDriver	Person	Optional
rcMaxRentalDuration	MaxRentalDuration	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

RentalCase has the following associations:

1. Every *RentalCase* ‘rcIssuedCar’ 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*.

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:

6.4.3 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: MaxRentalDuration1

This table has the following 1 fields:

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

6.4.18 Table: Model

This table has the following 1 fields:

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

6.4.19 Table: Person

This table has the following 1 fields:

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

6.4.20 Table: RentalCase

This table has the following 19 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.
- **rcIssuedCar**
This attribute implements the relation $RentalCase \xrightarrow{rcIssuedCar} Car$.
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 $RentalCase \xrightarrow{rcMaxRentalDuration} MaxRentalDuration$.
SQLVarchar 255, Optional.

6.4.21 Table: YesNo

This table has the following 1 fields:

- **YesNo**

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 $Date \xrightarrow{dateIntervalsWithinMaxRentalDuration} Date$.
It contains the following columns:

- **SrcDate**

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

- **TgtDate**

This attribute implements the relation $Date \xrightarrow{dateIntervalsWithinMaxRentalDuration} Date$.
SQLVarchar 255, Mandatory.

6.4.24 Table: distbranch

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

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

6.4.25 Table: maxRentalDuration2

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

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

6.4.26 Table: rcBranchRequestedQ

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

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

6.4.27 Table: rcKeysHandedOverQ

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

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

- **YesNo**

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

6.4.28 Table: rcUserRequestedQ

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

- **RentalCase**

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

- **YesNo**

This attribute implements the relation $RentalCase \xrightarrow{rcUserRequestedQ} YesNo$.
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 $RentalCase \xrightarrow{rentalIsPaidQ} YesNo$. It contains the following columns:

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

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

```

```

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

```

----- 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]

(MAINAINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocation
(MAINAINING -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 branchLocatio
      (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 Isn{dety=Branch}
      SELECTFROM ((carAvailableAt \/ Delta)~;carAvailableAt /\ -I[Branch]) \/

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

(MAINAINING -(carAvailableAt~;carAvailableAt) \/ I[Branch] FROM UNI carAvailabl

```

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

```
ALL of INSERT INTO Isn{detyp=Branch}
    SELECTFROM ((carAvailableAt \/ Delta)~;carAvailableAt /\ -I[Branch]) \/ ((car
    (TO MAINTAIN -(carAvailableAt~;carAvailableAt) \/ I[Branch] FROM UNI carAvail
    INSERT INTO Isn{detyp=Car}
    SELECTFROM (Delta;Delta~ /\ I[Car]) - I[Car]

(MAINTAINING -(carAvailableAt~;carAvailableAt) \/ I[Branch] FROM UNI carAvailableAt::
```

<-----End Derivation --

```
ON DELETE Delta FROM carAvailableAt[Car*Branch] EXECUTE -- (ECA rule 6)
ALL of DELETE FROM Isn{detyp=Car}
    SELECTFROM -((carAvailableAt /\ -Delta);(carAvailableAt /\ -Delta)~) /\

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

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

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

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

    (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHa
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPro
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHa
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
```

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

```
ALL of DELETE FROM Isn{detyp=Car}
    SELECTFROM -((carAvailableAt /\ -Delta);(carAvailableAt /\ -Delta)~) /\ -(rcI

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(renta
    ONE OF DELETE FROM contractedPickupBranch[RentalCase*Branch]
```

```

SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised);contractedCarType;

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

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

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

(TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeen
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHasBeen
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr

```

<-----End Derivation --

```

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

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

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

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

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

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

(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*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 -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int
      (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int
      (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int
      (MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
      (MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
      (MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
      (MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
      (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~;rcIssuedCar;carType /\ -I[CarType]) \/ (contra

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

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

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

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

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

      (TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
      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]

(MAINAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINAINING -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 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~);contractedPickupBra

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

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

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

  (TO MAINTAIN -(contractedCarType~;rcIssuedCar) \/ carType~ FROM Rented c
DELETE FROM rcIssuedCar[RentalCase*Car]

```

```

SELECTFROM (-(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;(carType /\ -Del

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

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

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

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

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

(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
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Renta
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rent
(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 contractedPickupBranch[RentalCase*Branch]
SELECTFROM (I[RentalCase] /\ rentalHasBeenPromised);contractedCarType;(-(car

```



```

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

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

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

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

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

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

(TO MAINTAIN  -(contractedCarType~;rcIssuedCar) /\ carType~ FROM Rented car type
DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM -(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;(carType /\ -Delta);rcIssuedCar

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

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

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

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

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

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

```

```

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

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(rentalExcessPeriod;
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 -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contractedPickupBranch~
(MAINTAINING -rcIssuedCar \/(contractedCarType;carType~ FROM Rented car type integrity)
(MAINTAINING -rcIssuedCar \/(contractedCarType;carType~ FROM Rented car type integrity)
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase])
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/(rentalExcessPeriod;rentalExcessPeriod~
(MAINTAINING -(carType~;carType) \/(carType;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)~;Delta)~) /\ I[Brand]

(TO MAINTAIN -(brand~;brand) \/(brand;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) \/(brand;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)~) /\ I[Brand]

(TO MAINTAIN -(brand~;brand) \/(brand;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]

```

```

(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 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]

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

(MAINTEINING -(model~;model) \/ I[Model] FROM UNI model::CarType*Model)
(MAINTEINING -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~ /\ rcIssuedCar;carType;rentalTari.

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

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
INSERT INTO Isn{dety=Amount}
SELECTFROM ((rentalTariffPerDay \/ Delta)~;rentalTariffPerDay /\ -I[Amou

(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]

```

```

(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI ren
(MAINAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rent

```

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

```

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

      (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariff
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carT

      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM ((rentalTariffPerDay \/ Delta)~;rentalTariffPerDay /\ -I[Amount])

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

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

      (MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
      (MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
      (MAINTAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTa
      (MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTar

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalTariffPerDay[CarType*Amount] EXECUTE -- (ECA rule
ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;(rentalT

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

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

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

```

```

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

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

      (TO MAINTAIN  -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Amount])
(MAINTAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTariffPerDay~
(MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTariffPerDay~

```

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

```

ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;(rentalTariffPerDay /\ -Delta);(rentalTariffPerDay /\ -Delta)~)

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

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

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

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

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Amount])
DELETE FROM Isn{dety=CarType}
      SELECTFROM -((rentalTariffPerDay /\ -Delta);(rentalTariffPerDay /\ -Delta)~)

      (TO MAINTAIN  -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase*Amount])
(MAINTAINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTariffPerDay~
(MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTariffPerDay~

```

<-----End Derivation --

ON INSERT Delta IN excessTariffPerDay[CarType*Amount] EXECUTE -- (ECA rule 15)

```

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

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

      (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~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(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~ /\ rcIssuedCar;carType;excessTar

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

      (TO MAINTAIN -((rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
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~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(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~ /\ rcIssuedCar;carType;(e

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

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

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{detyp=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~ /\ rcIssuedCar;carType;(excess

      (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~ /\ rcIssuedCar;carType;(excessT

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (r
DELETE FROM Isn{detyp=CarType}
      SELECTFROM -((excessTariffPerDay /\ -Delta);(excessTariffPerDay /\ -Delta)~)

      (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExc
(MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI excessTa
(MAINTAINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT excessTar

```

<-----End Derivation --

```

ON INSERT Delta IN maxRentalDuration[CarRentalCompany*MaxRentalDuration] EXECUTE

```



```

ALL of INSERT INTO rcMaxRentalDuration[RentalCase*MaxRentalDuration]
      SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxR

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcM
INSERT INTO Isn{dety=MaxRentalDuration}
      SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRent

      (TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
INSERT INTO Isn{dety=CarRentalCompany}
      SELECTFROM (Delta;Delta~ /\ I[CarRentalCompany]) - I[CarRentalCompany]

(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRental
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRental

```

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

```

ALL of INSERT INTO rcMaxRentalDuration[RentalCase*MaxRentalDuration]
      SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxRental

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRen
INSERT INTO Isn{dety=MaxRentalDuration}
      SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDur

      (TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
INSERT INTO Isn{dety=CarRentalCompany}
      SELECTFROM (Delta;Delta~ /\ I[CarRentalCompany]) - I[CarRentalCompany]

(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat

```

<-----End Derivation --

```

ON INSERT Delta IN dateIntervalIsWithinMaxRentalDuration[Date*Date] EXECUTE --
INSERT INTO Isn{dety=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 dateIntervalsWithinMaxRentalDuration[Date*Date] EXECUTE
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedEndDate;((-dateIntervalsWithinMaxRentalDuration~ /

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM contractedStartDate;((-dateIntervalsWithinMaxRentalDuration ~

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration

```

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

```

ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedEndDate;((-dateIntervalsWithinMaxRentalDuration~ /\ contractedStartDate

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM contractedStartDate;((-dateIntervalsWithinMaxRentalDuration /\ contractedStartDate

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration

```

<-----End Derivation --

```

ON INSERT Delta IN contractedStartDate[RentalCase*Date] EXECUTE      -- (ECA rule 1)
ALL of INSERT INTO dateIntervalsWithinMaxRentalDuration[Date*Date]
      SELECTFROM (contractedStartDate \/ Delta)~;contractedEndDate /\ -dateIntervalsWithinMaxRentalDuration

      (TO MAINTAIN  -(contractedStartDate~;contractedEndDate) \/ dateIntervalsIsWithinMaxRentalDuration
INSERT INTO Isn{dety=Date}
      SELECTFROM ((contractedStartDate \/ Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ;'No'[YesNo])

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ;'No'[YesNo])
      (TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;'No'[YesNo])
      (TO MAINTAIN  -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM dateIntervalsWithinMaxRentalDuration
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcKeysHandedOverQ;'No'[YesNo])

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcKeysHandedOverQ;'No'[YesNo])
INSERT INTO rentalPeriod[RentalCase*Integer]
      SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
INSERT INTO Isn{dety=Integer}
      SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)

```

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(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDrop)
INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM ((contractedStartDate /\ Delta)~;rcMaxRentalDuration;rcMaxRen

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurat
INSERT INTO Isn{detypr=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;rcMaxRentalDuration
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a'[Date]*'b'[RentalCase]*

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[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~ /\

(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'[Date]

```



```

SELECTFROM 'a' [Date]*'b' [Date]

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;
(MAINAINING  -(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~;
      (MAINAINING  -(rcMaxRentalDuration;rcMaxRentalDuration~;contract
      (MAINAINING  -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
      (MAINAINING  -(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 contractedStartDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;
      PICK a,b FROM contractedStartDate~;'a' [RentalCase]
      THEN INSERT INTO earliestDate[DateDifferencePlusOne]
      SELECTFROM 'b' [DateDifferencePlusOne]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINAINING  -(rcDroppedOffDate;rcDroppedOffDate~;
      NEW x:Date;
      ALL of INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a' [RentalCase]*'b' [Date]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;
      INSERT INTO earliestDate[DateDifferencePlusOne]
      SELECTFROM 'b' [DateDifferencePlusOne]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINAINING  -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINAINING  -(rcDroppedOffDate;rcDroppedOffDate~;
      (MAINAINING  -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
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]

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~;

```

```

(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCase*Integer]
SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
INSERT INTO latestDate[DateDifferencePlusOne]
SELECTFROM 'b'[DateDifferencePlusOne]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDro
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Triggers
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ latestDate;rcDro
(MAINAINING -(contractedStartDate~;contractedEndDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;)
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contractedStartDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
(MAINAINING -(contractedStartDate~;contractedStartDate) /\ I[Date] FROM UNI

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

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ALL of INSERT INTO dateIntervalIsWithinMaxRentalDuration[Date*Date]
SELECTFROM (contractedStartDate /\ Delta)~;contractedEndDate /\ -dateIntervalIsWithinMaxRentalDuration[Date*Date]

(TO MAINTAIN -(contractedStartDate~;contractedEndDate) /\ dateIntervalIsWithinMaxRentalDuration[Date*Date]
INSERT INTO Isn{detyp=Date}
SELECTFROM ((contractedStartDate /\ Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ rcIssuedCar;)

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ rcIssuedCar;)
(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ rcIssuedCar;)
(TO MAINTAIN -(contractedStartDate~;contractedStartDate) /\ I[Date] FROM UNI
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;)

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;)
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

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate
INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM ((contractedStartDate /\ Delta)~;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;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])*((

```

```

THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a'[Date]*'b'[Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRe
PICK a,b FROM dateIntervalCompTrigger~;'x'[Date]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
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;rc

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRenta
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalD

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRenta
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuratio
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contracted
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEn
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
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]

(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;rcDropped0
INSERT INTO earliestDate [DateDifferencePlus
SELECTFROM 'b' [DateDifferencePlusOne]*'a' [

(TO MAINTAIN -(rcDroppedOffDate;rcDropped0
(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[DateDifferencePlu
SELECTFROM 'b'[DateDifferencePlusOne]*'

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINTAINING -(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'[

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSta
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDrope
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger re
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMaxRent
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINTAINING -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI contract

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<-----End Derivation --

```

ON DELETE Delta FROM contractedStartDate[RentalCase*Date] EXECUTE -- (ECA rule
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM (-((contractedStartDate /\ -Delta);(contractedStartDate

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM (-((contractedStartDate /\ -Delta);(contractedStartDate

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}

```

```

SELECTFROM -((contractedStartDate /\ -Delta);(contractedStartDate

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM -((contractedStartDate /\ -Delta);(contractedStartDate

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM -((contractedStartDate /\ -Delta);(contractedStartDate

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedStartDate /\ -Delta);(contractedStartDate

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contrac

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contrac

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate;dateIntervalCompTrigger~;(contrac

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte

```

```

DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~;(contracted

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;(-(contracted

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~;(contract

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedSta

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~;(contract

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contracted

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate /\ -Delta);dateIntervalCompTri

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
(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;
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contrac

```

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

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate~ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\ -

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate~ /\

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(((contractedStartDate /\ -Delta);(contractedStartDate /\ -

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -(((contractedStartDate /\ -Delta);dateIntervalCompTrigger;

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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*MaxRentalDuration]
SELECTFROM  -((contractedStartDate /\ -Delta);dateIntervalCompTrigger)

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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~;contractedEndDate
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~;(contractedSt

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM contractedStartDate;contractedStartDate~;(-(contractedStar

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate /\ -Delta);dateIntervalCompTrigger)

      (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate /\ c
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rcDrop

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(contr

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rcDrop

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];(earliestDate;(contr

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -(((contractedStartDate /\ -Delta);earliestDate~ /\ rcDrop

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
      (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt

```

<-----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'[YesNo]);

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBran
(TO MAINTAIN -(contractedEndDate~;contractedEndDate) \ / I[Date] FROM UNI
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
  SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssue

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIs
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~ /\ contracte

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
INSERT INTO dateIntervalCompTrigger[Date*Date]
  SELECTFROM (contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurat
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;rcMaxRentalD
  NEW x:Date;
  ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
    SELECTFROM 'a'[Date]*'b'[RentalCase]*

    (TO MAINTAIN -(rcMaxRentalDuration;rc
  INSERT INTO contractedEndDate[RentalCase*Date]
    SELECTFROM 'b'[RentalCase]*'a'[Date]*

```



```

        (TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;con

        (TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRen
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRenta
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDura
        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~;con

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;
        INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'x'[Date]*((rcMaxRentalDuration;rcMaxRentalDura

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contract
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted
        (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*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcDroppedOffDate;rc
        PICK a,b FROM contractedEndDate~;('a'[Re
        THEN INSERT INTO firstDate[DateDifference]
        SELECTFROM 'b'[DateDifference]*'a'

        (TO MAINTAIN  -(rcDroppedOffDate;rc
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate
        NEW x:Date;
        ALL of INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcDroppedOffDate;rcDro
        INSERT INTO firstDate[DateDifference]*D

```

```

SELECTFROM 'b' [DateDifference]*'a' [Re

(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;rcDro
PICK a,b FROM rcDroppedOffDate~;('a' [Ren
THEN INSERT INTO lastDate[DateDifference
SELECTFROM 'b' [DateDifference]*'a'

(TO MAINTAIN -(rcDroppedOffDate;rcDro
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDat
NEW x:Date;
ALL of INSERT INTO rcDroppedOffDate[RentalCas
SELECTFROM 'a' [RentalCase]*'b' [DateDi

(TO MAINTAIN -(rcDroppedOffDate;rcDro
INSERT INTO lastDate[DateDifference*Da
SELECTFROM 'b' [DateDifference]*'a' [Re

(TO MAINTAIN -(rcDroppedOffDate;rcDro
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffD
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDat
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ c
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contract
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedO
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger exce
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;con
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMa
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;
(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) \/ I[Date] FROM UNI contrac

```

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

```

ALL of INSERT INTO dateIntervalsWithinMaxRentalDuration[Date*Date]
      SELECTFROM (contractedStartDate~;contractedEndDate /\ -dateIntervalsWithinMa

      (TO MAINTAIN -(contractedStartDate~;contractedEndDate) /\ dateIntervalsWithi
INSERT INTO Isn{detyp=Date}
      SELECTFROM ((contractedEndDate /\ Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUse

      (TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
      (TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      (TO MAINTAIN -(contractedEndDate~;contractedEndDate) /\ I[Date] FROM UNI cont
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
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
INSERT INTO dateIntervalCompTrigger[Date*Date]
      SELECTFROM (contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;con

      (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;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*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;rcMaxRe
INSERT INTO contractedEndDate[RentalCase*Da
        SELECTFROM 'b'[RentalCase]*'a'[Date]*'x'[D

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRe
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDura
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDurati
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEn
NEW x:Date;
    ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~ /\ cont

        (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;rc

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRenta
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalD

        (TO MAINTAIN -(rcMaxRentalDuration;rcMaxRenta
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuratio
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ con
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contracted
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEn
(MAINTAINING -(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;rcMaxRe

        (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMax
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~;contrac

        (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;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
        (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
        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
        SELECTFROM 'a' [RentalCase]*'b' [Date]

        (TO MAINTAIN -(rcDroppedOffDate;rcDropp
        PICK a,b FROM contractedEndDate~;('a' [RentalC
        THEN INSERT INTO firstDate[DateDifference*Dat
        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' [DateDifference]

(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~ /\ 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 lastDate[DateDifference*Date]
SELECTFROM 'b' [DateDifference]*'a' [Date]

(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~ /\ contra
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEnd
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate]
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger excess pe
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEnd
(MAINTAINING -(contractedStartDate~;contractedEndDate) \/ dateIntervalIsWithinMaxRent
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ c
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINTAINING -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI contractedEnd

```

<-----End Derivation --

```

ON DELETE Delta FROM contractedEndDate[RentalCase*Date] EXECUTE    -- (ECA rule 1)
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
    SELECTFROM (-(contractedEndDate /\ -Delta);(contractedEndDate /\
    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
    SELECTFROM (-(contractedEndDate /\ -Delta);(contractedEndDate /\
    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -(contractedEndDate /\ -Delta);(contractedEndDate /\
    (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
    SELECTFROM (-(contractedEndDate /\ -Delta);(contractedEndDate /\
    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
    SELECTFROM (-(contractedEndDate /\ -Delta);(contractedEndDate /\
    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
    SELECTFROM -(contractedEndDate /\ -Delta);(contractedEndDate /\
    (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
    SELECTFROM (-(contractedStartDate;dateIntervalCompTrigger;(contractedStartDate /\
    (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
    SELECTFROM (-(contractedEndDate /\ -Delta);dateIntervalCompTrigger;(contractedStartDate /\
    (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate
DELETE FROM contractedEndDate[RentalCase*Date]
    SELECTFROM (-(contractedStartDate;dateIntervalCompTrigger;(contractedStartDate /\
    (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate
DELETE FROM contractedEndDate[RentalCase*Date]
    SELECTFROM (-(contractedEndDate /\ -Delta);dateIntervalCompTrigger;(contractedStartDate /\
    (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate
DELETE FROM contractedStartDate[RentalCase*Date]
    SELECTFROM (-(contractedStartDate;dateIntervalCompTrigger;(contractedStartDate /\
    (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedStartDate

```



```

DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM -(contractedEndDate /\ -Delta);dateIntervalCompTrigg

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -(contractedStartDate;dateIntervalCompTrigger;(contract

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndD
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;(-(contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger;(contra

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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);dateIntervalCompTrigg

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
(MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurati

```

```

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~ /\ contractedEn
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -(((contractedEndDate /\ -Delta);firstDate~ /\ rcDrop

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEn
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;con
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte

```

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

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((contractedEndDate /\ -Delta);(contractedEndDate /\ -Del

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((contractedEndDate /\ -Delta);(contractedEndDate~ /\ -De

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delt

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((contractedEndDate /\ -Delta);(contractedEndDate /\ -Del

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((contractedEndDate /\ -Delta);(contractedEndDate~ /\ -De

```

```

(TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentatCase}
SELECTFROM -((contractedEndDate /\ -Delta);(contractedEndDate /\ -Delt

(TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -(contractedStartDate;dateIntervalCompTrigger;(contractedE

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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=RentatCase}
SELECTFROM -(contractedStartDate;dateIntervalCompTrigger;(contractedEn

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;-((contractedEndD

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM contractedStartDate;-(dateIntervalCompTrigger;(contractedE

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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~ /\ rcDroppedOff

(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~ /\ rcDroppedOff

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(V[RentalCase*DateDifference];(firstDate;(contractedEndDa

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM (-(contractedEndDate /\ -Delta);firstDate~ /\ rcDroppedOff

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contrac
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])

```

```

(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD

```

<-----End Derivation --

```

ON INSERT Delta IN contractedCarType[RentalCase*CarType] EXECUTE -- (ECA rule
ONE OF INSERT INTO Isn{dety=CarType}
    SELECTFROM ((contractedCarType \/ Delta)~;rcUserRequestedQ;'Yes'[YesNo]);

(TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
INSERT INTO Isn{dety=CarType}
    SELECTFROM ((contractedCarType \/ Delta)~;rcBranchRequestedQ;'Yes'[YesNo]

(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranch
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssue

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIss
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((contractedPickupBranch~;(I[Ren
    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
(MAINAINING -(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
            (MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
(MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPro
INSERT INTO carType[Car*CarType]
    SELECTFROM rcIssuedCar~;(contractedCarType \/ Delta) /\ -carType

(TO MAINTAIN -(contractedCarType~;rcIssuedCar) \/ carType~ FROM Rented c
INSERT INTO Isn{dety=CarType}
    SELECTFROM (contractedCarType \/ Delta)~;rcIssuedCar;carType /\ -I[CarTy

```

```

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

      (TO MAINTAIN  -(contractedCarType~;contractedCarType) \/ I[CarType] FROM
      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 -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
      (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type into
      (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type into
      (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type into
      (MAINTAINING -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI cont

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

```

ONE OF INSERT INTO Isn{dety=CarType}
      SELECTFROM ((contractedCarType \/ Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUser

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
      INSERT INTO Isn{dety=CarType}
      SELECTFROM ((contractedCarType \/ Delta)~;rcBranchRequestedQ;'Yes'[YesNo];rcB

      (TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
      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
INSERT INTO carType[Car*CarType]
        SELECTFROM rcIssuedCar~;(contractedCarType \/ Delta) /\ -carType

        (TO MAINTAIN  -(contractedCarType~;rcIssuedCar) \/ carType~ FROM Rented car ty
INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType \/ Delta)~;rcIssuedCar;carType /\ -I[CarType]

        (TO MAINTAIN  -(contractedCarType~;rcIssuedCar;carType) \/ I[CarType] FROM Ren
INSERT INTO Isn{dety=CarType}
        SELECTFROM ((contractedCarType \/ Delta)~;contractedCarType /\ -I[CarType]) \

        (TO MAINTAIN  -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI c
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 -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ c
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
        (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr
        (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
        (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
        (MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
        (MAINTAINING -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI contracte

<-----End Derivation --

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```

ON DELETE Delta FROM contractedCarType[RentalCase*CarType] EXECUTE  -- (ECA ru
ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
        SELECTFROM (-((contractedCarType /\ -Delta);(contractedCarType /\

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
        SELECTFROM (-((contractedCarType /\ -Delta);(contractedCarType~ /\

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
        SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\

```

```

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((contractedCarType /\ -Delta);(contractedCarType /\

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((contractedCarType /\ -Delta);(contractedCarType~ /\

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((contractedCarType /\ -Delta);(contractedCarType /\

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM  -((contractedCarType /\ -Delta);carType~) /\ rcIssuedCar

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

      (TO MAINTAIN  -(rcIssuedCar;carType) \/ contractedCarType FROM Ren
DELETE FROM carType[Car*CarType]
      SELECTFROM  rcIssuedCar~;((-contractedCarType /\ rcIssuedCar;carTy

      (TO MAINTAIN  -(rcIssuedCar;carType) \/ contractedCarType FROM Ren
(MAINAINING  -(rcIssuedCar;carType) \/ contractedCarType FROM Rented car
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING  -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int
(MAINAINING  -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type int

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

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((contractedCarType /\ -Delta);(contractedCarType /\ -Del

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((contractedCarType /\ -Delta);(contractedCarType~ /\ -De

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((contractedCarType /\ -Delta);(contractedCarType /\ -Delt

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re

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```

(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((contractedCarType /\ -Delta);(contractedCarType /\ -Del

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((contractedCarType /\ -Delta);(contractedCarType~ /\ -De

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedCarType /\ -Delta);(contractedCarType /\ -Delt

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM -((contractedCarType /\ -Delta);carType~) /\ rcIssuedCar

      (TO MAINTAIN -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type
ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM ((-contractedCarType /\ rcIssuedCar;carType) \/ (Delta /\ r

      (TO MAINTAIN -(rcIssuedCar;carType) \/ contractedCarType FROM Rented c
DELETE FROM carType[Car*CarType]
      SELECTFROM rcIssuedCar~;((-contractedCarType /\ rcIssuedCar;carType) \

      (TO MAINTAIN -(rcIssuedCar;carType) \/ contractedCarType FROM Rented c
(MAINAINING -(rcIssuedCar;carType) \/ contractedCarType FROM Rented car type
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ c
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit

<-----End Derivation --

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ON INSERT Delta IN contractedPickupBranch[RentalCase*Branch] EXECUTE    -- (ECA :
ALL of INSERT INTO Isn{dety=Branch}
      SELECTFROM ((contractedPickupBranch \/ Delta)~;rcUserRequestedQ;'Yes'[Yes

      (TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcU
      (TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNo];r
      (TO MAINTAIN -(contractedPickupBranch~;contractedPickupBranch) \/ I[Branch
INSERT INTO rcMaxRentalDuration[RentalCase*MaxRentalDuration]
      SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxR

      (TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcM
INSERT INTO Isn{dety=MaxRentalDuration}
      SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRent

```

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(TO MAINTAIN  -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
  SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssues

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIs
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]
  PICK a,b FROM carAvailableAt;((contractedPickupBranch /\ De
  THEN INSERT INTO carType[Car*CarType]
    SELECTFROM 'a'[Car]*'b'[CarType]

    (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase]
(MAINTAINING  -(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 /\ Delta)~;

    (TO MAINTAIN  -(contractedPickupBranch~;(I[RentalCase] /\
  (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalH
  (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHas
  (MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
(MAINTAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING  -(contractedPickupBranch;branchOf;maxRentalDuration) /\ rcMaxRental
(MAINTAINING  -(contractedPickupBranch;branchOf;maxRentalDuration) /\ rcMaxRental
(MAINTAINING  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;
(MAINTAINING  -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
(MAINTAINING  -(contractedPickupBranch~;contractedPickupBranch) /\ I[Branch] FROM

```

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

```

ALL of INSERT INTO Isn{dety=Branch}
  SELECTFROM ((contractedPickupBranch /\ Delta)~;rcUserRequestedQ;'Yes'[YesNo];

  (TO MAINTAIN  -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
  (TO MAINTAIN  -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBranch
  (TO MAINTAIN  -(contractedPickupBranch~;contractedPickupBranch) /\ I[Branch] F
  INSERT INTO rcMaxRentalDuration[RentalCase*MaxRentalDuration]

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SELECTFROM (contractedPickupBranch;branchOf;maxRentalDuration /\ -rcMaxRental

(TO MAINTAIN -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRen
INSERT INTO Isn{dety=MaxRentalDuration}
SELECTFROM (rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalDur

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
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'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr
(MAINTAINING -(contractedPickupBranch~;contractedPickupBranch) \/ I[Branch] FROM UNI

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<-----End Derivation --

ON DELETE Delta FROM contractedPickupBranch[RentalCase*Branch] EXECUTE -- (EC.


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DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM -((contractedPickupBranch /\ -Delta);(contractedPickupBranch

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedPickupBranch /\ -Delta);(contractedPickupBranch

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])

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<-----End Derivation --

```

ON INSERT Delta IN contractedDropoffBranch[RentalCase*Branch] EXECUTE -- (ECA
ALL of INSERT INTO Isn{dety=Branch}
SELECTFROM ((contractedDropoffBranch \ / Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \ / c
(TO MAINTAIN -(contractedDropoffBranch~;contractedDropoffBranch) \ / I[RentalCase]) \ / c
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssue[RentalCase]) \ / c
(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssue[RentalCase]) \ / c
INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~) /\ I[RentalCase]) \ / c
(TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~) /\ I[RentalCase]) \ / c
INSERT INTO Isn{dety=Amount}
SELECTFROM (rentalLocationPenaltyCharge~;rcDroppedOffBranch;distbranch~) /\ I[RentalCase]) \ / c
(TO MAINTAIN -(rentalLocationPenaltyCharge~;rcDroppedOffBranch;distbranch~) /\ I[RentalCase]) \ / c
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffBranch;distbranch~) /\ I[RentalCase]) \ / c
THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM 'a'[RentalCase]*'b'[Amount]

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~) /\ I[RentalCase]) \ / c
PICK a,b FROM rentalLocationPenaltyCharge~;((rcDroppedOffBranch;distbranch~) /\ I[RentalCase]) \ / c
THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

(TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~) /\ I[RentalCase]) \ / c
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~) /\ I[RentalCase]) \ / c
NEW x:Amount;

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ALL of INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])

    (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])
    INSERT INTO computedLocationPenaltyCharge[DistanceBetween]
    SELECTFROM ((distbranch;rcDroppedOffBranch~ /\ distbranch;rcDroppedOffBranch) /\ I[Branch])

    (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])
    (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])
    (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])
    (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])
    (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) /\ I[Branch])
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) /\ I[Branch])
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;) /\ I[Branch])
    (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch])
    (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch])
    (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch])
    (MAINTAINING -(contractedDropoffBranch~;contractedDropoffBranch) \/ I[Branch] FR

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

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ALL of INSERT INTO Isn{detyp=Branch}
    SELECTFROM ((contractedDropoffBranch \/ Delta)~;rcUserRequestedQ;'Yes'[YesNo]) /\ I[Branch]

    (TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Branch]) /\ I[Branch])
    (TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Branch]) /\ I[Branch])
    (TO MAINTAIN -(contractedDropoffBranch~;contractedDropoffBranch) \/ I[Branch]) /\ I[Branch]
    INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;) /\ I[Branch]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;) /\ I[Branch]) /\ I[Branch]
    INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch]

    (TO MAINTAIN -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch]) /\ I[Branch]
    INSERT INTO Isn{detyp=Amount}
    SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch]

    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch]) /\ I[Branch]
    INSERT INTO Isn{detyp=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch])
    THEN INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM 'a'[RentalCase]*'b'[Amount]

    (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch]
    PICK a,b FROM rentalLocationPenaltyCharge~;((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch) /\ I[Branch]) /\ I[Branch]

```

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THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLo
SELECTFROM 'b'[DistanceBetweenLocations]*'a'[Amount]

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contracte
(MAINAINING -(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

      (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDr
      (MAINAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
      (MAINAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
      (MAINAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINAINING -(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*YesNo]
SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDrop

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDrop

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDrop

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDrop

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM (-((contractedDropoffBranch /\ -Delta);(contractedDrop

```

```

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropo

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa

```

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

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBra

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBr

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedDropoffBranch /\ -Delta);(contractedDropoffBra

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])

```

<-----End Derivation --

```

ON INSERT Delta IN rcRenter[RentalCase*Person] EXECUTE      -- (ECA rule 31)
ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter \ / Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUserReq

      (TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~

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      (TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequest
      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOver
      (TO MAINTAIN  -(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::Rental
      INSERT INTO Isn{dety=RentCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]
      (MAINTAINING -(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::RentalCase*Person)

```

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

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      ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcRenter /\ Delta)~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequeste

      (TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcRe
      (TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;
      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rc
      (TO MAINTAIN  -(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::RentalCase
      INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) /\ r
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) /\
      (MAINTAINING -(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::RentalCase*Person)

```

<-----End Derivation --

```

      ON DELETE Delta FROM rcRenter[RentalCase*Person] EXECUTE      -- (ECA rule 32)
      ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUser

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
      DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((rcRenter /\ -Delta);(rcRenter~ /\ -Delta)~) /\ rcU

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUser

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]
      ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM (-((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranch

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      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcBranchRequestedQ

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchRequestedQ

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHandedOverQ

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])
      DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcKeysHandedOverQ

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHandedOverQ

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])
      (MAINTAINING  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])
      (MAINTAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])

```

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

```

ALL of ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUserRequestedQ

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcUserRequestedQ

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcUserRequestedQ

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchRequestedQ

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM  -((rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcBranchRequestedQ

```

```

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcBranchRe

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHan

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM -((rcRenter /\ -Delta);(rcRenter~ /\ -Delta~)) /\ rcKeysHa

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rcRenter /\ -Delta);(rcRenter /\ -Delta)~) /\ rcKeysHand

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / r
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \ /

<-----End Derivation --

```

```

ON INSERT Delta IN rcDriver[RentalCase*Person] EXECUTE    -- (ECA rule 33)
ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM ((rcDriver \ / Delta)~;rcDriver /\ -I[Person]) \ / ((rcDriver \

      (TO MAINTAIN  -(rcDriver~;rcDriver) \ / (I[Person] /\ validDrivingLicense;
      (TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
      (TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequest
      (TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOver
      (TO MAINTAIN  -(rcDriver~;rcDriver) \ / I[Person] FROM UNI rcDriver::Renta
INSERT INTO Isn{dety=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] /\ vali
PICK a,b FROM rcDriver~;((rcDriver /\ -(rcDriver;(I[Person]
      THEN ALL of INSERT INTO Isn{dety=Person}
      SELECTFROM 'a'[Person]*'b'[Person]

      (TO MAINTAIN  -rcDriver \ / rcDriver;(I[Person]

```

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM
    THEN INSERT INTO validDrivingLicense
        SELECTFROM 'a'[Person]*'b'[Person]

    (TO MAINTAIN -rcDriver \/\ rcDriver;
    PICK a,b FROM validDrivingLicense
    THEN INSERT INTO validDrivingLicense
        SELECTFROM 'b'[Person]*'a'[Person]

    (TO MAINTAIN -rcDriver \/\ rcDriver;
    (MAINTAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense)
    NEW x:DrivingLicense;
    ALL of INSERT INTO validDrivingLicense
        SELECTFROM 'a'[Person]*'b'[Person]

    (TO MAINTAIN -rcDriver \/\ rcDriver;
    INSERT INTO validDrivingLicense
        SELECTFROM 'b'[Person]*'a'[Person]

    (TO MAINTAIN -rcDriver \/\ rcDriver;
    (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{dety=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)
    THEN INSERT INTO validDrivingLicense[Person]
        SELECTFROM 'a'[Person]*'b'[Person]

    (TO MAINTAIN -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense)
    PICK a,b FROM validDrivingLicense~;'x'[Person]
    THEN INSERT INTO validDrivingLicense[Person]
        SELECTFROM 'b'[Person]*'a'[Person]

    (TO MAINTAIN -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense)
    (MAINTAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense)
    NEW x:DrivingLicense;
    INSERT INTO validDrivingLicense[Person*DrivingLicense]
        SELECTFROM 'x'[Person]*'x'[DrivingLicense] \/\ (

    (TO MAINTAIN -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense)

```

```

(MAINAINING -rcDriver \/\ rcDriver;(I[Person] /\ v
(MAINAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDri
(MAINAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLic
(MAINAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicen
(MAINAINING -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
(MAINAINING -(rcDriver~;rcDriver) \/\ (I[Person] /\ validDrivingLi
NEW x:DrivingLicense;
INSERT INTO validDrivingLicense[Person*DrivingLicense]
SELECTFROM (((rcDriver \/\ Delta)~;rcDriver /\ -I[Person])) \/\ ((
(TO MAINTAIN -(rcDriver~;rcDriver) \/\ (I[Person] /\ validDriving
(MAINAINING -(rcDriver~;rcDriver) \/\ (I[Person] /\ validDrivingLi
(MAINAINING -(rcDriver~;rcDriver) \/\ (I[Person] /\ validDrivingLicense;v
(MAINAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense;validDrivin
(MAINAINING -rcDriver \/\ rcDriver;(I[Person] /\ validDrivingLicense;validDrivin
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINAINING -(rcDriver~;rcDriver) \/\ I[Person] FROM UNI rcDriver::RentalCase*Pe

```

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

```

ALL of INSERT INTO Isn{dety=Person}
SELECTFROM ((rcDriver \/\ Delta)~;rcDriver /\ -I[Person])) \/\ ((rcDriver \/\ Del

(TO MAINTAIN -(rcDriver~;rcDriver) \/\ (I[Person] /\ validDrivingLicense;valid
(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDr
(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;
(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rc
(TO MAINTAIN -(rcDriver~;rcDriver) \/\ I[Person] FROM UNI rcDriver::RentalCase
INSERT INTO Isn{dety=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcDriver /\ -(rcDriver;(I[P
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a'[RentalCase]*'b'[Person]

(TO MAINTAIN -rcDriver \/\ rcDriver;(I[Person] /\ validDriv

```

```

PICK a,b FROM rcDriver~;((rcDriver /\ -(rcDriver;(I[Person] /\ v
THEN ALL of INSERT INTO Isn{detyp=Person}
      SELECTFROM 'a' [Person]*'b' [Person]

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ va
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a
      THEN INSERT INTO validDrivingLicense[P
      SELECTFROM 'a' [Person]*'b' [Drivi

      (TO MAINTAIN -rcDriver \/ rcDriv
PICK a,b FROM validDrivingLicense~;('a
      THEN INSERT INTO validDrivingLicense[P
      SELECTFROM 'b' [Person]*'a' [Drivi

      (TO MAINTAIN -rcDriver \/ rcDriv
(MAINTAINING -rcDriver \/ rcDriver;(I[Person]
NEW x:DrivingLicense;
      ALL of INSERT INTO validDrivingLicense[Pers
      SELECTFROM 'a' [Person]*'b' [Person]*

      (TO MAINTAIN -rcDriver \/ rcDriver;
INSERT INTO validDrivingLicense[Pers
      SELECTFROM 'b' [Person]*'a' [Person]*

      (TO MAINTAIN -rcDriver \/ rcDriver;
      (MAINTAINING -rcDriver \/ rcDriver;(I[Perso
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person]
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ val
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivi
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;va
NEW x:Person;
      ALL of INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM ((rcDriver /\ -(rcDriver;(I[Person] /\ validDrivin

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDriving
INSERT INTO Isn{detyp=Person}
      SELECTFROM 'x' [Person]*((rcDriver /\ -(rcDriver;(I[Person] /\

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDriving
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Person]*
      THEN INSERT INTO validDrivingLicense[Person*Driv
      SELECTFROM 'a' [Person]*'b' [DrivingLicense]

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Pers
PICK a,b FROM validDrivingLicense~;('x' [Person]*
      THEN INSERT INTO validDrivingLicense[Person*Driv
      SELECTFROM 'b' [Person]*'a' [DrivingLicense]

      (TO MAINTAIN -rcDriver \/ rcDriver;(I[Pers
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validD

```

```

NEW x:DrivingLicense;
INSERT INTO validDrivingLicense[Person*DrivingLicense]
SELECTFROM 'x'[Person]*'x'[DrivingLicense] \/ ((rcDriver
    (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;validDrivingLicense;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (((rcDriver \/ Delta)~;rcDriver)
THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
SELECTFROM 'a'[Person]*'b'[DrivingLicense]

    (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;
PICK a,b FROM validDrivingLicense~;(((rcDriver \/ Delta)~;rcDriver)
THEN INSERT INTO validDrivingLicense[Person*DrivingLicense]
SELECTFROM 'b'[Person]*'a'[DrivingLicense]

    (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;
(MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;
NEW x:DrivingLicense;
INSERT INTO validDrivingLicense[Person*DrivingLicense]
SELECTFROM (((rcDriver \/ Delta)~;rcDriver /\ -I[Person]) \/ ((rcDriver
    (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;
    (MAINTAINING -(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;
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ rcUserRequestedQ;
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/ rcBranchRequestedQ;
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \/ rcKeysHandedOverQ;
(MAINTAINING -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person)

```

<-----End Derivation --

```

ON DELETE Delta FROM rcDriver[RentalCase*Person] EXECUTE -- (ECA rule 34)
ALL of DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM -((rcDriver /\ -Delta);(I[Person] /\ validDrivingLicense;validDrivingLicense;
    (TO MAINTAIN -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;
ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM (-((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUserRequestedQ;

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ rcUserRequestedQ;
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM (-((rcDriver /\ -Delta);(rcDriver~ /\ -Delta)) /\ rcUserRequestedQ;

```

```

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUser

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
      ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBr

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
      DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver~ /\ -Delta)) /\ rcB

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBra

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
      ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKe

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
      DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver~ /\ -Delta)) /\ rcK

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKey

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[Ren
      (MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDriv
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]

```

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

```

      ALL of DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM -((rcDriver /\ -Delta);(I[Person] /\ validDrivingLicense;validDriv

      (TO MAINTAIN  -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDri
      ONE OF DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM -((rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUserReq

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re

```



```

DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcUserRe

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
DELETE FROM Isn{dety= RentalCase}
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcUserRequ

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Re
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBranchR

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcBranch

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
DELETE FROM Isn{dety= RentalCase}
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcBranchRe

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKeysHan

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver~ /\ -Delta~)) /\ rcKeysHa

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[
DELETE FROM Isn{dety= RentalCase}
SELECTFROM (-(rcDriver /\ -Delta);(rcDriver /\ -Delta)~) /\ rcKeysHand

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ r
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \/

<-----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{detyp=Person}
      SELECTFROM (Delta;Delta~ /\ I[Person]) - I[Person]

INSERT INTO Isn{detyp=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) \/ (-((validDri

      (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicens
DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;((-I[Person] /\ rcDriver~;rcDriver) \/ (-((validDri

      (TO MAINTAIN -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicens
      (MAINTAINING -(rcDriver~;rcDriver) \/ (I[Person] /\ validDrivingLicense;validD
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
```

<-----End Derivation --

```

ON INSERT Delta IN rentalHasBeenPromised[RentalCase*RentalCase] EXECUTE    -- (E
ALL of 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]
(MAINTAINING -(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] /\
            (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalH
            (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHas
            (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenProm
            (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);

```

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

```

ALL of 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 -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contr

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<-----End Derivation --

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ON INSERT Delta IN rcUserRequestedQ[RentalCase*YesNo] EXECUTE    -- (ECA rule 39)
ALL of INSERT INTO Isn{dety=Branch}
  SELECTFROM (contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];(rcUserRe

  (TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcU
  (TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNo];rcU
INSERT INTO Isn{dety=Date}
  SELECTFROM (contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];(rcUserRe

  (TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
  (TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
INSERT INTO Isn{dety=CarType}
  SELECTFROM (contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];(rcUserRequ

  (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
INSERT INTO Isn{dety=Person}
  SELECTFROM (rcDriver~;rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\

  (TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
  (TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
INSERT INTO Isn{dety=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'
  THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'a'[RentalCase]*'b'[Branch]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
  PICK a,b FROM contractedPickupBranch~;((rcUserRequestedQ;'Y

```

```

THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM 'b'[RentalCase]*'a'[Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Branch;
INSERT INTO contractedPickupBranch[RentalCase*Branch]
SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
SELECTFROM 'a'[RentalCase]*'b'[Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
PICK a,b FROM contractedDropoffBranch~;((rcUserRequestedQ;'
THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
SELECTFROM 'b'[RentalCase]*'a'[Branch]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Branch;
INSERT INTO contractedDropoffBranch[RentalCase*Branch]
SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
PICK a,b FROM contractedStartDate~;((rcUserRequestedQ;'Yes'
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Date;
INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'
THEN INSERT INTO contractedEndDate[RentalCase*Date]

```

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SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
PICK a,b FROM contractedEndDate~;((rcUserRequestedQ;'Yes' [Y
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:Date;
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcUserRequestedQ;'Yes' [YesNo];(rcUserRequestedQ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'a' [RentalCase]*'b' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
PICK a,b FROM contractedCarType~;((rcUserRequestedQ;'Yes' [Y
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b' [RentalCase]*'a' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:CarType;
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM ((rcUserRequestedQ;'Yes' [YesNo];(rcUserRequestedQ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
PICK a,b FROM rcDriver~;((rcUserRequestedQ;'Yes' [YesNo];(rc
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM ((rcUserRequestedQ;'Yes' [YesNo];(rcUserRequestedQ /\

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedStartDate~;((rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Date;
      INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\ Delt

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedEndDate~;((rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Date;
      INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\ Delt

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedCarType~;((rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'b'[RentalCase]*'a'[CarType]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:CarType;
      INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\ Delt

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        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesN
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        PICK a,b FROM rcDriver~;((rcUserRequestedQ;'Yes'[YesNo];(rcUserR
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
        NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\ Delt

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcUserRequestedQ;'Yes'[YesN
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        PICK a,b FROM rcRenter~;((rcUserRequestedQ;'Yes'[YesNo];(rcUserR
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
        NEW x:Person;
        INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM ((rcUserRequestedQ;'Yes'[YesNo];(rcUserRequestedQ /\ Delt

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase)) /\ c

```

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(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ r
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ r
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ r
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ r

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<-----End Derivation --

```

ON INSERT Delta IN rcBranchRequestedQ[RentalCase*YesNo] EXECUTE      -- (ECA rule 4)
ALL of INSERT INTO Isn{dety=Branch}
    SELECTFROM (contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ;
    (TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
    (TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
INSERT INTO Isn{dety=Date}
    SELECTFROM (contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ;
    (TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
    (TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
INSERT INTO Isn{dety=CarType}
    SELECTFROM (contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ;
    (TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
INSERT INTO Isn{dety=Person}
    SELECTFROM (rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ;
    (TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
    (TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
INSERT INTO Isn{dety=RentalCase}
    SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
        PICK a,b FROM contractedPickupBranch~;((rcBranchRequestedQ;
        THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM 'b'[RentalCase]*'a'[Branch]

            (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ;
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Branch;
    INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ;

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        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Ye
        THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        PICK a,b FROM contractedDropoffBranch~;((rcBranchRequestedQ
        THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Branch;
        INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Ye
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        PICK a,b FROM contractedStartDate~;((rcBranchRequestedQ;'Ye
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Date;
        INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Ye
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        PICK a,b FROM contractedEndDate~;((rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

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NEW x:Date;
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo]); (rcBranchRequestedQ~

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
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'[YesNo];rcBranchRequestedQ~
PICK a,b FROM contractedCarType~;((rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b'[RentalCase]*'a'[CarType]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:CarType;
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo]; (rcBranchRequestedQ~

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
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'[YesNo];rcBranchRequestedQ~
PICK a,b FROM rcDriver~;((rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo]; (rcBranchRequestedQ~

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
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'[YesNo];rcBranchRequestedQ~
PICK a,b FROM rcRenter~;((rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
THEN INSERT INTO rcRenter[RentalCase*Person]

```



```

SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedPickupBranch~;((rcBranchRequestedQ;'Yes'
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Branch;
    INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ \
        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedDropoffBranch~;((rcBranchRequestedQ;'Yes'
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Branch;
    INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ \
        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedStartDate~;((rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

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        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Date;
        INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ /\

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[Ye
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
        PICK a,b FROM contractedEndDate~;((rcBranchRequestedQ;'Yes'[YesN
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ /\

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcBranchRequestedQ;'Yes'[Ye
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
        PICK a,b FROM contractedCarType~;((rcBranchRequestedQ;'Yes'[YesN
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ /\

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
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'[YesNo];rcBranchReq

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PICK a,b FROM rcDriver~;((rcBranchRequestedQ;'Yes'[YesNo];rcBra
THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Person;
      INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ /\

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
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'[YesNo];rcBranchReq
PICK a,b FROM rcRenter~;((rcBranchRequestedQ;'Yes'[YesNo];(rcBra
THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Person;
      INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM ((rcBranchRequestedQ;'Yes'[YesNo];(rcBranchRequestedQ /\

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])

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<-----End Derivation --

```

ON INSERT Delta IN rentalHasBeenStarted[RentalCase*RentalCase] EXECUTE    -- (EC
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop
INSERT INTO Isn{dety=RentCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;Delta /

(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop

```

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

```

ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop
INSERT INTO Isn{dety=RentCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] \/ (Delta~;Delta /

(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop

<-----End Derivation --

```

```

ON DELETE Delta FROM rentalHasBeenStarted[RentalCase*RentalCase] EXECUTE    -- (
ALL of DELETE FROM Isn{dety=Car}
      SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcIssuedCar~;(rentalHas

      (TO MAINTAIN  -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHas
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~

```

```

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[Yes

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM (-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesN

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIss
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHa
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;

```

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

ALL of DELETE FROM Isn{detyp=Car}

```

SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcIssuedCar~;(rentalHasBeen
(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(renta
ONE OF DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedPickupBranch[RentalCase*Branch]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

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      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM ((-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];r

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM ((-rentalHasBeenStarted~ /\ rcKeysHandedOverQ;'Yes'[YesNo];

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
DELETE FROM Isn{dety=RentatCase}
      SELECTFROM (-rentalHasBeenStarted /\ rcKeysHandedOverQ;'Yes'[YesNo];rc

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rc
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCa
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHasBeen
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss

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<-----End Derivation --

```

ON INSERT Delta IN rcKeysHandedOverQ[RentalCase*YesNo] EXECUTE  -- (ECA rule 4
ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];(rcKeysHandedOverQ \/ Delta)~

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIss
INSERT INTO Isn{dety=Person}
      SELECTFROM (rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];(rcKeysHandedOverQ

      (TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOver
      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOver
INSERT INTO Isn{dety=RentalCase}
      SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

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'[YesNo];rcKeysH
PICK a,b FROM rcDriver~;((rcKeysHandedOverQ;'Yes'[YesNo];(r
      THEN INSERT INTO rcDriver[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysH
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
NEW x:Person;
      INSERT INTO rcDriver[RentalCase*Person]

```

```

SELECTFROM ((rcKeysHandedOverQ;'Yes'[YesNo]);rcKeysHandedOverQ

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[Ren
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'[YesNo];rcKeysH
PICK a,b FROM rcRenter~;((rcKeysHandedOverQ;'Yes'[YesNo];(r
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b'[RentalCase]*'a'[Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysH
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM ((rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[Ren
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase

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

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ALL of INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];(rcKeysHandedOverQ /\ Delta)~ /\ r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
INSERT INTO Isn{detyp=Person}
SELECTFROM (rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];(rcKeysHandedOverQ /\ De

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rc
(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rc
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

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' [YesNo];rcKeysHanded
PICK a,b FROM rcDriver~;((rcKeysHandedOverQ;'Yes' [YesNo];(rcKeys
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHanded
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[R
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM ((rcKeysHandedOverQ;'Yes' [YesNo];(rcKeysHandedOverQ /\ De

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[R
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
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' [YesNo];rcKeysHanded
PICK a,b FROM rcRenter~;((rcKeysHandedOverQ;'Yes' [YesNo];(rcKeys
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHanded
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[R
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM ((rcKeysHandedOverQ;'Yes' [YesNo];(rcKeysHandedOverQ /\ De

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[R
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) /\

<-----End Derivation --

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ON INSERT Delta IN rcIssuedCar[RentalCase*Car] EXECUTE -- (ECA rule 47)
ONE OF INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIssued

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIss
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcIssuedCar /\ -(contractedCar

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THEN INSERT INTO contractedCarType[RentalCase*CarType]
      SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN -rcIssuedCar \/ contractedCarType;carType~ FROM
PICK a,b FROM contractedCarType~;((rcIssuedCar /\ -(contractedCarType~
THEN INSERT INTO carType[Car*CarType]
      SELECTFROM 'b'[Car]*'a'[CarType]

      (TO MAINTAIN -rcIssuedCar \/ contractedCarType;carType~ FROM
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car t;
NEW x:CarType;
  ALL of INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM ((rcIssuedCar /\ -(contractedCarType;carType~)) \/ (
        (TO MAINTAIN -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car t;
INSERT INTO carType[Car*CarType]
        SELECTFROM ((rcIssuedCar~ /\ -(carType;contractedCarType~)) \/ (
        (TO MAINTAIN -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car t;
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car t;
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car t;
INSERT INTO carType[Car*CarType]
        SELECTFROM (rcIssuedCar~;contractedCarType /\ -carType) \/ (Delta~;contractedCarType~)

(TO MAINTAIN -(contractedCarType~;rcIssuedCar) \/ carType~ FROM Rented car t;
INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType~;rcIssuedCar;carType /\ -I[CarType]) \/ (contractedCarType~;rcIssuedCar)

(TO MAINTAIN -(contractedCarType~;rcIssuedCar;carType) \/ I[CarType] FROM Rented car t;
INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM (rcIssuedCar;carType /\ -contractedCarType) \/ (Delta;carType~;rcIssuedCar)

(TO MAINTAIN -(rcIssuedCar;carType) \/ contractedCarType FROM Rented car t;
INSERT INTO Isn{dety=Car}
        SELECTFROM (rcIssuedCar \/ Delta)~;rcDroppedOffCar /\ -I[Car]

(TO MAINTAIN -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off car t;
INSERT INTO rentalBasicCharge[RentalCase*Amount]
        SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariff)~;rcDroppedOffCar)

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

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

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

```


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

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcIssuedCar;(rcIssuedCar \/\ D

THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [

THEN INSERT INTO rentalPeriod[RentalCase

SELECTFROM 'a' [RentalCase]*'b' [Int

(TO MAINTAIN -(rcIssuedCar;rcIssue

PICK a,b FROM rentalPeriod~;('a' [RentalC

THEN INSERT INTO ctcNrOfDays[CompTariffe

SELECTFROM 'b' [CompTariffedCharge]

(TO MAINTAIN -(rcIssuedCar;rcIssue

(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rent

NEW x:Integer;

ALL of INSERT INTO rentalPeriod[RentalCase*In

SELECTFROM 'a' [RentalCase]*'b' [CompTa

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar

INSERT INTO ctcNrOfDays[CompTariffedCh

SELECTFROM 'b' [CompTariffedCharge]*'a

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar

(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ re

(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rent

(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [

THEN INSERT INTO rcIssuedCar[RentalCase*

SELECTFROM 'a' [RentalCase]*'b' [Car

(TO MAINTAIN -(rcIssuedCar;rcIssue

PICK a,b FROM rcIssuedCar~;('a' [RentalC

THEN ONE OF ONE NONEMPTY ALTERNATIVE OF

THEN INSERT INTO carT

SELECTFROM 'a' [

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PICK a,b FROM carType

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
    THEN INSERT INTO carType
        SELECTFROM 'a' [Car]

        (TO MAINTAIN -(rcI
PICK a,b FROM carType~;(
THEN ONE OF ONE NONEMPTY
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THEN

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NEW x:Amount
    ALL of INS
    SE

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(MAINTAINING -(rcIs
(MAINTAINING -(rcIssuedCar;rcIs
NEW x:CarType;
    ALL of INSERT INTO carType[Car]
        SELECTFROM 'x' [Car]*'

(TO MAINTAIN -(rcIssu
ONE OF ONE NONEMPTY AL
    THEN INS
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PICK a,b
THEN INS
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(MAINTAINING -(
NEW x:Amount;
    ALL of INSERT
    SELEC

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(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcIssuedCar /\ -(contractedCarType
      THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

      (TO MAINTAIN  -rcIssuedCar /\ contractedCarType;carType~ FROM Rent
      PICK a,b FROM contractedCarType~;((rcIssuedCar /\ -(contractedCarType;c
      THEN INSERT INTO carType[Car*CarType]
        SELECTFROM 'b'[Car]*'a'[CarType]

      (TO MAINTAIN  -rcIssuedCar /\ contractedCarType;carType~ FROM Rent
(MAINTAINING -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type i
NEW x:CarType;
  ALL of INSERT INTO contractedCarType[RentalCase*CarType]
    SELECTFROM ((rcIssuedCar /\ -(contractedCarType;carType~)) /\ (Delta

      (TO MAINTAIN  -rcIssuedCar /\ contractedCarType;carType~ FROM Rented
      INSERT INTO carType[Car*CarType]
        SELECTFROM ((rcIssuedCar~ /\ -(carType;contractedCarType~)) /\ (Delt

      (TO MAINTAIN  -rcIssuedCar /\ contractedCarType;carType~ FROM Rented
      (MAINTAINING -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type
(MAINTAINING -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type i
      INSERT INTO carType[Car*CarType]
        SELECTFROM (rcIssuedCar~;contractedCarType /\ -carType) /\ (Delta~;contracted

      (TO MAINTAIN  -(contractedCarType~;rcIssuedCar) /\ carType~ FROM Rented car ty
      INSERT INTO Isn{dety=CarType}
        SELECTFROM (contractedCarType~;rcIssuedCar;carType /\ -I[CarType]) /\ (contra

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

      (TO MAINTAIN  -(rcIssuedCar;carType) /\ contractedCarType FROM Rented car type
      INSERT INTO Isn{dety=Car}
        SELECTFROM (rcIssuedCar /\ Delta~;rcDroppedOffCar /\ -I[Car]

      (TO MAINTAIN  -(rcIssuedCar~;rcDroppedOffCar) /\ I[Car] FROM Dropped-off car t
      INSERT INTO rentalBasicCharge[RentalCase*Amount]
        SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer

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

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

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

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcIssuedCar;(rcIssuedCar /\ Delta)
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 -(rcIssuedCar;rcIssuedCar~
PICK a,b FROM rentalPeriod~;('a'[RentalCase]*
THEN INSERT INTO ctcNrOfDays[CompTariffedChar
SELECTFROM 'b'[CompTariffedCharge]*'a'[

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
NEW x:Integer;
ALL of INSERT INTO rentalPeriod[RentalCase*Integer
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\
INSERT INTO ctcNrOfDays[CompTariffedCharge*
SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalP
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;ren
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
THEN INSERT INTO rcIssuedCar[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[Car]

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~
PICK a,b FROM rcIssuedCar~;('a'[RentalCase]*'
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
THEN INSERT INTO carType[C
SELECTFROM 'a'[Car]*

(TO MAINTAIN -(rcIss
PICK a,b FROM carType~;('a
THEN ONE OF ONE NONEMPTY A
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NEW x:CarType;
ALL of INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rcIssued
ONE OF ONE NONEMPTY ALTE
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NEW x:Amount;
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(MAINAINING -(rcIssuedCar;rcIssuedCar~
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
NEW x:Car;
ALL of INSERT INTO rcIssuedCar[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

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(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
    THEN INSERT INTO carType[Car*
        SELECTFROM 'a'[Car]*'b'

        (TO MAINTAIN -(rcIssued
PICK a,b FROM carType~;'x'[C
THEN ONE OF ONE NONEMPTY ALTE
    THEN INSER
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        SELE

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NEW x:Amount;
    ALL of INSERT I
        SELECTF

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        SELECTF

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(MAINTAINING -(rcIssuedCar;rcIssuedC
NEW x:CarType;
    ALL of INSERT INTO carType[Car*Car
        SELECTFROM 'x'[Car]*'a'[Re

        (TO MAINTAIN -(rcIssuedCar
ONE OF ONE NONEMPTY ALTERNA
    THEN INSERT I
        SELECTF

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PICK a,b FROM
THEN INSERT I
        SELECTF

        (TO MAIN
(MAINTAINING -(rcIss
NEW x:Amount;
    ALL of INSERT INTO

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(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalP
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;ren
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeri
PICK a,b FROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariff
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger regul
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Ren
INSERT INTO Isn{detyp=Car}
SELECTFROM ((rcIssuedCar \/ Delta)~;rcIssuedCar /\ -I[Car]) \/ ((rcIssuedCar

(TO MAINTAIN -(rcIssuedCar~;rcIssuedCar) \/ I[Car] FROM UNI rcIssuedCar::Rent
INSERT INTO Isn{detyp=RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -rcIssuedCar \/ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase
(MAINTAINING -(rcIssuedCar~;rcIssuedCar) \/ I[Car] FROM UNI rcIssuedCar::RentalCase*C

<-----End Derivation --

ON DELETE Delta FROM rcIssuedCar[RentalCase*Car] EXECUTE -- (ECA rule 48)

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

(TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM (-rcIssuedCar /\ rcDroppedOffCar) \/ (Delta /\ rcDroppedOffCar

(TO MAINTAIN -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type i
ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ (rcIssuedCar /\ -Delta

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

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPer
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ (rcIssuedCar /\ -Delta

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

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

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPer
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-((rentalExcessPeriod;ctcNrOfDays~ /\ (rcIssuedCar /\

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

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Rental
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ (rcIssuedCar /\

(TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[Rental
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase)) \
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHa
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Renta
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase)) \/ (rent

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

```

ALL of DELETE FROM Isn{dety=Car}
      SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -((rcIssuedCar /\ -Delta)~;(rc
      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHasBeen
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM (-rcIssuedCar /\ rcDroppedOffCar) \/ (Delta /\ rcDroppedOffCar)

(TO MAINTAIN -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM -((rentalPeriod;ctcNrOfDays~ /\ (rcIssuedCar /\ -Delta);car

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

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

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

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

      (TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase]
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM -((rentalExcessPeriod;ctcNrOfDays~ /\ (rcIssuedCar /\ -Delta);car

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

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

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExcessPeriod;
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHasBeen
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase]
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExcessPeriod;

```

<-----End Derivation --

```

ON INSERT Delta IN rentalHasBeenEnded[RentalCase*RentalCase] EXECUTE    -- (ECA
INSERT INTO Isn{dety= RentalCase}
SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase] /\ (Delta~;Delta /\

```

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

```

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

```

<-----End Derivation --

```

ON DELETE Delta FROM rentalHasBeenEnded[RentalCase*RentalCase] EXECUTE    -- (EC
ALL of DELETE FROM Isn{dety=Car}
SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcIssuedCar~;(rentalHas

(TO MAINTAIN -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;(
ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];re

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];re

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];re

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];r

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rcDroppedOffCar[RentalCase*Car]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];re

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDro
DELETE FROM rcDroppedOffCar[RentalCase*Car]

```

```

SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
DELETE FROM Isn{dety=Car}
SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
(MAINTAINING  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
(MAINTAINING  -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;(rentalHasBeenStarted[RentalCase*Car]
(MAINTAINING  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

```

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

```

ALL of DELETE FROM Isn{dety=Car}
SELECTFROM -(carAvailableAt;carAvailableAt~) /\ -(rcIssuedCar~;(rentalHasBeenStarted[RentalCase*Car]

(TO MAINTAIN  -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;(rentalHasBeenStarted[RentalCase*Car]
ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]
DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch[RentalCase*Branch]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffDate[RentalCase*Date]
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffDate[RentalCase*Date]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffDate[RentalCase*Date]
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffDate[RentalCase*Date]

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar[RentalCase*Car]
DELETE FROM rcDroppedOffCar[RentalCase*Car]
SELECTFROM ((-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar[RentalCase*Car]

```

```

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM ((-rentalHasBeenEnded~ /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar) /\ rcDroppedOffCar) /\ rcDroppedOffCar

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar
DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar) /\ rcDroppedOffCar

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM (-rentalHasBeenEnded /\ rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar) /\ rcDroppedOffCar

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar
      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar) /\ rcDroppedOffCar
(MAINTAINING -I[Car] /\ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;(rentalHasBeenEnded /\ rcDroppedOffCar) /\ rcDroppedOffCar
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar;rcDroppedOffCar) /\ rcDroppedOffCar

```

<-----End Derivation --

```

ON INSERT Delta IN rcDroppedOffCar[RentalCase*Car] EXECUTE  -- (ECA rule 51)
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar) /\ rcDroppedOffCar

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar
INSERT INTO rcIssuedCar[RentalCase*Car]
      SELECTFROM (rcDroppedOffCar /\ -rcIssuedCar) /\ (Delta /\ -rcIssuedCar)

      (TO MAINTAIN  -rcDroppedOffCar /\ rcIssuedCar FROM Dropped-off car type integrity
INSERT INTO Isn{dety=Car}
      SELECTFROM (rcIssuedCar~;rcDroppedOffCar /\ -I[Car]) /\ (rcIssuedCar~;Delta /\ -rcIssuedCar)

      (TO MAINTAIN  -(rcIssuedCar~;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'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar;rcDroppedOffCar) /\ rcDroppedOffCar
      (MAINTAINING -rcDroppedOffCar /\ rcIssuedCar FROM Dropped-off car type integrity
      (MAINTAINING -rcDroppedOffCar /\ rcIssuedCar FROM Dropped-off car type integrity
      (MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) /\ I[Car] FROM UNI rcDroppedOffCar

```

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

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ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar;rcDroppedOffCar) /\ rcDroppedOffCar

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffCar) /\ rcDroppedOffCar

```

```

INSERT INTO rcIssuedCar[RentalCase*Car]
  SELECTFROM (rcDroppedOffCar /\ -rcIssuedCar) \/ (Delta /\ -rcIssuedCar)

(TO MAINTAIN -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
INSERT INTO Isn{dety=Car}
  SELECTFROM (rcIssuedCar~;rcDroppedOffCar /\ -I[Car]) \/ (rcIssuedCar~;Delta /\ -rcDroppedOffCar)

(TO MAINTAIN -(rcIssuedCar~;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'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDroppedOffCar)
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
(MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar::)

<-----End Derivation --

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ON INSERT Delta IN rcDroppedOffDate[RentalCase*Date] EXECUTE -- (ECA rule 53)
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
  SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDroppedOffDate)

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDroppedOffDate)
INSERT INTO rentalPeriod[RentalCase*Integer]
  SELECTFROM ((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
INSERT INTO Isn{dety=Integer}
  SELECTFROM (rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)
(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedStartDate;firstDate)
INSERT INTO rentalExcessPeriod[RentalCase*Integer]
  SELECTFROM ((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate)

(TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate)
INSERT INTO Isn{dety=Date}
  SELECTFROM ((rcDroppedOffDate \/ Delta)~;rcDroppedOffDate /\ -I[Date]) \

(TO MAINTAIN -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDroppedOffDate)
INSERT INTO Isn{dety=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'[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[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~)
        NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
        INSERT INTO earliestDate[DateDifferencePlusOne]
        SELECTFROM 'b'[DateDifferencePlusOne]

        (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'[RentalCase]
        THEN INSERT INTO rcDroppedOffDate[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (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~ /\ c
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contract
        PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate~)
        THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Triggers
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ 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 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*DateDifference]
SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate~)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [RentalCase]
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*DateDifference]
SELECTFROM 'b' [DateDifference]*'a' [RentalCase]

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~)
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate~)
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate~)
THEN BLOCK
(CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger except
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate~)

```

```

(MAINAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;r
(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;contrac
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
(MAINAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDropped

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

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ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;r

    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch
    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 -(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)~;rcDroppedOffDate /\ -I[Date]) \/ ((r

    (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[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
(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[DateDifferencePlu
SELECTFROM 'b' [DateDifferencePlusOne]*'

(TO MAINTAIN -(rcDroppedOffDate;rcDropp
(MAINTAINING -(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' [

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedO
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedSta
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDrope
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger re
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
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
SELECTFROM 'b' [DateDifference]*'a' [Date]

(TO MAINTAIN -(rcDroppedOffDate;rcDropp

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```

(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
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(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
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contra
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEnd
PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDat
    THEN BLOCK
        (CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger excess pe
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contrac
(MAINAINING -(rentalIsPaidQ;'Yes' [YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDropp
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD
(MAINAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDroppedOffDa

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<-----End Derivation --

```

ON DELETE Delta FROM rcDroppedOffDate[RentalCase*Date] EXECUTE    -- (ECA rule 5)
ALL of ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
    SELECTFROM (-((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
        DELETE FROM rcDroppedOffDate[RentalCase*Date]
        SELECTFROM (- (V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedStartDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
        DELETE FROM contractedStartDate[RentalCase*Date]
        SELECTFROM (-((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate;contractedStartDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
        DELETE FROM contractedStartDate[RentalCase*Date]
        SELECTFROM (- (V[RentalCase*DateDifferencePlusOne];(earliestDate;contractedStartDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
        DELETE FROM Isn{dety=RentalCase}
        SELECTFROM -((contractedStartDate;earliestDate~ /\ (rcDroppedOffDate;contractedStartDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate;
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
    SELECTFROM (-((contractedEndDate;firstDate~ /\ (rcDroppedOffDate;contractedEndDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;
        DELETE FROM rcDroppedOffDate[RentalCase*Date]
        SELECTFROM (- (V[RentalCase*DateDifference];(firstDate;contractedEndDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;
        DELETE FROM contractedEndDate[RentalCase*Date]
        SELECTFROM (-((contractedEndDate;firstDate~ /\ (rcDroppedOffDate;contractedEndDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;
        DELETE FROM contractedEndDate[RentalCase*Date]
        SELECTFROM (- (V[RentalCase*DateDifference];(firstDate;contractedEndDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;
        DELETE FROM Isn{dety=RentalCase}
        SELECTFROM -((contractedEndDate;firstDate~ /\ (rcDroppedOffDate;contractedEndDate;
        (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate;
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate;
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate;

```

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

```

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
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contr
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -((contractedEndDate;firstDate~ /\ (rcDroppedOffDate /\ -D

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDat

      (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
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD

```

<-----End Derivation --


```

ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
      SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch
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)~;rcDroppedOffBranch /\ -I[Branch])

      (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[DistanceBetweenLocat
            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

            (TO MAINTAIN -(rcDroppedOffBranch;distbranch~ /\ contractedDr
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distb
      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop
      (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
      (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
      (MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
      (MAINTAINING -(rcDroppedOffBranch~;rcDroppedOffBranch) \/ I[Branch] FROM UNI rcDroppe

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<-----End Derivation --


```

ON INSERT Delta IN rentalIsPaidQ[RentalCase*YesNo] EXECUTE -- (ECA rule 57)
ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ \ / Delta)~ /\ rcDro
    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOff
    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'[YesNo];rentalIsPaidQ~ /\ rcDroppedOff
        PICK a,b FROM rentalCharge~;((rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ~ /\ rcDroppedOff
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM 'b'[RentalCase]*'a'[Amount]
        (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOff
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]
        NEW x:Amount;
        INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM ((rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ \ / Delta)~ /\ rcDroppedOff
        (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]
        INSERT INTO Isn{dety=Amount}
            SELECTFROM (rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ \ / Delta)~ /\ rcDroppedOff
        (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOff
        INSERT INTO Isn{dety=RentalCase}
            SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]
        INSERT INTO Isn{dety=YesNo}
            SELECTFROM (Delta~;Delta /\ I[YesNo]) - I[YesNo]
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;r
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ / re
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ / re

```

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

```

ALL of INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ \ / Delta)~ /\ rcDroppedOffBranch;r
    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;r
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ~ /\ rcDroppedOffBranch;r
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
            SELECTFROM 'a'[RentalCase]*'b'[Amount]

```

```

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /
PICK a,b FROM rentalCharge~;((rentalIsPaidQ;'Yes'[YesNo];(rental
THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'b'[RentalCase]*'a'[Amount]

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCas
NEW x:Amount;
        INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM ((rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ /\ Delta)~ /\

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Rental
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCas
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) /\
INSERT INTO Isn{detyp=Amount}
        SELECTFROM (rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];(rentalIsPaidQ /\ Delta)

(TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
INSERT INTO Isn{detyp=RentalCase}
        SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

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

(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) /\ rentalC
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) /\ rentalC

<-----End Derivation --

```

```

ON INSERT Delta IN rentalPeriod[RentalCase*Integer] EXECUTE      -- (ECA rule 59)
ALL of INSERT INTO Isn{detyp=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~ /\ rcIssuedCar;carType;rentalTari

        (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalT
INSERT INTO Isn{detyp=Amount}
        SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar

        (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
INSERT INTO Isn{detyp=RentalCase}
        SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcIssuedCar;rcIssuedCar~ /\ r

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[illegible]

```

      (TO MAINTAIN  -(rcIssuedCar;rcIssue
(MAINTAINING  -(rcIssuedCar;rcIssuedCar~ /\ rent.
NEW x:Integer;

```

```
(TO MAINTAIN  -(rcIssuedCar;rcIssuedCar
INSERT INTO ctcNrOfDays[CompTariffedCh
SELECTFROM 'b'[CompTariffedCharge]*'a
```

```

(MAINTEINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
      THEN INSERT INTO rcIssuedCar[RentalCase*
      SELECTFROM 'a'[RentalCase]*'b'[Car

```

```

      (TO MAINTAIN  -(
PICK a,b FROM carType
THEN ONE OF ONE NONEM
      TH

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```

      (TO MAINTAIN  -(rcIssuedCar;rcIs
PICK a,b FROM carType~;(
THEN ONE OF ONE NONEMPTY
      THEN

PICK
THEN

(MAINTAINING
NEW x:Amount
ALL of INS
SE

(TO
INS
SE

(TO
(MAINTAINING
(MAINTAINING
(MAINTAINING -(rcIss
(MAINTAINING -(rcIssuedCar;rcIs
NEW x:CarType;
ALL of INSERT INTO carType[Car
      SELECTFROM 'x'[Car]*'.

(TO MAINTAIN  -(rcIssuedCar;rcIs
ONE OF ONE NONEMPTY AL
      THEN INS
      SE

(TO
PICK a,b
THEN INS
SE

(TO
(MAINTAINING -(rcIssuedCar;rcIs
NEW x:Amount;
ALL of INSERT
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(TO MA
(MAINTAINING -(
(MAINTAINING -(rcIssue
(MAINTAINING -(rcIssuedCar;rc
(MAINTAINING -(rcIssuedCar;rcIs
(MAINTAINING -(rcIssuedCar;rcIssuedCar
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ re
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rent
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rental
PICK a,b FROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalT
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger :
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPeri
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPeri
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINTAINING -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPeriod:

```

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

```

ALL of INSERT INTO Isn{detyp=Integer}
  SELECTFROM ((rentalPeriod \/ Delta)~;(contractedStartDate;earliestDate~ /\ rc

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedO
(TO MAINTAIN -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPerio
INSERT INTO rentalBasicCharge[RentalCase*Amount]
  SELECTFROM ((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariff
INSERT INTO Isn{detyp=Amount}
  SELECTFROM (rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carT

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
INSERT INTO Isn{detyp=RentalCase}
  SELECTFROM (Delta;Delta~ /\ I[RentalCase]) - I[RentalCase]

ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcIssuedCar;rcIssuedCar~ /\ rental
  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 -(rcIssuedCar;rcIssuedCar~
      PICK a,b FROM rentalPeriod~;('a'[RentalCase]*
      THEN INSERT INTO ctcNrOfDays[CompTariffedChar
        SELECTFROM 'b'[CompTariffedCharge]*'a'[

```

```

        (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
NEW x:Integer;
    ALL of INSERT INTO rentalPeriod[RentalCase*Integer
        SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

        (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\
INSERT INTO ctcNrOfDays[CompTariffedCharge*
        SELECTFROM 'b'[CompTariffedCharge]*'a'[Ren

        (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\
        (MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalP
        (MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;ren
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[Renta
        THEN INSERT INTO rcIssuedCar[RentalCase*Car]
            SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~
PICK a,b FROM rcIssuedCar~;('a'[RentalCase]*'
        THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
            THEN INSERT INTO carType[C
                SELECTFROM 'a'[Car]*

                (TO MAINTAIN  -(rcIss
PICK a,b FROM carType~;('a
        THEN ONE OF ONE NONEMPTY A
            THEN IN
                S

                (T
PICK a,
        THEN IN
            S

                (T
(MAINAINING -
NEW x:Amount;
        ALL of INSE
            SELE

                (TO M
INSE
            SELE

                (TO M
(MAINAINING
(MAINAINING -
(MAINAINING -(rcIssu

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(MAINAINING -(rcIssuedCar;rcIssu
NEW x:CarType;
  ALL of INSERT INTO carType[Car*
    SELECTFROM 'a'[Car]*'b'

      (TO MAINTAIN -(rcIssued
      ONE OF ONE NONEMPTY ALTE
        THEN INSE
          SELE

            (TO M
            PICK a,b F
            THEN INSE
              SELE

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                (MAINAINING -(rc
                NEW x:Amount;
                ALL of INSERT I
                SELECTF

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                  INSERT I
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                    (MAINAINING -(
                    (MAINAINING -(rc
                    (MAINAINING -(rcIssuedC
                    (MAINAINING -(rcIssuedCar;rcIs
                    (MAINAINING -(rcIssuedCar;rcIssu
                    (MAINAINING -(rcIssuedCar;rcIssuedCar~
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
NEW x:Car;
  ALL of INSERT INTO rcIssuedCar[RentalCase*Car]
    SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

      (TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
        THEN INSERT INTO carType[Car*
          SELECTFROM 'a'[Car]*'b'

            (TO MAINTAIN -(rcIssued
            PICK a,b FROM carType~;('x'[C
            THEN ONE OF ONE NONEMPTY ALTE
              THEN INSE
                SELE

                  (TO M
                  PICK a,b F

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THEN INSERT
SELECT

(TO MA
(MAINAINING -(rc
NEW x:Amount;
ALL of INSERT I
SELECTF

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INSERT I
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(TO MAIN
(MAINAINING -(
(MAINAINING -(rc
(MAINAINING -(rcIssuedC
(MAINAINING -(rcIssuedCar;rcIssuedC
NEW x:CarType;
ALL of INSERT INTO carType[Car*Car
SELECTFROM 'x'[Car]*'a'[Re

(TO MAINTAIN -(rcIssuedCar
ONE OF ONE NONEMPTY ALTERNA
THEN INSERT I
SELECTF

(TO MAIN
PICK a,b FROM
THEN INSERT I
SELECTF

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NEW x:Amount;
ALL of INSERT INTO
SELECTFROM

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INSERT INTO
SELECTFROM

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(MAINAINING -(rcI
(MAINAINING -(rcIss
(MAINAINING -(rcIssuedCar;
(MAINAINING -(rcIssuedCar;rcIssue
(MAINAINING -(rcIssuedCar;rcIssuedC
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalP

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(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;re
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeri
PICK a,b FROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariff
THEN BLOCK
(CANNOT CHANGE V[CompTariffedCharge*RentalCase] FROM Trigger regul
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Ren
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase
(MAINAINING -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPeriod::Renta

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<-----End Derivation --

```

ON DELETE Delta FROM rentalPeriod[RentalCase*Integer] EXECUTE -- (ECA rule 60
ALL of ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM ((-rentalPeriod /\ (contractedStartDate;earliestDate~

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;((-rentalPeriod~ /\ computedRentalPeriod;

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM ((-rentalPeriod /\ (contractedStartDate;earliestDate~

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
DELETE FROM latestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;((-rentalPeriod~ /\ computedRentalPeriod;

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate;

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c

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

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod;rentalPeriod~ /\ I[Ren
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c

```

```

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

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

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPer
      (MAINTAINING  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\
(MAINTAINING  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate
(MAINTAINING  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Renta

```

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

```

ALL of ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  ((-rentalPeriod /\ (contractedStartDate;earliestDate~ /\ rc

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM  computedRentalPeriod;((-rentalPeriod~ /\ computedRentalPeri

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM  ((-rentalPeriod /\ (contractedStartDate;earliestDate~ /\ rc

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
DELETE FROM latestDate[DateDifferencePlusOne*Date]
      SELECTFROM  computedRentalPeriod;((-rentalPeriod~ /\ computedRentalPeri

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
      SELECTFROM  (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedO

      (TO MAINTAIN  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;
(MAINTAINING  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDa
ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM  (-(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssuedCar;ca

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

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

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~

```

```

DELETE FROM rentalPeriod[RentalCase*Integer]
  SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;(rentalPer

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~
DELETE FROM Isn{dety=rentalCase}
  SELECTFROM -(((rentalPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssuedCar;car

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Ren
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -(rcIssuedCar;rcIssuedCar~ /\ 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~ /\

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
(TO MAINTAIN -(rentalBasicCharge~;rentalBasicCharge) /\ I[Amount] FROM U
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~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
      PICK a,b FROM rentalBasicCharge~;('a'[RentalCase]*'b'[Amount])
      THEN INSERT INTO arg1[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[RentalCase]

      (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
(MAINTAINING -(rentalLocationPenaltyCharge;rentalBasicCharge;arg1~ /\ rentalPenaltyCh
NEW x:Amount;
  ALL of INSERT INTO rentalBasicCharge[RentalCase*Amount]
    SELECTFROM 'a'[RentalCase]*'b'[CompRentalCharge*Amount]

    (TO MAINTAIN -(rentalLocationPenaltyCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
    INSERT INTO arg1[CompRentalCharge*Amount]
      SELECTFROM 'b'[CompRentalCharge]*'a'[RentalCase]

```



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        (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 -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINTAINING -(rentalBasicCharge~;rentalBasicCharge) /\ I[Amount] FROM UNI rental

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

```

ALL of INSERT INTO Isn{dety=Amount}
    SELECTFROM ((rentalBasicCharge /\ Delta~;(rentalPeriod;ctcNrOfDays~ /\ rcIss

    (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
    (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
    (TO MAINTAIN -(rentalBasicCharge~;rentalBasicCharge) /\ I[Amount] FROM UNI re
    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;rental
    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
    (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;rentalLoc

```

```

(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
    (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~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
            (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~ /\ rcIssuedCar;carType;
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
    SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ comput
    (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
DELETE FROM rcIssuedCar[RentalCase*Car]
    SELECTFROM ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\ :
    (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
DELETE FROM carType[Car*CarType]
    SELECTFROM rcIssuedCar~;((-rentalBasicCharge /\ (rentalPeriod;ctc
    (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
DELETE FROM rentalTariffPerDay[CarType*Amount]
    SELECTFROM carType~;rcIssuedCar~;((-rentalBasicCharge /\ (rentalP
    (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
    SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ comput
    (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
    SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTar
    (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTar
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenal
    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCh

```



```

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenal

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCh

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  (-(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenal

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCh

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM Isn{dety=RentalCase}
      SELECTFROM  -(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenalt;

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
      (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      (MAINTAINING  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
      (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental

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

```

ALL of ONE OF DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\ rcIss

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;renta
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
      SELECTFROM  computedTariffedCharge;((-rentalBasicCharge~ /\ computedTar

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;renta
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM  ((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfDays~ /\ rcIss

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;renta
DELETE FROM carType[Car*CarType]
      SELECTFROM  rcIssuedCar~;((-rentalBasicCharge /\ (rentalPeriod;ctcNrOfD

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;renta
DELETE FROM rentalTariffPerDay[CarType*Amount]
      SELECTFROM  carType~;rcIssuedCar~;((-rentalBasicCharge /\ (rentalPeriod

      (TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;renta
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]

```

```

SELECTFROM computedTariffedCharge;((-rentalBasicCharge~ /\ computedTariffPerDay;rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod)

DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPerDay;rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod

(TO MAINTAIN  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod)

(MAINTAINING  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod)

ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM  -(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM  -(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;(rentalBasicCharge~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

DELETE FROM Isn{detyp=RentalCase}
SELECTFROM  -(((rentalBasicCharge /\ -Delta);arg1~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

(MAINTAINING  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod)

(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]) /\ rentalPenaltyCharge[RentalCase*Amount]

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<-----End Derivation --

```

ON INSERT Delta IN rentalExcessPeriod[RentalCase*Integer] EXECUTE  -- (ECA rule)
ALL of INSERT INTO Isn{detyp=Integer}
SELECTFROM ((rentalExcessPeriod /\ Delta)~;(rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod

(TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ rentalExcessPeriod) /\ rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod)

(TO MAINTAIN  -(rentalExcessPeriod~;rentalExcessPeriod) /\ I[Integer] FROM rentalExcessPeriod)

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```

INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
  SELECTFROM ((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;exce

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

(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;(rentalExc
  THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[R
    THEN INSERT INTO rentalExcessPeriod[RentalCase]
      SELECTFROM 'a'[RentalCase]*'b'[Int

      (TO MAINTAIN -(rentalExcessPeriod;
      PICK a,b FROM rentalExcessPeriod~;('a'[R
      THEN INSERT INTO ctcNrOfDays[CompTariffedCharge]
        SELECTFROM 'b'[CompTariffedCharge]

      (TO MAINTAIN -(rentalExcessPeriod;
      (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~;
      NEW x:Integer;
      ALL of INSERT INTO rentalExcessPeriod[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~;
      INSERT INTO ctcNrOfDays[CompTariffedCharge]
        SELECTFROM 'b'[CompTariffedCharge]*'a'

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~;
      (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~;
      (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~;
      (MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~;
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO rcIssuedCar[RentalCase*Amount]
          SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~;
      PICK a,b FROM rcIssuedCar~;('a'[RentalCase]
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO carType[CompTariffedCharge]
          SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~;
      PICK a,b FROM carType[CompTariffedCharge]
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
        THEN INSERT INTO carType[CompTariffedCharge]
          SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

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THEN

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SELECTFROM 'a' [Car

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NEW x:Car;
  ALL of INSERT INTO rcIssuedCar[RentalCase*Car
    SELECTFROM 'a'[RentalCase]*'b'[CompTa

  (TO MAINTAIN -(rentalExcessPeriod;ren
  ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
    THEN INSERT INTO carType
      SELECTFROM 'a'[Car

      (TO MAINTAIN -(ren
      PICK a,b FROM carType~;(
      THEN ONE OF ONE NONEMPTY
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        (MAINTAINING -(rentalExcessPeri
        NEW x:CarType;
        ALL of INSERT INTO carType[Car
          SELECTFROM 'x'[Car]*'

          (TO MAINTAIN -(rental
          ONE OF ONE NONEMPTY AL
            THEN INS
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(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]) \
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (rent
(MAINTAINING -(rentalExcessPeriod~;rentalExcessPeriod) /\ I[Integer] FROM UNI re

```

----- 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~ /\ rcIssuedCar;carType;excessTar

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excess
INSERT INTO Isn{detyp=Amount}
  SELECTFROM (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIssued

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss

```

```

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

```

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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 rcIssuedCar[RentalCase*Car]
    SELECTFROM 'a'[RentalCase]*'b'[Car]

```

```

      (TO MAINTAIN -(rentalExcessPeriod;renta
PICK a,b FROM rcIssuedCar~;('a'[RentalCase]*'
  THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
    THEN INSERT INTO carType[C
      SELECTFROM 'a'[Car]*

```

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      (TO MAINTAIN -(renta
PICK a,b FROM carType~;('a
  THEN ONE OF ONE NONEMPTY A

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PICK a,
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NEW x:Amount;
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(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 INSE
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PICK a,b F
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NEW x:Amount;
ALL of INSERT I
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(MAINTAINING -(rentalExcessPeriod;rental
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod
NEW x:Car;
ALL of INSERT INTO rcIssuedCar[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

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PICK a,b F
THEN INSE
        SELE

        (TO M
(MAINTAINING -(re
NEW x:Amount;
    ALL of INSERT I
        SELECTF

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INSERT I
        SELECTF

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(MAINTAINING -(
(MAINTAINING -(re
(MAINTAINING -(rentalExc
(MAINTAINING -(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
(MAINTAINING -(renta
NEW x:Amount;
    ALL of INSERT INTO
        SELECTFROM

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                                                    (TO MAINTAIN
                                                    INSERT INTO
                                                    SELECTFROM

                                                    (TO MAINTAIN
                                                    (MAINTAINING -(ren
                                                    (MAINTAINING -(renta
                                                    (MAINTAINING -(rentalExcess
                                                    (MAINTAINING -(rentalExcessPeriod;
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                                                    (MAINTAINING -(rentalExcessPeriod;rentalExcessPeri
                                                    (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 /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays /\ rcIssuedCar;carType;excessTariffPe
(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

```

```

(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcIss

      (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{detypr=RentalCase}
      SELECTFROM -(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssued

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \ / (rentalExc

```

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

```

ALL of ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM ((-rentalExcessPeriod /\ (rcDroppedOffDate;lastDate~ /\ contractedEndD

      (TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
DELETE FROM lastDate[DateDifference*Date]
      SELECTFROM computedNrOfExcessDays;((-rentalExcessPeriod~ /\ computedNrOfExcessDays

      (TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM ((-rentalExcessPeriod /\ (rcDroppedOffDate;lastDate~ /\ contractedEndD

      (TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
DELETE FROM firstDate[DateDifference*Date]
      SELECTFROM computedNrOfExcessDays;((-rentalExcessPeriod~ /\ computedNrOfExcessDays

      (TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
      SELECTFROM (lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~

      (TO MAINTAIN -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate
(MAINAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);co
ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM (-(((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssued

      (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=RentCase}
SELECTFROM -((rentalExcessPeriod /\ -Delta);ctcNrOfDays~ /\ rcIssuedC

      (TO MAINTAIN -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/\ (re
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedM
(MAINTAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/\ (rentalExc

<-----End Derivation --

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```

ON INSERT Delta IN rentalPenaltyCharge[RentalCase*Amount] EXECUTE -- (ECA rule
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~;rentalBasicCharge~;('a'[RentalCase]
      PICK a,b FROM rentalBasicCharge~;('a'[RentalCase]*'b'[Amount]
      THEN INSERT INTO arg1[CompRentalCharge*Amount]
      SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

      (TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]
      (MAINTAINING -(rentalLocationPenaltyCharge;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]
      NEW x:Amount;
      ALL of INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM 'a'[RentalCase]*'b'[CompRentalCharge*Amount]

      (TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]
      INSERT INTO arg1[CompRentalCharge*Amount]
      SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

      (TO MAINTAIN -(rentalLocationPenaltyCharge~;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]
      (MAINTAINING -(rentalLocationPenaltyCharge;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]
      (MAINTAINING -(rentalLocationPenaltyCharge;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]
      (MAINTAINING -(rentalLocationPenaltyCharge;rentalBasicCharge~;rentalBasicCharge~;('a'[RentalCase]

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(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINAINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UNI r

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

```

ALL of INSERT INTO Isn{dety=Amount}
    SELECTFROM ((rentalPenaltyCharge \/ Delta)~;(rentalExcessPeriod;ctcNrOfDays~

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
(TO MAINTAIN -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UN
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;rental
    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
INSERT INTO arg1[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[Renta

        (TO MAINTAIN -(rentalLocationPenaltyCharge
(MAINAINING -(rentalLocationPenaltyCharge;rentalL
(MAINAINING -(rentalLocationPenaltyCharge;rentalLoc
(MAINAINING -(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 -(rentalLocationPenaltyCharge
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~ /\ rcIssuedCar;carType;excessTariffPe

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```

(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
(MAINAINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UNI rental

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<-----End Derivation --

```

ON DELETE Delta FROM rentalPenaltyCharge[RentalCase*Amount] EXECUTE -- (ECA r
ALL of ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
    SELECTFROM ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
    SELECTFROM computedTariffedCharge;((-rentalPenaltyCharge~ /\ comp
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    DELETE FROM rcIssuedCar[RentalCase*Car]
    SELECTFROM ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    DELETE FROM carType[Car*CarType]
    SELECTFROM rcIssuedCar~;((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    DELETE FROM excessTariffPerDay[CarType*Amount]
    SELECTFROM carType~;rcIssuedCar~;((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
    SELECTFROM computedTariffedCharge;((-rentalPenaltyCharge~ /\ comp
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
    SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessTariffPerDay;computedTariffedCharge)
    (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    (MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcDailyAmount;computedTariffedCharge)
    ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM (-((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ (rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
    SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge;rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
    DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
    SELECTFROM (-((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ (rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)

```



```

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCha

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCha

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM Isn{detyP=RentalCase}
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
      (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      (MAINTAINING  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
      (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental

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

```

ALL of ONE OF DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM  ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
      SELECTFROM  computedTariffedCharge;((-rentalPenaltyCharge~ /\ computedT

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM  ((-rentalPenaltyCharge /\ (rentalExcessPeriod;ctcNrOfDays~

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
DELETE FROM carType[Car*CarType]
      SELECTFROM  rcIssuedCar~;((-rentalPenaltyCharge /\ (rentalExcessPeriod;

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
DELETE FROM excessTariffPerDay[CarType*Amount]
      SELECTFROM  carType~;rcIssuedCar~;((-rentalPenaltyCharge /\ (rentalExce

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
      SELECTFROM  computedTariffedCharge;((-rentalPenaltyCharge~ /\ computedT

      (TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]

```

```

SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessTa

(TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType
(MAINTAINING  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessT
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{detyp=RentalCase}
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ (rentalPenaltyCharge /\ -Delt

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ ren
(MAINTAINING  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena

<-----End Derivation --

```

```

ON INSERT Delta IN computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
ONE OF INSERT INTO rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM ((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;d

(TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
INSERT INTO Isn{detyp=Amount}
      SELECTFROM (rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch~

(TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
INSERT INTO Isn{detyp=Amount}

```

```

SELECTFROM ((computedLocationPenaltyCharge \/ Delta)~;computedLocationPen
(TO MAINTAIN -(computedLocationPenaltyCharge~;computedLocationPenaltyCha
INSERT INTO Isn{detyp=DistanceBetweenLocations}
SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBet

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

(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ 
(MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;compu

```

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

```

ONE OF 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=Amount}
SELECTFROM ((computedLocationPenaltyCharge \/ Delta)~;computedLocationPenalty

(TO MAINTAIN -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge)
INSERT INTO Isn{detyp=DistanceBetweenLocations}
SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBetweenL

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

(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ I[Amo
(MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLo

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<-----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);rentalLocationPen

(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);rentalLocationPen

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch
DELETE FROM Isn{dety=DistanceBetweenLocations}
SELECTFROM (-(computedLocationPenaltyCharge /\ -Delta);(computedLocation

(TO MAINTAIN  -I[DistanceBetweenLocations] \/ computedLocationPenaltyChar
(MAINTAINING  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING  -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ 
(MAINTAINING  -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);rentalLocationPenalty

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dist
DELETE FROM Isn{dety=DistanceBetweenLocations}
SELECTFROM (-(computedLocationPenaltyCharge /\ -Delta);(computedLocationPenal

(TO MAINTAIN  -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;I[
(MAINTAINING  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTAINING  -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/ I[Amo
(MAINTAINING  -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;computedLo

```

<-----End Derivation --

```

ON INSERT Delta IN rentalLocationPenaltyCharge[RentalCase*Amount] EXECUTE  --
ALL of INSERT INTO Isn{dety=Amount}
    SELECTFROM ((rentalLocationPenaltyCharge \/ Delta)~;(rcDroppedOffBranch;

(TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
(TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
(TO MAINTAIN  -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge)
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;(
    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'[CompRentalCharge*Amount]

            (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rentalBasicCharge~;('a'[RentalCase]
PICK a,b FROM rentalBasicCharge~;('a'[RentalCase]
        THEN INSERT INTO arg1[CompRentalCharge*Amount]
            SELECTFROM 'b'[CompRentalCharge]*'a'[CompRentalCharge*Amount]

            (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rentalBasicCharge~;('a'[RentalCase]
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;
NEW x:Amount;
    ALL of INSERT INTO rentalBasicCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalCharge*Amount]

        (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rentalBasicCharge~;('a'[RentalCase]
INSERT INTO arg1[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[CompRentalCharge*Amount]

        (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rentalBasicCharge~;('a'[RentalCase]
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]
    THEN INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[CompRentalCharge*Amount]

        (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rentalBasicCharge~;('a'[RentalCase]
PICK a,b FROM rentalPenaltyCharge~;('a'[RentalCase]
    THEN INSERT INTO arg2[CompRentalCharge*Amount]
        SELECTFROM 'b'[CompRentalCharge]*'a'[CompRentalCharge*Amount]

        (TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rentalBasicCharge~;('a'[RentalCase]
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;rentalLocationPenaltyCharge;
NEW x:Amount;

```

```

ALL of INSERT INTO rentalPenaltyCharge[RentalCase]
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
SELECTFROM 'a' [RentalCase]*'b' [CompRentalCharge]

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
PICK a,b FROM rentalLocationPenaltyCharge
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
SELECTFROM 'a' [RentalCase]*'b' [CompRentalCharge]

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
INSERT INTO arg3[CompRentalCharge*Amount]
SELECTFROM 'b' [CompRentalCharge]*'a' [RentalCase]

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge)
(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;distbranch)
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge)
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge)
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) /\ rentalLocationPenaltyCharge)
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge) /\ I[Amount]

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

ALL of INSERT INTO Isn{detyp=Amount}

```

SELECTFROM ((rentalLocationPenaltyCharge \/ Delta)~;(rcDroppedOffBranch;distb

(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{detyp=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'[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
(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 -((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]

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<-----End Derivation --

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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);computedLoca

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM (- (computedLocationPenaltyCharge;(rentalLocationPenalt

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM (-((rentalLocationPenaltyCharge /\ -Delta);computedLoca

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM (- (computedLocationPenaltyCharge;(rentalLocationPenalt

(TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
(MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM (- (V[RentalCase*CompRentalCharge]; (arg1;rentalBasicCha

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg

(TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (- (V[RentalCase*CompRentalCharge]; (arg1;rentalBasicCha

```

```

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM  (- (V[RentalCase*CompRentalCharge]; (arg1;rentalBasicCha

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
DELETE FROM Isn{detyP=RentalCase}
      SELECTFROM  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyC
      (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental

```

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

```

ALL of ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM  ((-rentalLocationPenaltyCharge /\ (rcDroppedOffBranch;distb

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM  computedLocationPenaltyCharge;((-rentalLocationPenaltyCharg

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM  ((-rentalLocationPenaltyCharge /\ (rcDroppedOffBranch;distb

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM  computedLocationPenaltyCharge;((-rentalLocationPenaltyCharg

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amou
      SELECTFROM  (distbranch;rcDroppedOffBranch~ /\ distbranch;contractedDro

      (TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;dist
ONE OF DELETE FROM rcDroppedOffBranch[RentalCase*Branch]
      SELECTFROM  (-((rentalLocationPenaltyCharge /\ -Delta);computedLocation

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBra
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM  -(computedLocationPenaltyCharge;(rentalLocationPenaltyChar

```

```

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch)
      DELETE FROM contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM  -(rentalLocationPenaltyCharge /\ -Delta);computedLocationPenaltyCharge~ /\

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch)
      DELETE FROM distbranch[DistanceBetweenLocations*Branch]
      SELECTFROM  -(computedLocationPenaltyCharge;(rentalLocationPenaltyCharge~ /\

      (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch)
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
      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{detyp=RentalCase}
      SELECTFROM  -(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge~ /\
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
      (MAINTAINING -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~ /\
      (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge~ /\

```

<-----End Derivation --

```

ON INSERT Delta IN rentalCharge[RentalCase*Amount] EXECUTE      -- (ECA rule 71)
ALL of INSERT INTO Isn{detyp=Amount}

```

```

SELECTFROM ((rentalCharge \/ Delta)~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPa

(TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
(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'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \/ re
(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'[YesNo];rentalIsPaidQ

(TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
(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'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \/ rentalC
(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*YesNo]
SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~)

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase])
DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~)

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase])
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~)

(TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase])
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase])
ONE OF DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio

(TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio

```

```

DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;((-rentalCharge~ /\ computedRentalCharge) /\ rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;((-rentalCharge~ /\ computedRentalCharge) /\ rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM ((-rentalCharge /\ (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;((-rentalCharge~ /\ computedRentalCharge) /\ rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\ arg3;rentalLocationPenaltyCharge~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)
(MAINTAINING -(rentalIsPaidQ;Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg3~ /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes) /\ rentalIsPaidQ;Yes)

```

```

ALL of ONE OF DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
      SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~) /\ re

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCa
DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
      SELECTFROM (-((rentalCharge /\ -Delta);(rentalCharge~ /\ -Delta~)) /\

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCa
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM -((rentalCharge /\ -Delta);(rentalCharge /\ -Delta)~) /\ re

      (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCa
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];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'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) /\ rentalC
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio

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<-----End Derivation --

```

ON INSERT Delta IN rcMaxRentalDuration[RentalCase*MaxRentalDuration] EXECUTE
ALL of INSERT INTO Isn{dety=MaxRentalDuration}
SELECTFROM ((rcMaxRentalDuration \/ Delta)~;contractedPickupBranch;branchOf;maxR

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxR
(TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[MaxRentalD
INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM (contractedStartDate~;rcMaxRentalDuration;(rcMaxRentalDuration~

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurat
INSERT INTO Isn{dety=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;rcMaxRentalDuratio
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;(rcMaxRentalDuratio

```

```

THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [Date]
THEN INSERT INTO dateIntervalCompTrigger
SELECTFROM 'a' [Date]*'b' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
PICK a,b FROM dateIntervalCompTrigger~;
THEN INSERT INTO contractedEndDate[RentalCase*]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~)
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*]
SELECTFROM 'a' [Date]*'b' [RentalCase]*

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
INSERT INTO contractedEndDate[RentalCase*]
SELECTFROM 'b' [RentalCase]*'a' [Date]*

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate[RentalCase*]
NEW x:Date;
ALL of INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate[RentalCase*]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x' [Date]
THEN INSERT INTO dateIntervalCompTrigger[Date*]
SELECTFROM 'a' [Date]*'b' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
PICK a,b FROM dateIntervalCompTrigger~;('x' [Date]
THEN INSERT INTO contractedEndDate[RentalCase*]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~)
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*]
SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDuration~)

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
INSERT INTO contractedEndDate[RentalCase*]
SELECTFROM (((rcMaxRentalDuration /\ Delivered[RentalCase*]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~)
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~)

```

```

(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDura
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~/
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~/ \ contr
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~/ \ contrac
(MAINAINING -(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
(MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRental
NEW x:Date;
ALL of INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM ((contractedStartDate~;rcMaxRentalDuration;(r

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM ((rcMaxRentalDuration \ Delta);rcMaxRentalD

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;
(MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRen
(MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRental
(MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurati
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;rcMaxRentalDuratio
PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;(r
THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
SELECTFROM 'a'[Date]*'b'[Date]

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuratio
(MAINAINING -(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~;
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contract
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contracted

```



```

(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
(MAINAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRental
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINAINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \ / I [MaxRentalDuration]

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

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ALL of INSERT INTO Isn{dety=MaxRentalDuration}
    SELECTFROM ((rcMaxRentalDuration \ / Delta)~;contractedPickupBranch;branchOf;m

    (TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRental
    (TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \ / I [MaxRentalDurati
    INSERT INTO dateIntervalCompTrigger [Date*Date]
    SELECTFROM (contractedStartDate~;rcMaxRentalDuration;(rcMaxRentalDuration \ /

    (TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;
    INSERT INTO Isn{dety=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
            (MAINAINING -(rcMaxRentalDuration;rcMaxRentalDurati
            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

```

```

(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDura
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDura
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\
(MAINAINING -(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
(MAINAINING -(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
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuratio
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ con
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contracted
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEn
(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;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration \ / Delta);rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration

        (TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ((rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a' [RentalCase]*'b' [Date]

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        PICK a,b FROM contractedStartDate~;((rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a' [Date]*'b' [Date]

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM ((rcMaxRentalDuration;rcMaxRentalDuration \ / Delta);rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'x' [Date]*((rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ \ / contractedEndDate;contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ \ / contractedEndDate;contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ \ / contractedEndDate;contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ \ / contractedEndDate;contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
        (MAINTAINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \ / I[MaxRentalDuration] FROM

```

<-----End Derivation --

```

ON DELETE Delta FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration] EXECUTE
ONE OF DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM ((-rcMaxRentalDuration \ / contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration

(TO MAINTAIN  -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration
DELETE FROM branchOf [Branch*CarRentalCompany]
SELECTFROM contractedPickupBranch~;((-rcMaxRentalDuration \ / contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDuration) \ / rcMaxRentalDuration

```

```

        (TO MAINTAIN  -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcM
DELETE FROM maxRentalDuration[CarRentalCompany*MaxRentalDuration]
        SELECTFROM branchOf~;contractedPickupBranch~;((-rcMaxRentalDuration /\ c

        (TO MAINTAIN  -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcM
(MAINTAINING -(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*MaxRentalDuration]
        SELECTFROM branchOf~;contractedPickupBranch~;((-rcMaxRentalDuration /\ contra

        (TO MAINTAIN  -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRen
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \ / rcMaxRentalDurat

```

<-----End Derivation --

```

ON INSERT Delta IN dateIntervalCompTrigger[Date*Date] EXECUTE      -- (ECA rule 75
INSERT INTO Isn{dety=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 7
ALL of ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
        SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -De

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]

```

```

SELECTFROM (-(contractedEndDate;(dateIntervalCompTrigger~ /\ -Del

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contra
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -De

(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 /\ -De

(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*MaxRentalDuration]
SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -De

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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*MaxRentalDuration]
SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ cont

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent.
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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 /\ cont

(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 /\ cont

(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 /\ cont

(TO MAINTAIN  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRent
(MAINTAINING  -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDurati
ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM  -(contractedStartDate;(dateIntervalCompTrigger /\ -De

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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 /\ -De

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~ /\ -Del

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;contractedEndDate~;(-(contractedStar

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM  -(contractedStartDate;(dateIntervalCompTrigger /\ -De

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte

```

```

DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-(dateIntervalCompTrigger~ /\ -Del

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedStartDate;contractedStartDate~;(-(contracted

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Del

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~;contracte
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINTAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con

```

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

```

ALL of ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM -(contractedEndDate;(dateIntervalCompTrigger~ /\ -Delta~);

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE
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{detyp=RentalCase}
SELECTFROM -(contractedStartDate;(dateIntervalCompTrigger /\ -Delta);c

(TO MAINTAIN -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedE

```



```

(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;c
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;(-(contractedEndDa

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
      SELECTFROM contractedStartDate;(-(dateIntervalCompTrigger /\ -Delta));

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
      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
(MAINAINING -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDuration~ /
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndDate;

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
      SELECTFROM contractedStartDate;((-dateIntervalCompTrigger /\ contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur

```

```

DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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 contractedStartDate;((-dateIntervalCompTrigger /\ contracte

(TO MAINTAIN -(contractedStartDate~;rcMaxRentalDuration;rcMaxRentalDur
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;((-dateIntervalCompTrigger~ /\ contracted

(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*MaxRentalDuration]

```

```

SELECTFROM (-(contractedStartDate;(dateIntervalCompTrigger /\ -Delta))

(TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~;contractedEndD
DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
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~;contractedEndD
(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;arg2~ /\

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;(arg1 \ / Delta)~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{detyp=CompRentalCharge}
      SELECTFROM (arg3;arg3~ /\ arg2;arg2~ /\ arg1;(arg1 \ / Delta)~ /\ -I[CompRentalCharge]

(TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \ / I[CompRentalCharge]
INSERT INTO Isn{detyp=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{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~ /\ rentalPenaltyCharge;arg2~ /\
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge;arg2~ /\
(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)

```

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

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalBasicCharge;(arg1 \ / Delta)~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;(arg1 \ / Delta)~ /\ rentalPenaltyCharge;arg2~ /\

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\
INSERT INTO Isn{detyp=CompRentalCharge}
      SELECTFROM (arg3;arg3~ /\ arg2;arg2~ /\ arg1;(arg1 \ / Delta)~ /\ -I[CompRentalCharge]

(TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \ / I[CompRentalCharge]
INSERT INTO Isn{detyp=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{detyp=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~ /\ rentalLocatio
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM Un
(MAINAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINAINING -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~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;arg1~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;arg1~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM -(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;arg1~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\ rentalLocationPenaltyCharge~ /\
DELETE FROM Isn{dety=CompRentalCharge}
SELECTFROM -((arg1 /\ -Delta);(arg1 /\ -Delta)~) /\ I[CompRentalCharge]

(TO MAINTAIN -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1:
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental
(MAINAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount)

```

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

```

ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;arg1)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;arg1)
      /\ rentalPenaltyCharge;arg2)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (-(rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (-(V[RentalCase*CompRentalCharge];((arg1 /\ -Delta);rentalBasicCharge;arg1)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM (-(rentalBasicCharge;(arg1 /\ -Delta)~ /\ rentalPenaltyCharge;arg2)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      DELETE FROM Isn{detyp=CompRentalCharge}
      SELECTFROM (-(arg1 /\ -Delta);(arg1 /\ -Delta)~) /\ I[CompRentalCharge]

      (TO MAINTAIN  -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1::CompRentalCharge*Amount)
      (MAINTAINING  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPenaltyCharge;arg2)
      (MAINTAINING  -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
      (MAINTAINING  -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)
      /\ rentalLocationPenaltyCharge;arg1)

      (TO MAINTAIN  -(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocationPenaltyCharge;arg1)
      INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~)

```

```

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
INSERT INTO Isn{dety=CompRentalCharge}
SELECTFROM (arg3;arg3~ /\ arg2;(arg2 \/ Delta)~ /\ arg1;arg1~ /\ -I[Comp

(TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCh
INSERT INTO Isn{dety=Amount}
SELECTFROM ((arg2 \/ Delta)~;arg2 /\ -I[Amount]) \/ ((arg2 \/ Delta)~;De

(TO MAINTAIN -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::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~ /\ rentalLo
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FR
(MAINTAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*

```

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

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 \/ Delta)~ /

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ renta
INSERT INTO Isn{dety=Amount}
SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
INSERT INTO Isn{dety=CompRentalCharge}
SELECTFROM (arg3;arg3~ /\ arg2;(arg2 \/ Delta)~ /\ arg1;arg1~ /\ -I[CompRenta

(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*Amoun
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~ /\ rentalLocatio
(MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio

```

```

(MAINAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM UNI
(MAINAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINAINING -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 /\ -Delta)
      /\ I[CompRentalCharge]) /\ I[Amount]) FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\
      rentalPenaltyCharge;(arg2 /\ -Delta) /\ I[CompRentalCharge]) /\ I[Amount])
      FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta)
      /\ I[CompRentalCharge]) /\ I[Amount]) FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\
      rentalPenaltyCharge;(arg2 /\ -Delta) /\ I[CompRentalCharge]) /\ I[Amount])
      FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta)
      /\ I[CompRentalCharge]) /\ I[Amount]) FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM -(V[RentalCase*CompRentalCharge];(arg1;rentalBasicCharge~ /\
      rentalPenaltyCharge;(arg2 /\ -Delta) /\ I[CompRentalCharge]) /\ I[Amount])
      FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta)
      /\ I[CompRentalCharge]) /\ I[Amount]) FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\
      DELETE FROM Isn{detyp=CompRentalCharge}
      SELECTFROM -((arg2 /\ -Delta);(arg2 /\ -Delta)~) /\ I[CompRentalCharge]
      FROM UNI arg2::CompRentalCharge*Amount)

      (TO MAINTAIN -I[CompRentalCharge] \/ arg2;I[Amount];arg2~ FROM UNI arg2::
      CompRentalCharge*Amount)
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rental
(MAINAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*Amount)

```

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

```

ONE OF DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
      SELECTFROM (-((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta)
      /\ I[CompRentalCharge]) /\ I[Amount]) FROM UNI arg2::CompRentalCharge*Amount)

```



```

(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{detyp=RentalCase}
SELECTFROM -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;(arg2 /\ -Delta)

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{detyp=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*Amount

```

<-----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~ /\ rent

(TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ :
INSERT INTO Isn{detyp=Amount}
SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
INSERT INTO Isn{detyp=CompRentalCharge}
SELECTFROM (arg3;(arg3 \/ Delta)~ /\ arg2;arg2~ /\ arg1;arg1~ /\ -I[Comp

```

```

(TO MAINTAIN  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCh
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((arg3 \/ Delta)~;arg3 /\ -I[Amount]) \/ ((arg3 \/ Delta)~;De

(TO MAINTAIN  -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::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~ /\ rentalLo
(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINTAINING  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FR
(MAINTAINING  -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTAINING  -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*

```

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

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLoc

(TO MAINTAIN  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ renta
INSERT INTO Isn{dety=Amount}
      SELECTFROM rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2

(TO MAINTAIN  -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
INSERT INTO Isn{dety=CompRentalCharge}
      SELECTFROM (arg3;(arg3 \/ Delta)~ /\ arg2;arg2~ /\ arg1;arg1~ /\ -I[CompRenta

(TO MAINTAIN  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((arg3 \/ Delta)~;arg3 /\ -I[Amount]) \/ ((arg3 \/ Delta)~;Delta /

(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~ /\ rentalLocatio
(MAINTAINING  -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTAINING  -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge] FROM Un
(MAINTAINING  -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTAINING  -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{detyp=RentalCase}
      SELECTFROM (-(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ re

      (TO MAINTAIN  -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~
DELETE FROM Isn{detyp=CompRentalCharge}
      SELECTFROM (-(arg3 /\ -Delta);(arg3 /\ -Delta)~) /\ I[CompRentalCharge]

      (TO MAINTAIN  -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UNI arg3:
(MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(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{dety=RentalCase}
SELECTFROM (-(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalL

(TO MAINTAIN -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ re
DELETE FROM Isn{dety=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*Amount

```

<-----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~ /\ rentalPenaltyCharg

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCh
INSERT INTO Isn{dety=Amount}
SELECTFROM ((computedRentalCharge \/ Delta)~;computedRentalCharge /\ -I[

(TO MAINTAIN -(computedRentalCharge~;I[CompRentalCharge];computedRentalC
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 -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~
(MAINAINING -(computedRentalCharge~;computedRentalCharge) \/ I[Amount] FROM UNI

```

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

```

ONE OF INSERT INTO rentalCharge[RentalCase*Amount]
      SELECTFROM ((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo

      (TO MAINTAIN -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ renta
      INSERT INTO Isn{dety=Amount}
      SELECTFROM (rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg

      (TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;
      INSERT INTO Isn{dety=Amount}
      SELECTFROM ((computedRentalCharge \/ Delta)~;computedRentalCharge /\ -I[Amoun

      (TO MAINTAIN -(computedRentalCharge~;I[CompRentalCharge];computedRentalCharge
      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~ /\ rentalLocatio
      (MAINTAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
      (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;

    (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;
INSERT INTO Isn{detyp=Integer}
    SELECTFROM rentalPeriod~;(contractedStartDate;(earliestDate \/ Delta)~ /\ rcDroppedOffDate;

    (TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;
INSERT INTO Isn{detyp=DateDifferencePlusOne}
    SELECTFROM (earliestDate;(earliestDate \/ Delta)~ /\ latestDate;latestDate~ /\ rcDroppedOffDate;

    (TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((earliestDate \/ Delta)~;earliestDate /\ -I[Date]) \/ ((earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne])

    (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]

(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;latestDate~) \/ I[DateDifferencePlusOne])
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;latestDate~) \/ I[DateDifferencePlusOne])
(MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
(MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDifferencePlusOne
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earliestDate;earliestDate~

```

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

```

ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
    SELECTFROM (contractedStartDate;(earliestDate \/ Delta)~ /\ rcDroppedOffDate;latestDate;latestDate~) \/ I[DateDifferencePlusOne]

    (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;latestDate~) \/ I[DateDifferencePlusOne])
INSERT INTO Isn{detyp=Integer}
    SELECTFROM rentalPeriod~;(contractedStartDate;(earliestDate \/ Delta)~ /\ rcDroppedOffDate;latestDate;latestDate~) \/ I[DateDifferencePlusOne]

    (TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate;latestDate~) \/ I[DateDifferencePlusOne])
INSERT INTO Isn{detyp=DateDifferencePlusOne}
    SELECTFROM (earliestDate;(earliestDate \/ Delta)~ /\ latestDate;latestDate~ /\ rcDroppedOffDate;latestDate~) \/ I[DateDifferencePlusOne]

    (TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((earliestDate \/ Delta)~;earliestDate /\ -I[Date]) \/ ((earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne])

```



```

ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDate;

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta);c

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffD

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifferencePlusOne];((earliestDate /\ -Delta);c

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM -((contractedStartDate;(earliestDate /\ -Delta)~ /\ rcDroppedOffDa

      (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;cont
DELETE FROM Isn{detyp=DateDifferencePlusOne}
      SELECTFROM -((earliestDate /\ -Delta);(earliestDate /\ -Delta)~) /\ I[DateDif

      (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDiff
(MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earlies

```

<-----End Derivation --

```

ON INSERT Delta IN latestDate[DateDifferencePlusOne*Date] EXECUTE -- (ECA rule
ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
      SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(lates

      (TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;la
INSERT INTO Isn{detyp=Integer}
      SELECTFROM rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedD

      (TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDro
INSERT INTO Isn{detyp=DateDifferencePlusOne}
      SELECTFROM (earliestDate;earliestDate~ /\ latestDate;(latestDate \/ Delt

      (TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/
INSERT INTO Isn{detyp=Date}
      SELECTFROM ((latestDate \/ Delta)~;latestDate /\ -I[Date]) \/ ((latestDa

      (TO MAINTAIN -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::D
INSERT INTO Isn{detyp=DateDifferencePlusOne}

```



```

SELECTFROM (Delta;Delta~ /\ I[DateDifferencePlusOne]) - I[DateDifferencePlusOne]

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

(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifferencePlusOne
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate;latestDate~

```

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

```

ONE OF INSERT INTO rentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co

(TO MAINTAIN -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
INSERT INTO Isn{detyp=Integer}
SELECTFROM rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
INSERT INTO Isn{detyp=DateDifferencePlusOne}
SELECTFROM (earliestDate;earliestDate~ /\ latestDate;(latestDate \/ Delta)~;latestDate)

(TO MAINTAIN -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
INSERT INTO Isn{detyp=Date}
SELECTFROM ((latestDate \/ Delta)~;latestDate /\ -I[Date]) \/ ((latestDate \/ Delta)~;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]

(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTAINING -(earliestDate;earliestDate~ /\ latestDate;latestDate~) \/ I[DateDifferencePlusOne]
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifferencePlusOne
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate;latestDate~

```

<-----End Derivation --

```

ON DELETE Delta FROM latestDate[DateDifferencePlusOne*Date] EXECUTE -- (ECA r
ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM (-((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co

```

```

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM  -((V[RentalCase*DateDifferencePlusOne];(earliestDate;contract

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(la

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM  -(V[RentalCase*DateDifferencePlusOne];(earliestDate;contract

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM  -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;(lat

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate
DELETE FROM Isn{detyp=DateDifferencePlusOne}
      SELECTFROM  -((latestDate /\ -Delta);(latestDate /\ -Delta)~) /\ I[DateDi

      (TO MAINTAIN  -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~
(MAINTAINING  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contrac
(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 Isn{detyp=DateDifferencePlusOne}

```

```

SELECTFROM -((latestDate /\ -Delta);(latestDate /\ -Delta)~) /\ I[DateDifferencePlusOne]
(TO MAINTAIN -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~ FROM
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate~
(MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifferencePlusOne
(MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate::DateDifferencePlusOne

<-----End Derivation --

```

```

ON INSERT Delta IN computedRentalPeriod[DateDifferencePlusOne*Integer] EXECUTE
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~
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~
(MAINTAINING -(computedRentalPeriod~;computedRentalPeriod) \/ I[Integer] FROM UNI

----- 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~

```

```

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

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

(MAINTEINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTEINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTEINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~
(MAINTEINING -(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;computedRentalPer

----- 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 ru
ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
  SELECTFROM (rentalPeriod;(ctcNrOfDays \/ Delta)~ /\ rcIssuedCar;carType;

(TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalT
INSERT INTO Isn{detyp=Amount}
  SELECTFROM rentalBasicCharge~;(rentalPeriod;(ctcNrOfDays \/ Delta)~ /\ r

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
  SELECTFROM (rentalExcessPeriod;(ctcNrOfDays \/ Delta)~ /\ rcIssuedCar;ca

(TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;e
INSERT INTO Isn{detyp=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 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~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[
(MAINTAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::Comp
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfD

```

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

```

ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
  SELECTFROM (rentalPeriod;(ctcNrOfDays \/ Delta)~ /\ rcIssuedCar;carType;renta

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

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

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

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
INSERT INTO Isn{dety=CompTariffedCharge}
  SELECTFROM (ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;(ctcNrOfDays \/ Del

(TO MAINTAIN -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/
INSERT INTO Isn{dety=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~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[CompT
(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 rcIssuedCar[RentalCase*Car]
  SELECTFROM -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcIssuedCar;carType;

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

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

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

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

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

(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{detyp=RentalCase}
  SELECTFROM -((rentalExcessPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcIssuedCar;

```

```

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{detyp=CompTariffedCharge}
      SELECTFROM  -((ctcNrOfDays /\ -Delta);(ctcNrOfDays /\ -Delta)~) /\ I[Comp

      (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays
(MAINTAINING  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Renta
(MAINTAINING  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rent
(MAINTAINING  -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::Comp
(MAINTAINING  -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOf

```

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

```

ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM  -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcIssuedCar;carType;r

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);renta

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

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  -(V[RentalCase*CompTariffedCharge];((ctcNrOfDays /\ -Delta);renta

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM Isn{detyp=RentalCase}
      SELECTFROM  -((rentalPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcIssuedCar;carType;re

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM  -((rentalExcessPeriod;(ctcNrOfDays /\ -Delta)~ /\ rcIssuedCar;car

      (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)~ /\ rcIssuedCar;carT

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (r
DELETE FROM Isn{detyp=CompTariffedCharge}
      SELECTFROM  -((ctcNrOfDays /\ -Delta);(ctcNrOfDays /\ -Delta)~) /\ I[CompTarif

      (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays~ FR

```

```

(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExc
(MAINAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTari
(MAINAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays:

```

<-----End Derivation --

```

ON INSERT Delta IN ctcDailyAmount[CompTariffedCharge*Amount] EXECUTE -- (ECA :
ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPeri
      (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPeri
      INSERT INTO Isn{dety=Amount}
      SELECTFROM rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
      INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPeri
      (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPeri
      INSERT INTO Isn{dety=Amount}
      SELECTFROM rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
      (TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
      INSERT INTO Isn{dety=CompTariffedCharge}
      SELECTFROM (ctcDailyAmount;(ctcDailyAmount \/ Delta)~ /\ ctcNrOfDays;ctcNrOfDays~
      (TO MAINTAIN -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~
      INSERT INTO Isn{dety=Amount}
      SELECTFROM ((ctcDailyAmount \/ Delta)~;ctcDailyAmount /\ -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]
      (MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPeriod;
      (MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPeriod;
      (MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPeriod;
      (MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPeriod;
      (MAINAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[Amount]
      (MAINAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount
      (MAINAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDailyAmount

```

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


```

ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;
      (TO MAINTAIN -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
INSERT INTO rentalPenaltyCharge[RentalCase*Amount]
      SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;
      (TO MAINTAIN -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;
INSERT INTO Isn{detyp=Amount}
      SELECTFROM rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
      (TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;
INSERT INTO Isn{detyp=CompTariffedCharge}
      SELECTFROM (ctcDailyAmount;(ctcDailyAmount /\ Delta)~ /\ ctcNrOfDays;ctcNrOfDays~) /\
      (TO MAINTAIN -(ctcDailyAmount;(ctcDailyAmount /\ Delta)~ /\ ctcNrOfDays;ctcNrOfDays~) /\
INSERT INTO Isn{detyp=Amount}
      SELECTFROM ((ctcDailyAmount /\ Delta)~;(ctcDailyAmount /\ -I[Amount])) /\ ((ctcDailyAmount
      (TO MAINTAIN -(ctcDailyAmount~;(ctcDailyAmount /\ I[Amount]) FROM UNI ctcDailyAmount;
INSERT INTO Isn{detyp=CompTariffedCharge}
      SELECTFROM (Delta;Delta~ /\ I[CompTariffedCharge]) - I[CompTariffedCharge]

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

(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;ctcNrOfDays~) /\
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;ctcNrOfDays~) /\
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcNrOfDays~) /\
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPerDay;ctcNrOfDays~) /\
(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) /\ I[CompTariffedCharge]
(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 rcIssuedCar[RentalCase*Car]
      SELECTFROM (-((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;
      (TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM -(V[RentalCase*CompTariffedCharge];(ctcNrOfDays;rentalPeriod;

```

```

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

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

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM Isn{detypr=RentalCase}
      SELECTFROM  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffP

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
      SELECTFROM  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;ex

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

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

      (TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase])
DELETE FROM Isn{detypr=CompTariffedCharge}
      SELECTFROM  -((ctcDailyAmount /\ -Delta);(ctcDailyAmount /\ -Delta)~) /\

      (TO MAINTAIN  -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDaily
(MAINTAINING  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Rental
(MAINTAINING  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rent
(MAINTAINING  -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmo
(MAINTAINING  -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT c

```

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

```

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

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

      (TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffP

```

```

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

(TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM Isn{detyp=RentalCase}
SELECTFROM  -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPe

(TO MAINTAIN  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Re
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessT

(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~ /\ rcIssuedCar;carType;excessTa

(TO MAINTAIN  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (r
DELETE FROM Isn{detyp=CompTariffedCharge}
SELECTFROM  -((ctcDailyAmount /\ -Delta);(ctcDailyAmount /\ -Delta)~) /\ I[Com

(TO MAINTAIN  -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDailyAmount
(MAINTAINING  -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase
(MAINTAINING  -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExc
(MAINTAINING  -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount::
(MAINTAINING  -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDai

```

<-----End Derivation --

```

ON INSERT Delta IN computedTariffedCharge[CompTariffedCharge*Amount] EXECUTE
ONE OF INSERT INTO rentalBasicCharge[RentalCase*Amount]
SELECTFROM  ((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTari

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

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

(TO MAINTAIN  -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;exce
INSERT INTO Isn{detyp=Amount}
SELECTFROM  (rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcI

```

```

      (TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ :
INSERT INTO Isn{dety=Amount}
      SELECTFROM ((computedTariffedCharge /\ Delta)~;computedTariffedCharge /\

      (TO MAINTAIN  -(computedTariffedCharge~;I[CompTariffedCharge];computedTar
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~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINTAINING -I[CompTariffedCharge] /\ computedTariffedCharge;computedTariffedCh
(MAINTAINING -(computedTariffedCharge~;computedTariffedCharge) /\ I[Amount] FROM

```

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

```

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

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

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

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

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

      (TO MAINTAIN  -(computedTariffedCharge~;I[CompTariffedCharge];computedTariffed
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~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINTAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c

```

```

(MAINTEINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTEINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTEINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge~
(MAINTEINING -(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;1

(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;1a

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contra
DELETE FROM Isn{dety=DateDifference}
SELECTFROM -((firstDate /\ -Delta);(firstDate /\ -Delta)~) /\ I[DateDifference]

(TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI firstDate::DateDifference*Da
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
(MAINTAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference*Date
(MAINTAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::DateDifference

```

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

```

ONE OF DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;1

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];((firstDate /\ -Delta);contractedEndDate

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;1a

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM -(V[RentalCase*DateDifference];((firstDate /\ -Delta);contractedEndDate

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
DELETE FROM Isn{dety=RentalCase}
SELECTFROM -((contractedEndDate;(firstDate /\ -Delta)~ /\ rcDroppedOffDate;1a

(TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
DELETE FROM Isn{dety=DateDifference}
SELECTFROM -((firstDate /\ -Delta);(firstDate /\ -Delta)~) /\ I[DateDifference]

(TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI firstDate::DateDifference*Da
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndDate
(MAINTAINING -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference*Date
(MAINTAINING -I[DateDifference] \/ firstDate;firstDate~ FROM TOT firstDate::DateDifference

```

<-----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{detyp=Integer}
    SELECTFROM rentalExcessPeriod~;(rcDroppedOffDate;(lastDate \/ Delta)~ /\

    (TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contra
INSERT INTO Isn{detyp=DateDifference}
    SELECTFROM (lastDate;(lastDate \/ Delta)~ /\ firstDate;firstDate~ /\ -I[DateD

    (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDiffere
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((lastDate \/ Delta)~;lastDate /\ -I[Date]) \/ ((lastDate \/ Delta)~

    (TO MAINTAIN  -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDiffere
INSERT INTO Isn{detyp=DateDifference}
    SELECTFROM (Delta;Delta~ /\ I[DateDifference]) - I[DateDifference]

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

(MAINTAINING  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINTAINING  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINTAINING  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifference]
(MAINTAINING  -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*
(MAINTAINING  -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDiff

```

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

```

ONE OF INSERT INTO rentalExcessPeriod[RentalCase*Integer]
    SELECTFROM (rcDroppedOffDate;(lastDate \/ Delta)~ /\ contractedEndDate;firstD

    (TO MAINTAIN  -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);c
INSERT INTO Isn{detyp=Integer}
    SELECTFROM rentalExcessPeriod~;(rcDroppedOffDate;(lastDate \/ Delta)~ /\ cont

    (TO MAINTAIN  -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedE
INSERT INTO Isn{detyp=DateDifference}
    SELECTFROM (lastDate;(lastDate \/ Delta)~ /\ firstDate;firstDate~ /\ -I[DateD

    (TO MAINTAIN  -(lastDate;lastDate~ /\ firstDate;firstDate~) \/ I[DateDifferenc
INSERT INTO Isn{detyp=Date}
    SELECTFROM ((lastDate \/ Delta)~;lastDate /\ -I[Date]) \/ ((lastDate \/ Delta

```



```

      (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~

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM rcDroppedOffDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDate~

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM (-((contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate~

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM contractedEndDate[RentalCase*Date]
      SELECTFROM -(V[RentalCase*DateDifference];(firstDate;contractedEndDate~

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM Isn{dety=RentalCase}
      SELECTFROM -((contractedEndDate;firstDate~ /\ rcDroppedOffDate;(lastDate~

      (TO MAINTAIN  -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;c
      DELETE FROM Isn{dety=DateDifference}
      SELECTFROM -((lastDate /\ -Delta);(lastDate /\ -Delta)~) /\ I[DateDifferen

      (TO MAINTAIN  -I[DateDifference] \/ lastDate;I[Date];lastDate~ FROM UNI 1
      (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte
      (MAINTAINING -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference*
      (MAINTAINING -I[DateDifference] \/ lastDate;lastDate~ FROM TOT lastDate::DateDif

```

----- 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 lastDa
(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~ /\ contractedEndD

      (TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndD
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{detyp=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)~ /\ contractedDropo

(TO MAINTAIN  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
INSERT INTO Isn{dety=Amount}
    SELECTFROM rentalLocationPenaltyCharge~;(rcDroppedOffBranch;(distbranch

(TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran
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~;(rcDroppedOffBra
        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 \/ Delta)~ /\

        (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contrac
        INSERT INTO computedLocationPenaltyCharge[DistanceBetween
            SELECTFROM ((distbranch \/ Delta);rcDroppedOffBranch~ /\

        (TO MAINTAIN  -(rcDroppedOffBranch;distbranch~ /\ contrac
        (MAINTAINING  -(rcDroppedOffBranch;distbranch~ /\ contractedDropo
        (MAINTAINING  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoff
        (MAINTAINING  -(rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;
        INSERT INTO Isn{dety=DistanceBetweenLocations}
            SELECTFROM (Delta;Delta~ /\ I[DistanceBetweenLocations]) - I[DistanceBet

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

(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINTAINING  -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr

```

----- 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 Isn{dety=Branch} EXECUTE -- (ECA rule 107)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchOf;'EU-Rent' [CarRentalCompany]))
  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' [CarRentalCompany]))
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a' [CarRentalCompany])
  THEN BLOCK
    (CANNOT CHANGE 'EU-Rent' [CarRentalCompany])
    PICK a,b FROM 'EU-Rent' [CarRentalCompany];('a' [CarRentalCompany])
    THEN INSERT INTO branchOf[Branch*CarRentalCompany]
      SELECTFROM 'b' [Branch]*'a' [CarRentalCompany]

      (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent' [CarRentalCompany])
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent' [CarRentalCompany])
NEW x:CarRentalCompany;
  ALL of BLOCK
    (CANNOT CHANGE 'EU-Rent' [CarRentalCompany])
    INSERT INTO branchOf[Branch*CarRentalCompany]
      SELECTFROM 'b' [Branch]*'a' [CarRentalCompany]

      (TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent' [CarRentalCompany])
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent' [CarRentalCompany])
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent' [CarRentalCompany])
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent' [CarRentalCompany])
(MAINTAINING -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'[CarRe
        (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany]);
        (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf
        (MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchOf;branch
        THEN INSERT INTO branchOf[Branch*CarRentalCompany]
        SELECTFROM 'a'[Branch]*'b'[CarRentalCompany]

        (TO MAINTAIN -I[Branch] \/ branchOf;I[CarRentalCompany];bran
        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];bran
        (MAINTAINING -I[Branch] \/ branchOf;I[CarRentalCompany];branchOf~ FROM UN
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Branch] /\ -(branchLocation;
        THEN INSERT INTO branchLocation[Branch*Location]
        SELECTFROM 'a'[Branch]*'b'[Location]

        (TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branch
        PICK a,b FROM branchLocation~;(I[Branch] /\ -(branchLocation;branch
        THEN INSERT INTO branchLocation[Branch*Location]
        SELECTFROM 'b'[Branch]*'a'[Location]

        (TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branch
        (MAINTAINING -I[Branch] \/ branchLocation;I[Location];branchLocation~ FROM
        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 branchLocati

```

----- 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 EU
PICK a,b FROM 'EU-Rent'[CarRentalCompany];('a'[CarRentalCompany]
THEN INSERT INTO branchOf[Branch*CarRentalCompany]
SELECTFROM 'b'[Branch]*'a'[CarRentalCompany]

(TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany]
(MAINTAINING -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany]
NEW x:CarRentalCompany;
ALL of BLOCK
(CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EU
INSERT INTO branchOf[Branch*CarRentalCompany]
SELECTFROM 'b'[Branch]*'a'[CarRentalCompany]*'x'[CarRentalCompany]

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

(TO MAINTAIN -I[Branch] \/ branchOf;'EU-Rent'[CarRentalCompany];branchOf~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[CarRentalCompany]*(I[Branch] /\
THEN BLOCK
(CANNOT CHANGE 'EU-Rent'[CarRentalCompany] FROM EU
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~ 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;branchOf~)
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;branchLoca
        THEN INSERT INTO branchLocation[Branch*Location]
            SELECTFROM 'b'[Branch]*'a'[Location]

        (TO MAINTAIN -I[Branch] \/ branchLocation;I[Location];branchLocat
        (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*C
        (MAINTAINING -I[Branch] \/ branchOf;branchOf~ FROM TOT branchOf::Branch*CarRentalComp
        (MAINTAINING -(branchLocation~;branchLocation) \/ I[Location] FROM UNI branchLocation
        (MAINTAINING -I[Branch] \/ branchLocation;branchLocation~ FROM TOT branchLocation::Br

<-----End Derivation --

```

```

        ON DELETE Delta FROM Isn{dety=Branch} EXECUTE      -- (ECA rule 108)
        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 109)
        ONE OF INSERT INTO Isn{dety=CarRentalCompany}
            SELECTFROM 'EU-Rent'[CarRentalCompany];branchOf~;branchOf /\ -I[CarRenta

        (TO MAINTAIN -( 'EU-Rent'[CarRentalCompany];branchOf~;branchOf) \/ I[CarR
        INSERT INTO Isn{dety=CarRentalCompany}
            SELECTFROM branchOf~;branchOf;'EU-Rent'[CarRentalCompany] /\ -I[CarRenta

        (TO MAINTAIN -(branchOf~;branchOf;'EU-Rent'[CarRentalCompany]) \/ I[CarR
        INSERT INTO branchOf[Branch*CarRentalCompany]
            SELECTFROM branchOf;'EU-Rent'[CarRentalCompany] /\ -branchOf

        (TO MAINTAIN -(branchOf;'EU-Rent'[CarRentalCompany]) \/ branchOf FROM EU
        (MAINTAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branc

```

```

(MAINAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
(MAINAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
(MAINAINING -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 branches)
    (MAINAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
    (MAINAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
    (MAINAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)
    (MAINAINING -branchOf \/ branchOf;'EU-Rent'[CarRentalCompany] FROM EURent branches)

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=CarRentalCompany} EXECUTE -- (ECA rule 110)
ONE OF DELETE FROM branchOf[Branch*CarRentalCompany]
    SELECTFROM -(branchOf;'EU-Rent'[CarRentalCompany]) /\ branchOf

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

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

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

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

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

DELETE FROM maxRentalDuration[CarRentalCompany*MaxRentalDuration]
SELECTFROM Delta;V[CarRentalCompany*MaxRentalDuration]

(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;'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;'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{dety=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*MaxRentalDuration]
SELECTFROM Delta;V [CarRentalCompany*MaxRentalDuration]

(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 111)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carAvailableAt;car.
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'a'[Car]*'b'[Branch]

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
    PICK a,b FROM carAvailableAt~;(I[Car] /\ -(carAvailableAt;carAvail.
    THEN INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM 'b'[Car]*'a'[Branch]

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(r
NEW x:Branch;
    INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (I[Car] /\ -(carAvailableAt;carAvailableAt~) /\ -(rcIssuedC

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(r
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carAvailableAt;car.

```

```

THEN INSERT INTO rcIssuedCar[RentalCase*Car]
    SELECTFROM 'b'[RentalCase]*'a'[Car]

    (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
PICK a,b FROM rcIssuedCar;(I[Car] /\ -(carAvailableAt;carAvailable
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalC
    THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[RentalCase*Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        DELETE FROM rentalHasBeenEnded[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[RentalCase*Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded
        THEN INSERT INTO rcIssuedCar[RentalCase*Car]
            SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        NEW x:RentalCase;
        ALL of ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
            SELECTFROM 'a'[RentalCase]*'b'[Car]*'b'[Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        DELETE FROM rentalHasBeenEnded[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[Car]*'b'[Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        INSERT INTO rcIssuedCar[RentalCase*Car]
            SELECTFROM 'x'[RentalCase]*'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        NEW x:RentalCase;
        ALL of INSERT INTO rcIssuedCar[RentalCase*Car]
            SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvailableAt~
                \/ rcIssuedCar)

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar
        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*Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        DELETE FROM rentalHasBeenEnded[RentalCase*Car]

```

```

SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~
        PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded~)
        THEN INSERT INTO rcIssuedCar[RentalCase*Car]
                SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ /\
        NEW x:RentalCase;
        ALL of INSERT INTO rentalHasBeenStarted[RentalCase*Car]
                SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt~
        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
        DELETE FROM rentalHasBeenEnded[RentalCase*Car]
                SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt~
        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
        INSERT INTO rcIssuedCar[RentalCase*Car]
                SELECTFROM 'x'[RentalCase]*'x'[RentalCase]*(I[Car] /\
        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ /\
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;(rentalHasBeenStarted~
        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 carType::CarType
        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 carType::CarType
        (MAINTAINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::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::CarType
        (MAINTAINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::CarType
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ /\ rcIssuedCar~;(rentalHasBeenStarted~
        (MAINTAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
        (MAINTAINING -I[Car] \/ carType;carType~ FROM TOT carType::Car*CarType)

```

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

```

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~ \/ rcIssue
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~ \/ rcIssue
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rental
NEW x:Branch;
      INSERT INTO carAvailableAt[Car*Branch]
        SELECTFROM (I[Car] /\ -(carAvailableAt;carAvailableAt~) /\ -(rcIssuedCar~;(
      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(ren
(MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rental
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[Car] /\ -(carAvailableAt;carAvail
      THEN INSERT INTO rcIssuedCar[RentalCase*Car]
        SELECTFROM 'b'[RentalCase]*'a'[Car]

      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssue
PICK a,b FROM rcIssuedCar;(I[Car] /\ -(carAvailableAt;carAvailableAt~)
      THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase]*
        THEN ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
          SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

      (TO MAINTAIN -I[Car] \/ carAvailableAt;
      DELETE FROM rentalHasBeenEnded[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[RentalCase]

      (TO MAINTAIN -I[Car] \/ carAvailableAt;
      (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~
PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenEnded
      THEN INSERT INTO rcIssuedCar[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[Car]

      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
      (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssue
NEW x:RentalCase;
      ALL of ALL of INSERT INTO rentalHasBeenStarted[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[Car]*'x'[RentalCase]

      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
      DELETE FROM rentalHasBeenEnded[RentalCase*Car]
        SELECTFROM 'a'[RentalCase]*'b'[Car]*'x'[RentalCase]

      (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~
      (MAINAINING -I[Car] \/ carAvailableAt;carAvailableAt~

```



```

INSERT INTO rcIssuedCar[RentalCase*Car]
SELECTFROM 'x'[RentalCase]*'a'[RentalCase]*'b'[Ca

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailab
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ r
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssued
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rental
NEW x:RentalCase;
    ALL of INSERT INTO rcIssuedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*(I[Car] /\ -(carAvailableAt;carAvailableA

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCa
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
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailabl
        PICK a,b FROM (rentalHasBeenStarted~ /\ -rentalHasBeenE
        THEN INSERT INTO rcIssuedCar[RentalCase*Car]
            SELECTFROM 'a'[RentalCase]*'b'[Car]

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailab
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIs
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 rcIssuedCar[RentalCase*Car]
        SELECTFROM 'x'[RentalCase]*'x'[RentalCase]*(I[Car] /

        (TO MAINTAIN -I[Car] \/ carAvailableAt;carAvailableA
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rc
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIs
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rent
        (MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rental
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]

        (TO MAINTAIN  -I[Car] \/ carType;I[CarType];carType~ FROM UNI carT
(MAINTAINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car*CarT
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*C
        (MAINTAINING -I[Car] \/ carType;I[CarType];carType~ FROM UNI carType::Car*CarT
(MAINTAINING -I[Car] \/ carAvailableAt;carAvailableAt~ \/ rcIssuedCar~;(rentalHasBeen
(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 Isn{dety=Car} EXECUTE      -- (ECA rule 112)
ALL of DELETE FROM rcIssuedCar[RentalCase*Car]
        SELECTFROM rcIssuedCar;(-I[Car] /\ rcIssuedCar~;rcIssuedCar) \/ V[Rental

        (TO MAINTAIN  -(rcIssuedCar~;rcIssuedCar) \/ I[Car] FROM UNI rcIssuedCar:
DELETE FROM rcDroppedOffCar[RentalCase*Car]
        SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcDroppedOffCar)

        (TO MAINTAIN  -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDr
DELETE FROM carAvailableAt[Car*Branch]
        SELECTFROM Delta;V[Car*Branch]

DELETE FROM carType[Car*CarType]
        SELECTFROM Delta;V[Car*CarType]

ONE OF DELETE FROM rcIssuedCar[RentalCase*Car]
        SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcIssuedC

        (TO MAINTAIN  -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropp
DELETE FROM rcDroppedOffCar[RentalCase*Car]
        SELECTFROM rcIssuedCar;(-I[Car] /\ rcIssuedCar~;rcDroppedOffCar)

        (TO MAINTAIN  -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropp
        (MAINTAINING -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off c
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity
(MAINTAINING -(rcIssuedCar~;rcIssuedCar) \/ I[Car] FROM UNI rcIssuedCar::RentalC
(MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOff

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

```

```

ALL of DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM rcIssuedCar;(-I[Car] /\ rcIssuedCar~;rcIssuedCar) \/ V[RentalCase*

      (TO MAINTAIN -(rcIssuedCar~;rcIssuedCar) \/ I[Car] FROM UNI rcIssuedCar::Rent
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 rcIssuedCar[RentalCase*Car]
      SELECTFROM rcDroppedOffCar;(-I[Car] /\ rcDroppedOffCar~;rcIssuedCar)

      (TO MAINTAIN -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off
DELETE FROM rcDroppedOffCar[RentalCase*Car]
      SELECTFROM rcIssuedCar;(-I[Car] /\ rcIssuedCar~;rcDroppedOffCar)

      (TO MAINTAIN -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off
      (MAINTAINING -(rcIssuedCar~;rcDroppedOffCar) \/ I[Car] FROM Dropped-off car ty
(MAINTAINING -rcDroppedOffCar \/ rcIssuedCar FROM Dropped-off car type integrity)
(MAINTAINING -(rcIssuedCar~;rcIssuedCar) \/ I[Car] FROM UNI rcIssuedCar::RentalCase*C
(MAINTAINING -(rcDroppedOffCar~;rcDroppedOffCar) \/ I[Car] FROM UNI rcDroppedOffCar::

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=RentalCase} EXECUTE      -- (ECA rule 113)
ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

```

```

(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranchRequestedQ~
      PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      (MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      (MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      (MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Renta
      ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
      PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes'
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
      (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
      NEW x:Branch;
      INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
      (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
      (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
      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'[YesNo];rcBranchRequestedQ~
      PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes'
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      (MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      NEW x:Branch;
      INSERT INTO contractedDropoffBranch[RentalCase*Branch]

```

```

SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
      PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes'[
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Date;
      INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranch
      PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes'
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Date;
      INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
      PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes'[Ye
      THEN INSERT INTO contractedEndDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

```

```

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
        (MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranch
        PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes'[
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
        PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes'[Ye
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
        (MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranch

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        PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes' [
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'b' [RentalCase]*'a' [CarType]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranch
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
NEW x:CarType;
    INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequeste
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'a' [RentalCase]*'b' [Person]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
        PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes' [YesNo];rcUs
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b' [RentalCase]*'a' [Person]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:Person;
    INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\

        (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
(MAINAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
(MAINAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Renta
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' [YesNo];rcBranch
        PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes' [YesNo];rc
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b' [RentalCase]*'a' [Person]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranch
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
NEW x:Person;
    INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequeste
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
(MAINAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [

```

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THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'a' [RentalCase]*'b' [Person]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes' [YesNo];rcUs
THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'b' [RentalCase]*'a' [Person]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:Person;
    INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
    (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Rental
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' [YesNo];rcBranch
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes' [YesNo];rcBr
THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'b' [RentalCase]*'a' [Person]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
NEW x:Person;
    INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequeste
    (MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[R
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIssued

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIs
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[Re
THEN INSERT INTO carType[Car*CarType]
    SELECTFROM 'a' [Car]*'b' [CarType]

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

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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[RentalCase] /\
    (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHas
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHas
    (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPro
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'[YesNo];rcKeysH
    PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes'[YesNo];rcK
    THEN INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM 'b'[RentalCase]*'a'[Person]
    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysH
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
NEW x:Person;
  INSERT INTO rcDriver[RentalCase*Person]
    SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[Ren
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'[YesNo];rcKeysH
    PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes'[YesNo];rcK
    THEN INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM 'b'[RentalCase]*'a'[Person]
    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysH
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
NEW x:Person;
  INSERT INTO rcRenter[RentalCase*Person]
    SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[Ren
  INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBran

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[illegible]


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        (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 rentalLocationPenaltyCharg
        SELECTFROM 'a' [RentalCase]*'b' [CompRe

        (TO MAINTAIN -(rentalLocationPenaltyC
        INSERT INTO arg3[CompRentalCharge*Amou
        SELECTFROM 'b' [CompRentalCharge]*'a' [

        (TO MAINTAIN -(rentalLocationPenaltyC
        (MAINTAINING -(rentalLocationPenaltyCharge;re
        (MAINTAINING -(rentalLocationPenaltyCharge;rent

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        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocat
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPena
        PICK a,b FROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge
        THEN BLOCK
            (CANNOT CHANGE V[CompRentalCharge*RentalCase] FROM Trigger re
        (MAINTAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /
        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 contractedStartDate[RentalCase]
                SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

            (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
            PICK a,b FROM contractedStartDate~;('a'[
            THEN INSERT INTO earliestDate[DateDifferencePlusOne]
                SELECTFROM 'b'[DateDifferencePlusOne]

            (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        INSERT INTO earliestDate[DateDifferencePlusOne]
            SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        (MAINTAINING -(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~;('a'[
            PICK a,b FROM rcDroppedOffDate~;('a'[
            THEN INSERT INTO latestDate[DateDifferencePlusOne]
                SELECTFROM 'b'[DateDifferencePlusOne]

            (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        NEW x:Date;
        ALL of INSERT INTO rcDroppedOffDate[RentalCase]
            SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[
        INSERT INTO latestDate[DateDifferencePlusOne]
            SELECTFROM 'b'[DateDifferencePlusOne]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~;('a'[

```

```

(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractDate;
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractDate;
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractDate;
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractDate;
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcD
THEN BLOCK
(CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigg
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcIssuedCar;rcIssuedCar~ /\ re
THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO rentalPeriod[RentalCase*Int
SELECTFROM 'a'[RentalCase]*'b'[Int

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
PICK a,b FROM rentalPeriod~;('a'[RentalCase]*'b'[Int
THEN INSERT INTO ctcNrOfDays[CompTariffedCharge]
SELECTFROM 'b'[CompTariffedCharge]

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
NEW x:Integer;
ALL of INSERT INTO rentalPeriod[RentalCase*Int
SELECTFROM 'a'[RentalCase]*'b'[CompTariffedCharge]

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
INSERT INTO ctcNrOfDays[CompTariffedCharge]
SELECTFROM 'b'[CompTariffedCharge]*'a'[Int

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO rcIssuedCar[RentalCase*Int
SELECTFROM 'a'[RentalCase]*'b'[CarType]

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
PICK a,b FROM rcIssuedCar~;('a'[RentalCase]*'b'[CarType]
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
THEN INSERT INTO cartType[CompTariffedCharge]
SELECTFROM 'a'[CompTariffedCharge]*'b'[Int

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;
PICK a,b FROM carType~;('a'[RentalCase]*'b'[CarType]
THEN ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[
TH

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(MAINTAIN
NEW x:Amo
ALL of

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                                (MAINTAIN
                                (MAINTAIN
                                (MAINTAINING -(r
(MAINTAINING -(rcIssuedCar;r
NEW x:CarType;
    ALL of INSERT INTO carType
        SELECTFROM 'a'[Car

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(TO MAINTAIN  -(rcI
ONE OF ONE NONEMPTY
THEN
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THEN

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(MAINTAINING
NEW x:Amount
  ALL of INS.
  SE.
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(TO
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SE

[illegible]

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NEW x:Car;
  ALL of INSERT INTO rcIssuedCar[RentalCase*Car]
    SELECTFROM 'a'[RentalCase]*'b'[CompTa

    (TO MAINTAIN -(rcIssuedCar;rcIssuedCa
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
      THEN INSERT INTO carType
        SELECTFROM 'a'[Car

        (TO MAINTAIN -(rcI
        PICK a,b FROM carType~;(
        THEN ONE OF ONE NONEMPTY
          THEN

          PICK
          THEN

          (MAINTAINING
          NEW x:Amount
          ALL of INS
          SE

          (TO
          INS
          SE

          (TO
          (MAINTAINING
          (MAINTAINING
          (MAINTAINING -(rcIs
          (MAINTAINING -(rcIssuedCar;rcIs
          NEW x:CarType;
            ALL of INSERT INTO carType[Car
              SELECTFROM 'x'[Car]*'

              (TO MAINTAIN -(rcIssu
              ONE OF ONE NONEMPTY AL
                THEN INS
                SE

                (TO
                PICK a,b
                THEN INS
                SE

                (TO

```



```

SELECTFROM 'a'[RentalCase]*'b'[Car

(TO MAINTAIN -(rentalExcessPeriod;
PICK a,b FROM rcIssuedCar~;('a'[RentalCa
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
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(MAINTAIN
NEW x:Amo
ALL of

(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

PICK
THEN

(MAINTAINING

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NEW x:Amount
ALL of INS
SE

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(MAINAINING
(MAINAINING -(rent
(MAINAINING -(rentalExces
(MAINAINING -(rentalExcessP
(MAINAINING -(rentalExcessPeriod;r
(MAINAINING -(rentalExcessPeriod;rentalExcessP
NEW x:Car;
ALL of INSERT INTO rcIssuedCar[RentalCase*Car
SELECTFROM 'a'[RentalCase]*'b'[CompTa

(TO MAINTAIN -(rentalExcessPeriod;ren
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK
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
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(MAINAINI
(MAINAINING
(MAINAINING -(rent

```



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        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate)
NEW x:Date;
    ALL of INSERT INTO contractedEndDate[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
INSERT INTO firstDate[DateDifference*DateDifference]
        SELECTFROM 'b'[DateDifference]*'a'[DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
        (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate)
        (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate)
        (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contracte
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[DateDifference]
        THEN INSERT INTO rcDroppedOffDate[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
        PICK a,b FROM rcDroppedOffDate~;'a'[DateDifference]
        THEN INSERT INTO lastDate[DateDifference*DateDifference]
        SELECTFROM 'b'[DateDifference]*'a'[DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
        (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate)
NEW x:Date;
    ALL of INSERT INTO rcDroppedOffDate[RentalCase]
        SELECTFROM 'a'[RentalCase]*'b'[DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
INSERT INTO lastDate[DateDifference*DateDifference]
        SELECTFROM 'b'[DateDifference]*'a'[DateDifference]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate)
        (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate)
        (MAINAINING -(rcDroppedOffDate;rcDroppedOffDate)
        (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~ /\ contractedEndDate;contractedEndDate)
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])

```

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(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;
(MAINAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;r
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) /\ re
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;con
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ renta
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contrac
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[Renta
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) /\ (rent
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contracte

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

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ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'[Ye
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'[
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM 'b'[RentalCase]*'a'[Branch]

```

```

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Branch;
        INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes'[Y
        THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Branch;
        INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
        THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a'[RentalCase]*'b'[Branch]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes'
        THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b'[RentalCase]*'a'[Branch]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Branch;
        INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest

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PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes'[YesNo]
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Date;
INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes'[Yes
THEN INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Date;
INSERT INTO contractedStartDate[RentalCase*Date]
SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

(TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a'[RentalCase]*'b'[Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes'[YesNo];
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b'[RentalCase]*'a'[Date]

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Date;
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

(TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes

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THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'a' [RentalCase]*'b' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchReq
PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes' [YesNo]
THEN INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM 'b' [RentalCase]*'a' [Date]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
NEW x:Date;
INSERT INTO contractedEndDate[RentalCase*Date]
SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNo]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'a' [RentalCase]*'b' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequest
PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes' [YesNo];
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b' [RentalCase]*'a' [CarType]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:CarType;
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Ren

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF 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' [YesNo];rcBranchReq
PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes' [YesNo]
THEN INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM 'b' [RentalCase]*'a' [CarType]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
NEW x:CarType;
INSERT INTO contractedCarType[RentalCase*CarType]
SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I

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        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes'[YesNo];rcUserReq
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
        PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes'[YesNo];rcBranc
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes'[YesNo];rcUserReq
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

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NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'a'[RentalCase]*'b'[Person]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
      THEN INSERT INTO rcRenter[RentalCase*Person]
      SELECTFROM 'b'[RentalCase]*'a'[Person]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;r

      (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (contractedPickupBranch~;(I[R
      THEN INSERT INTO carAvailableAt[Car*Branch]
      SELECTFROM 'b'[Car]*'a'[Branch]

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ r
      PICK a,b FROM carAvailableAt;(contractedPickupBranch~;(I[RentalC
      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~;(I[RentalCase] /

      (TO MAINTAIN -(contractedPickupBranch~;(I[RentalCase] /\ rent
      (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBee

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(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenP
(MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesM
    THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHa
    THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
NEW x:Person;
    INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesM
    THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHa
    THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
NEW x:Person;
    INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R

    (TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
    (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rc

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranc
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[YesNo];r
    THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

    (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /
PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNo];rentalIs
    THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'b'[RentalCase]*'a'[Amount]

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        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~/
(MAINAINING  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~/ \ I[RentalCas
NEW x:Amount;
        INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~/ \ I[RentalCas

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~/ \ I[Rental
        (MAINAINING  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~/ \ I[RentalCas
        (MAINAINING  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~/ \ I[RentalCase]) \
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcMaxRentalDuration;rcMaxRen
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~/ \
PICK a,b FROM contractedStartDate~;(rcMaxRentalDuration;rcMaxRen
        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~/ \
(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~/ \
(MAINAINING  -(rcMaxRentalDuration;rcMaxRentalDuration~/ \ contractedEn
NEW x:Date;
        ALL of INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM (rcMaxRentalDuration;rcMaxRentalDuration~/ \ contr

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~/ \ co
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('x'[Date])*(rcMaxRentalDuration;rcMaxRen
        THEN INSERT INTO dateIntervalCompTrigger[Date*Date]
        SELECTFROM 'a'[Date]*'b'[Date]

        (TO MAINTAIN  -(rcMaxRentalDuration;rcMaxRentalDuration~/ \

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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
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*
        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*
            SELECTFROM 'a'[RentalCase]*'b'[DateDifferencePlusOne]

        (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*DateDifferencePlusOne]
        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~ /\ contractedStartDate
PICK a,b FROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate~
THEN BLOCK
        (CANNOT CHANGE V[DateDifferencePlusOne*RentalCase] FROM Trigger re
(MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedStartDate~
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcIssuedCar;rcIssuedCar~ /\ rentalCase*
        THEN ALL of ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM ('a'[RentalCase*

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INSERT
SELECT

(TO M
(MAINAINING
(MAINAINING -
(MAINAINING -(rcIssu
(MAINAINING -(rcIssuedCar;rcIssu
NEW x:CarType;
ALL of INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rcIssued
ONE OF ONE NONEMPTY ALTE
THEN INSERT
SELECT

(TO M
PICK a,b F
THEN INSERT
SELECT

(TO M
(MAINAINING -(rc
NEW x:Amount;
ALL of INSERT I
SELECTF

(TO MAIN
INSERT I
SELECTF

(TO MAIN
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(MAINAINING -(rc
(MAINAINING -(rcIssuedC
(MAINAINING -(rcIssuedCar;rcIs
(MAINAINING -(rcIssuedCar;rcIssu
(MAINAINING -(rcIssuedCar;rcIssuedCar~
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPer
NEW x:Car;
ALL of INSERT INTO rcIssuedCar[RentalCase*Car]
SELECTFROM 'a'[RentalCase]*'b'[CompTariffe

(TO MAINTAIN -(rcIssuedCar;rcIssuedCar~ /\
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b
THEN INSERT INTO carType[Car*
SELECTFROM 'a'[Car]*'b'

(TO MAINTAIN -(rcIssued

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PICK a,b FROM carType~;('x'[C
THEN 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

      (TO MAIN
INSERT I
SELECTF

      (TO MAIN
      (MAINAINING -(
      (MAINAINING -(rc
      (MAINAINING -(rcIssuedC
(MAINAINING -(rcIssuedCar;rcIssuedC
NEW x:CarType;
      ALL of INSERT INTO carType[Car*Car
      SELECTFROM 'x'[Car]*'a'[Re

      (TO MAINTAIN -(rcIssuedCar
ONE OF ONE NONEMPTY ALTERNA
      THEN INSERT I
      SELECTF

      (TO MAIN
PICK a,b FROM
THEN INSERT I
SELECTF

      (TO MAIN
(MAINAINING -(rcIss
NEW x:Amount;
      ALL of INSERT INTO
      SELECTFROM

      (TO MAINTAI
INSERT INTO
SELECTFROM

      (TO MAINTAI

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      PICK a,
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      (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
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      (MAINTAINING -(

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(MAINAINING -(rentalExc
(MAINAINING -(rentalExcessPeri
(MAINAINING -(rentalExcessPeriod
(MAINAINING -(rentalExcessPeriod;rental
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod
NEW x:Car;
ALL of INSERT INTO rcIssuedCar[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

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(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 ALTERNA
THEN INSERT I
SELECTF

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                                (TO MAIN
                                PICK a,b FROM
                                THEN INSERT I
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                                (TO MAIN
                                (MAINTAINING -(renta
                                NEW x:Amount;
                                ALL of INSERT INTO
                                SELECTFROM

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                                INSERT INTO
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                                (TO MAINTAI
                                (MAINTAINING -(ren
                                (MAINTAINING -(renta
                                (MAINTAINING -(rentalExcess
                                (MAINTAINING -(rentalExcessPeriod;
                                (MAINTAINING -(rentalExcessPeriod;re
                                (MAINTAINING -(rentalExcessPeriod;rentalExc
                                (MAINTAINING -(rentalExcessPeriod;rentalExcessPeri
                                (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
                                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
                                SELECTFROM 'b'[DateDifference]*'a'[Date

                                (TO MAINTAIN -(rcDroppedOffDate;rcDropp
                                (MAINTAINING -(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

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        (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*
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~
        PICK a,b FROM rcDroppedOffDate~;'a'[RentalCase*
        THEN INSERT INTO lastDate[DateDifference*Date]
        SELECTFROM 'b'[DateDifference]*'a'[Date]

        (TO MAINTAIN -(rcDroppedOffDate;rcDroppedOffDate~
        (MAINTAINING -(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~ /\ contra
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEnd
        PICK a,b FROM (firstDate;contractedEndDate~ /\ lastDate;rcDroppedOffDate~
        THEN BLOCK
        (CANNOT CHANGE V[DateDifference*RentalCase] FROM Trigger excess pe
        (MAINTAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEnd
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ c
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ r
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ r
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ r
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase]) \/\ r
        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIssuedCar
        (MAINTAINING -(contractedPickupBranch~;(I[RentalCase] /\ rentalHasBeenPromised);contractedPickupBranch
        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \/\
        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \/\

```



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(MAINAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop
(MAINAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \/ rentalC
(MAINAINING -(rcMaxRentalDuration;rcMaxRentalDuration~ /\ contractedEndDate;contract
(MAINAINING -(rentalLocationPenaltyCharge;rentalLocationPenaltyCharge~ /\ rentalPena
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedStartDate;contractedSt
(MAINAINING -(rcIssuedCar;rcIssuedCar~ /\ rentalPeriod;rentalPeriod~ /\ I[RentalCase
(MAINAINING -(rentalExcessPeriod;rentalExcessPeriod~ /\ I[RentalCase]) \/ (rentalExc
(MAINAINING -(rcDroppedOffDate;rcDroppedOffDate~ /\ contractedEndDate;contractedEndD

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=RentalCase} EXECUTE      -- (ECA rule 114)
ALL of 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 rentalHasBeenPromised[RentalCase*RentalCase]
      SELECTFROM Delta;V[RentalCase*RentalCase] \/ V[RentalCase*RentalCase];De

DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM Delta;V[RentalCase*YesNo]

DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM Delta;V[RentalCase*YesNo]

DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
      SELECTFROM Delta;V[RentalCase*RentalCase] \/ V[RentalCase*RentalCase];De

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
      SELECTFROM Delta;V[RentalCase*YesNo]

```

```

DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM Delta;V[RentalCase*Car]

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*YesNo]
SELECTFROM Delta;V[RentalCase*YesNo]

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*MaxRentalDuration]
SELECTFROM Delta;V[RentalCase*MaxRentalDuration]

```

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

```

ALL of DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM Delta;V[RentalCase*Date]

DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM Delta;V[RentalCase*Date]

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```

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 rentalHasBeenPromised[RentalCase*RentalCase]
SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];Delta

DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM Delta;V[RentalCase*YesNo]

DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM Delta;V[RentalCase*YesNo]

DELETE FROM rentalHasBeenStarted[RentalCase*RentalCase]
SELECTFROM Delta;V[RentalCase*RentalCase] \ / V[RentalCase*RentalCase];Delta

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM Delta;V[RentalCase*YesNo]

DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM Delta;V[RentalCase*Car]

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*YesNo]
SELECTFROM Delta;V[RentalCase*YesNo]

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*MaxRentalDuration]
SELECTFROM Delta;V[RentalCase*MaxRentalDuration]

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=Date} EXECUTE    -- (ECA rule 116)
ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedSta

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserR

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserR

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedSta

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserR

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserR

      (TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
DELETE FROM contractedStartDate[RentalCase*Date]

```

```

SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contracte

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranch

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranch

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contracte

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranch

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranch

(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedEnd

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedEnd

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserReque

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contracte

```

```

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ)
DELETE FROM rcBranchRequestedQ [RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequestedQ)

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ)
DELETE FROM rcBranchRequestedQ [RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequestedQ)

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ)
DELETE FROM contractedEndDate [RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~;contractedEndDate)

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ)
DELETE FROM contractedEndDate [RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequestedQ)

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ)
DELETE FROM contractedEndDate [RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequestedQ)

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ)
DELETE FROM contractedStartDate [RentalCase*Date]
SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;contractedStartDate)

(TO MAINTAIN -(contractedStartDate~;contractedStartDate) \/ I[Date] FROM UNI contractedStartDate
DELETE FROM contractedEndDate [RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;contractedStartDate)

(TO MAINTAIN -(contractedEndDate~;contractedEndDate) \/ I[Date] FROM UNI contractedEndDate
DELETE FROM rcDroppedOffDate [RentalCase*Date]
SELECTFROM rcDroppedOffDate;(-I[Date] /\ rcDroppedOffDate~;rcDroppedOffDate)

(TO MAINTAIN -(rcDroppedOffDate~;rcDroppedOffDate) \/ I[Date] FROM UNI rcDroppedOffDate
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::DateDifference
DELETE FROM firstDate [DateDifference*Date]
SELECTFROM firstDate;(-I[Date] /\ firstDate~;firstDate)

(TO MAINTAIN -(firstDate~;firstDate) \/ I[Date] FROM UNI firstDate::DateDifference
DELETE FROM lastDate [DateDifference*Date]
SELECTFROM lastDate;(-I[Date] /\ lastDate~;lastDate)

(TO MAINTAIN -(lastDate~;lastDate) \/ I[Date] FROM UNI lastDate::DateDifference
DELETE FROM dateIntervalIsWithinMaxRentalDuration [Date*Date]

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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

(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCa
(MAINAINING -(contractedStartDate~;contractedStartDate) /\ I[Date] FROM UNI con
(MAINAINING -(contractedEndDate~;contractedEndDate) /\ I[Date] FROM UNI contrac
(MAINAINING -(rcDroppedOffDate~;rcDroppedOffDate) /\ I[Date] FROM UNI rcDropped
(MAINAINING -(earliestDate~;earliestDate) /\ I[Date] FROM UNI earliestDate::Dat
(MAINAINING -I[DateDifferencePlusOne] /\ earliestDate;earliestDate~ FROM TOT ea
(MAINAINING -(latestDate~;latestDate) /\ I[Date] FROM UNI latestDate::DateDiffe
(MAINAINING -I[DateDifferencePlusOne] /\ latestDate;latestDate~ FROM TOT latest
(MAINAINING -(firstDate~;firstDate) /\ I[Date] FROM UNI firstDate::DateDifferen
(MAINAINING -I[DateDifference] /\ firstDate;firstDate~ FROM TOT firstDate::Date
(MAINAINING -(lastDate~;lastDate) /\ I[Date] FROM UNI lastDate::DateDifference*
(MAINAINING -I[DateDifference] /\ lastDate;lastDate~ FROM TOT lastDate::DateDif

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

```

ONE OF DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedStartDat

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedStartDat

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcUserReques

(TO MAINTAIN  -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedStar

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchRequ

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchRequ

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedStar

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchRequ

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
DELETE FROM contractedStartDate[RentalCase*Date]
      SELECTFROM contractedStartDate;(-I[Date] /\ contractedStartDate~;rcBranchRequ

(TO MAINTAIN  -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
DELETE FROM contractedEndDate[RentalCase*Date]

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```

SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedEndDate;

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedEndDate;

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcUserRequestedQ

(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedEndD

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedEndD

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM contractedEndDate;(-I[Date] /\ contractedEndDate~;rcBranchRequeste

(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
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

(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/\ c
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINAINING -(contractedStartDate~;contractedStartDate) \/\ I[Date] FROM UNI contract
(MAINAINING -(contractedEndDate~;contractedEndDate) \/\ I[Date] FROM UNI contractedEn
(MAINAINING -(rcDroppedOffDate~;rcDroppedOffDate) \/\ I[Date] FROM UNI rcDroppedOffDa
(MAINAINING -(earliestDate~;earliestDate) \/\ I[Date] FROM UNI earliestDate::DateDiff
(MAINAINING -I[DateDifferencePlusOne] \/\ earliestDate;earliestDate~ FROM TOT earlies
(MAINAINING -(latestDate~;latestDate) \/\ I[Date] FROM UNI latestDate::DateDifference
(MAINAINING -I[DateDifferencePlusOne] \/\ latestDate;latestDate~ FROM TOT latestDate:
(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=Location} EXECUTE -- (ECA rule 118)
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

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

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

ONE OF DELETE FROM branchLocation[Branch*Location]
SELECTFROM branchLocation;(-I[Location] /\ branchLocation~;branchLocation)

(TO MAINTAIN -(branchLocation~;branchLocation) \/\ I[Location] FROM UNI branch
DELETE FROM branchLocation[Branch*Location]
SELECTFROM V[Branch*Location];Delta

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

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=CarType} EXECUTE    -- (ECA rule 119)
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 b
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 b
(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::CarT
(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 m
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 m
(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::CarT
(MAINTAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(rentalTariffPer
    THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
        SELECTFROM 'a'[CarType]*'b'[Amount]

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];ren
PICK a,b FROM rentalTariffPerDay~;(I[CarType] /\ -(rentalTariffPer
    THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
        SELECTFROM 'b'[CarType]*'a'[Amount]

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];ren
(MAINTAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerD
NEW x:Amount;

```

```

INSERT INTO rentalTariffPerDay[CarType*Amount]
  SELECTFROM (I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~))*'
  (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffP
  (MAINTAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerD
  ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(excessTariffPer
  THEN INSERT INTO excessTariffPerDay[CarType*Amount]
    SELECTFROM 'a'[CarType]*'b'[Amount]

    (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];exc
    PICK a,b FROM excessTariffPerDay~;(I[CarType] /\ -(excessTariffPer
    THEN INSERT INTO excessTariffPerDay[CarType*Amount]
      SELECTFROM 'b'[CarType]*'a'[Amount]

      (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];exc
      (MAINTAINING -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerD
      (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 ren
      (MAINTAINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rent
      (MAINTAINING -(excessTariffPerDay~;excessTariffPerDay) \/ I[Amount] FROM UNI exc
      (MAINTAINING -I[CarType] \/ excessTariffPerDay;excessTariffPerDay~ FROM TOT exce

```

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

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(brand;brand~));bran
  THEN INSERT INTO brand[CarType*Brand]
    SELECTFROM 'a'[CarType]*'b'[Brand]

    (TO MAINTAIN -I[CarType] \/ brand;I[Brand];brand~ FROM UNI 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:
      (MAINTAINING -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Bran
      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*B
        (MAINTAINING -I[CarType] \/ brand;I[Brand];brand~ FROM UNI brand::CarType*Bran
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(model;model~));mode
        THEN INSERT INTO model[CarType*Model]
          SELECTFROM 'a'[CarType]*'b'[Model]

```

```

        (TO MAINTAIN -I[CarType] \/ model;I[Model];model~ FROM UNI 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:
(MAINAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Mode
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*M
(MAINAINING -I[CarType] \/ model;I[Model];model~ FROM UNI model::CarType*Mode
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CarType] /\ -(rentalTariffPerDay;
        THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
        SELECTFROM 'a'[CarType]*'b'[Amount]

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTa
PICK a,b FROM rentalTariffPerDay~;(I[CarType] /\ -(rentalTariffPerDay;r
THEN INSERT INTO rentalTariffPerDay[CarType*Amount]
        SELECTFROM 'b'[CarType]*'a'[Amount]

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTa
(MAINAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ F
NEW x:Amount;
        INSERT INTO rentalTariffPerDay[CarType*Amount]
        SELECTFROM (I[CarType] /\ -(rentalTariffPerDay;rentalTariffPerDay~))*'x'[Am

        (TO MAINTAIN -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay
(MAINAINING -I[CarType] \/ rentalTariffPerDay;I[Amount];rentalTariffPerDay~ F
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];excessTa
PICK a,b FROM excessTariffPerDay~;(I[CarType] /\ -(excessTariffPerDay;e
THEN INSERT INTO excessTariffPerDay[CarType*Amount]
        SELECTFROM 'b'[CarType]*'a'[Amount]

        (TO MAINTAIN -I[CarType] \/ excessTariffPerDay;I[Amount];excessTa
(MAINAINING -I[CarType] \/ excessTariffPerDay;I[Amount];excessTariffPerDay~ F
(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 120)
ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType]

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType]

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType]

      (TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType]

      (TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])

      (TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])
      DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchRequestedQ~;contractedCarType[RentalCase*CarType])
```

```

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
DELETE FROM contractedCarType[RentalCase*CarType]
SELECTFROM rcIssuedCar;carType;(-I[CarType] /\ carType~;rcIssuedCar~;contractedCarType)

(TO MAINTAIN  -(contractedCarType~;rcIssuedCar;carType) /\ I[CarType] FROM UNI carType::Car*CarType
DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcIssuedCar~;contractedCarType)

(TO MAINTAIN  -(contractedCarType~;rcIssuedCar;carType) /\ I[CarType] FROM UNI carType::Car*CarType
DELETE FROM carType[Car*CarType]
SELECTFROM rcIssuedCar~;contractedCarType;(-I[CarType] /\ contractedCarType~;contractedCarType)

(TO MAINTAIN  -(contractedCarType~;rcIssuedCar;carType) /\ I[CarType] FROM UNI carType::Car*CarType
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~;contractedCarType)

(TO MAINTAIN  -(contractedCarType~;contractedCarType) /\ I[CarType] FROM UNI carType::Car*CarType
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  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING  -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type into
(MAINTAINING  -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type into
(MAINTAINING  -(carType~;carType) /\ I[CarType] FROM UNI carType::Car*CarType)
(MAINTAINING  -I[Car] /\ carType;carType~ FROM TOT carType::Car*CarType)
(MAINTAINING  -(contractedCarType~;contractedCarType) /\ I[CarType] FROM UNI contractedCarType

```

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


```

ONE OF DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType;

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;contractedCarType;

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcUserRequest

(TO MAINTAIN  -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarT

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;contractedCarT

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedCarType[RentalCase*CarType]
      SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcBranchReque

(TO MAINTAIN  -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
DELETE FROM contractedCarType[RentalCase*CarType]

```

```

SELECTFROM rcIssuedCar;carType;(-I[CarType] /\ carType~;rcIssuedCar~;contract
(TO MAINTAIN -(contractedCarType~;rcIssuedCar;carType) \/ I[CarType] FROM Ren
DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM contractedCarType;(-I[CarType] /\ contractedCarType~;rcIssuedCar;c

(TO MAINTAIN -(contractedCarType~;rcIssuedCar;carType) \/ I[CarType] FROM Ren
DELETE FROM carType[Car*CarType]
SELECTFROM rcIssuedCar~;contractedCarType;(-I[CarType] /\ contractedCarType~;

(TO MAINTAIN -(contractedCarType~;rcIssuedCar;carType) \/ I[CarType] FROM Ren
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 -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -rcIssuedCar /\ contractedCarType;carType~ FROM Rented car type integrit
(MAINTAINING -(carType~;carType) \/ I[CarType] FROM UNI carType::Car*CarType)
(MAINTAINING -I[Car] /\ carType;carType~ FROM TOT carType::Car*CarType)
(MAINTAINING -(contractedCarType~;contractedCarType) \/ I[CarType] FROM UNI contracte

<-----End Derivation --

ON DELETE Delta FROM Isn{dety=Brand} EXECUTE -- (ECA rule 122)

```

```

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

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

(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 Isn{dety=Model} EXECUTE      -- (ECA rule 124)
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)

```

----- 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 126)
ONE OF DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      (TO MAINTAIN -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]
      /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesNo])
      DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      DELETE FROM rentalPeriod[RentalCase*Integer]
      SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
      SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;computedTariffedCharge*Amount)
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      DELETE FROM rcIssuedCar[RentalCase*Car]
      SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      DELETE FROM carType[Car*CarType]
      SELECTFROM rcIssuedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      (TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
      DELETE FROM rentalTariffPerDay[CarType*Amount]
      SELECTFROM carType~;rcIssuedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;carType*Amount)
```

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(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPerD

(TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssued
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;exces

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rent

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rent

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
DELETE FROM carType[Car*CarType]
SELECTFROM rcIssuedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalPenalty

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcIssuedCar~;rentalPenaltyCharge;(-I[Amount] /\ rent

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN  -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\
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] /\ rentalLocationPena

(TO MAINTAIN  -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbran

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DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocationPenaltyCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch;DistanceBetweenLocations*Branch)
DELETE FROM contractedDropoffBranch[RentalCase*Branch]
SELECTFROM rentalLocationPenaltyCharge;(-I[Amount] /\ rentalLocationPenaltyCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch;DistanceBetweenLocations*Branch)
DELETE FROM distbranch[DistanceBetweenLocations*Branch]
SELECTFROM computedLocationPenaltyCharge;(-I[Amount] /\ computedLocationPenaltyCharge;

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch;DistanceBetweenLocations*Amount)
DELETE FROM computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
SELECTFROM (distbranch;rcDroppedOffBranch~ /\ distbranch;contractedDropoffBranch;DistanceBetweenLocations*Amount)

(TO MAINTAIN -(rentalLocationPenaltyCharge~;(rcDroppedOffBranch;distbranch;DistanceBetweenLocations*Amount)
DELETE FROM rentalCharge[RentalCase*Amount]
SELECTFROM (rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM rentalBasicCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM arg2[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM rentalLocationPenaltyCharge[RentalCase*Amount]
SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM arg3[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM (arg1;rentalBasicCharge~ /\ arg2;rentalPenaltyCharge~ /\ arg3;rentalPenaltyCharge;

(TO MAINTAIN -(rentalCharge~;(rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalPenaltyCharge)
DELETE FROM computedRentalCharge[CompRentalCharge*Amount]
SELECTFROM computedRentalCharge;(-I[Amount] /\ computedRentalCharge~;computedRentalCharge;

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(TO MAINTAIN  -(computedRentalCharge~;I[CompRentalCharge];computedRentalC
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~

(TO MAINTAIN  -(computedTariffedCharge~;I[CompTariffedCharge];computedTar
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM rentalTariffPerDay;(-I[Amount] /\ rentalTariffPerDay~;rentalT

(TO MAINTAIN  -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM
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~;renta

(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] /\ rentalLocationPena

(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

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DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM V[CarType*Amount];Delta

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

(MAINAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \/\ re
(MAINAINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPer
(MAINAINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTar
(MAINAINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbr
(MAINAINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLo
(MAINAINING -I[CompRentalCharge] \/\ computedRentalCharge;computedRentalCharge~
(MAINAINING -I[CompTariffedCharge] \/\ computedTariffedCharge;computedTariffedCh
(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

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(MAINTEINING -(rentalBasicCharge~;rentalBasicCharge) \/ I[Amount] FROM UNI renta
(MAINTEINING -(rentalPenaltyCharge~;rentalPenaltyCharge) \/ I[Amount] FROM UNI r
(MAINTEINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/
(MAINTEINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;compu
(MAINTEINING -(rentalLocationPenaltyCharge~;rentalLocationPenaltyCharge) \/ I[Am
(MAINTEINING -(rentalCharge~;rentalCharge) \/ I[Amount] FROM UNI rentalCharge::R
(MAINTEINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*
(MAINTEINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::CompRentalCharge*
(MAINTEINING -(arg3~;arg3) \/ I[Amount] FROM UNI arg3::CompRentalCharge*Amount)
(MAINTEINING -I[CompRentalCharge] \/ arg3;arg3~ FROM TOT arg3::CompRentalCharge*
(MAINTEINING -(computedRentalCharge~;computedRentalCharge) \/ I[Amount] FROM UNI
(MAINTEINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmo
(MAINTEINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT c
(MAINTEINING -(computedTariffedCharge~;computedTariffedCharge) \/ I[Amount] FROM

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

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ONE OF DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]

      (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesN

      (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesN

      (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalCharge;(-I[Amount]

      (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesN

      (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
DELETE FROM rentalCharge[RentalCase*Amount]
      SELECTFROM rentalCharge;(-I[Amount] /\ rentalCharge~;rentalIsPaidQ;'Yes'[YesN

      (TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
DELETE FROM rentalBasicCharge[RentalCase*Amount]
      SELECTFROM (rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerD

      (TO MAINTAIN  -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM rentalPeriod[RentalCase*Integer]

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SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(rentalPeriod;

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM carType[Car*CarType]
SELECTFROM rcIssuedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasicCharge~;(

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM rentalTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcIssuedCar~;rentalBasicCharge;(-I[Amount] /\ rentalBasic

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalPeriod~ /\ ctcDailyAmount;rentalTariffPerDay~;

(TO MAINTAIN -(rentalBasicCharge~;(rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;c
DELETE FROM rentalPenaltyCharge[RentalCase*Amount]
SELECTFROM (rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTari

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM rcIssuedCar[RentalCase*Car]
SELECTFROM rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharge~;(rentalExc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM carType[Car*CarType]
SELECTFROM rcIssuedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalPenaltyCharg

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM excessTariffPerDay[CarType*Amount]
SELECTFROM carType~;rcIssuedCar~;rentalPenaltyCharge;(-I[Amount] /\ rentalPen

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(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM computedTariffedCharge;(-I[Amount] /\ computedTariffedCharge~;(ctc

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
DELETE FROM computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM (ctcNrOfDays;rentalExcessPeriod~ /\ ctcDailyAmount;excessTariffPer

(TO MAINTAIN -(rentalPenaltyCharge~;(rentalExcessPeriod;ctcNrOfDays~ /\ rcIss
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

(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 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 UNI
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 rentalTariffPerDay[CarType*Amount]
SELECTFROM V[CarType*Amount];Delta

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

(MAINTEINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \/ rentalC
(MAINTEINING -((rentalPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;rentalTariffPerDay;c
(MAINTEINING -((rentalExcessPeriod;ctcNrOfDays~ /\ rcIssuedCar;carType;excessTariffPe
(MAINTEINING -((rcDroppedOffBranch;distbranch~ /\ contractedDropoffBranch;distbranch~
(MAINTEINING -((rentalBasicCharge;arg1~ /\ rentalPenaltyCharge;arg2~ /\ rentalLocatio
(MAINTEINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM
(MAINTEINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge~
(MAINTEINING -(rentalTariffPerDay~;rentalTariffPerDay) \/ I[Amount] FROM UNI rentalTa
(MAINTEINING -I[CarType] \/ rentalTariffPerDay;rentalTariffPerDay~ FROM TOT rentalTar
(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

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<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=MaxRentalDuration} EXECUTE -- (ECA rule 128)
ALL of DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM rcMaxRentalDuration;(-I[MaxRentalDuration] /\ rcMaxRentalDura

(TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[MaxRentalD
DELETE FROM maxRentalDuration[CarRentalCompany*MaxRentalDuration]
SELECTFROM V[CarRentalCompany*MaxRentalDuration];Delta

ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM contractedPickupBranch;branchOf;maxRentalDuration;(-I[

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branch

```

```

DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM rcMaxRentalDuration;(-I[MaxRentalDuration] /\ rcMaxRen

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branch
DELETE FROM branchOf[Branch*CarRentalCompany]
SELECTFROM contractedPickupBranch~;rcMaxRentalDuration;(-I[MaxRen

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branch
DELETE FROM maxRentalDuration[CarRentalCompany*MaxRentalDuration]
SELECTFROM branchOf~;contractedPickupBranch~;rcMaxRentalDuration;

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branch
(MAINTAINING -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRe
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRental
(MAINTAINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[MaxRentalDuration]

```

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

```

ALL of DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM rcMaxRentalDuration;(-I[MaxRentalDuration] /\ rcMaxRentalDuration~

(TO MAINTAIN -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[MaxRentalDurati
DELETE FROM maxRentalDuration[CarRentalCompany*MaxRentalDuration]
SELECTFROM V[CarRentalCompany*MaxRentalDuration];Delta

ONE OF DELETE FROM rcMaxRentalDuration[RentalCase*MaxRentalDuration]
SELECTFROM contractedPickupBranch;branchOf;maxRentalDuration;(-I[MaxRe

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;ma
DELETE FROM contractedPickupBranch[RentalCase*Branch]
SELECTFROM rcMaxRentalDuration;(-I[MaxRentalDuration] /\ rcMaxRentalDu

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;ma
DELETE FROM branchOf[Branch*CarRentalCompany]
SELECTFROM contractedPickupBranch~;rcMaxRentalDuration;(-I[MaxRentalDu

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;ma
DELETE FROM maxRentalDuration[CarRentalCompany*MaxRentalDuration]
SELECTFROM branchOf~;contractedPickupBranch~;rcMaxRentalDuration;(-I[M

(TO MAINTAIN -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;ma
(MAINTAINING -(rcMaxRentalDuration~;contractedPickupBranch;branchOf;maxRentalD
(MAINTAINING -(contractedPickupBranch;branchOf;maxRentalDuration) \/ rcMaxRentalDurat
(MAINTAINING -(rcMaxRentalDuration~;rcMaxRentalDuration) \/ I[MaxRentalDuration] FROM

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=Person} EXECUTE      -- (ECA rule 130)
ALL of DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM ~(rcDriver;I[Person] /\ validDrivingLicense;validDrivingLic

      (TO MAINTAIN  ~rcDriver /\ rcDriver;I[Person] /\ validDrivingLicense;val
      (TO MAINTAIN  ~(rcDriver~;rcDriver) /\ (I[Person] /\ validDrivingLicense;
      (TO MAINTAIN  ~(rcDriver~;rcDriver) /\ I[Person] FROM UNI rcDriver::Renta
DELETE FROM rcRenter[RentalCase*Person]
      SELECTFROM rcRenter;~I[Person] /\ rcRenter~;rcRenter) /\ V[RentalCase*P

      (TO MAINTAIN  ~(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::Renta
DELETE FROM validDrivingLicense[Person*DrivingLicense]
      SELECTFROM Delta;V[Person*DrivingLicense]

ONE OF DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriv

      (TO MAINTAIN  ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequ
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM rcDriver;~I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes

      (TO MAINTAIN  ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequ
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM rcDriver;~I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes

      (TO MAINTAIN  ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequ
DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriv

      (TO MAINTAIN  ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequ
DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;~I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes

      (TO MAINTAIN  ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequ
DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcDriver;~I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes

      (TO MAINTAIN  ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequ
(MAINTAINING ~(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;
ONE OF DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;rc

      (TO MAINTAIN  ~(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranch
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM rcDriver;~I[Person] /\ rcDriver~;rcBranchRequestedQ;'

      (TO MAINTAIN  ~(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranch
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
      SELECTFROM rcDriver;~I[Person] /\ rcDriver~;rcBranchRequestedQ;'

```



```

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~;rc

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'

(TO MAINTAIN  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
(MAINTAINING  -(rcDriver~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequeste
ONE OF DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~;rcRent

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequ
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Ye

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequ
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Ye

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequ
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~;rcRent

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequ
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Ye

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequ
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Ye

(TO MAINTAIN  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequ
(MAINTAINING  -(rcRenter~;rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~;
ONE OF DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~;rc

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'

```

```

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~;rc

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'

(TO MAINTAIN  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranch
(MAINTAINING  -(rcRenter~;rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequeste
ONE OF DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcDr

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Y

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Y

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcDr

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Y

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Y

(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
(MAINTAINING  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ
ONE OF DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcRe

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Y

(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHand
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Y

```

```

      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)
      DELETE FROM rcRenter[RentalCase*Person]
      SELECTFROM rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)

      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)
      DELETE FROM rcRenter[RentalCase*Person]
      SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)

      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)
      DELETE FROM rcRenter[RentalCase*Person]
      SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)

      (TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)
      (MAINTAINING -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ;rcRenter)
      (MAINTAINING -rcDriver /\ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;rcDriver)
      (MAINTAINING -rcDriver /\ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;rcDriver)
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])
      (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase])
      (MAINTAINING -(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::RentalCase*Person)
      (MAINTAINING -(rcDriver~;rcDriver) /\ I[Person] FROM UNI rcDriver::RentalCase*Person)

```

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

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ALL of DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM (-rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;rcDriver)

      (TO MAINTAIN  -rcDriver /\ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLicense;rcDriver)
      (TO MAINTAIN  -(rcDriver~;rcDriver) /\ (I[Person] /\ validDrivingLicense;validDrivingLicense;rcDriver)
      (TO MAINTAIN  -(rcDriver~;rcDriver) /\ I[Person] FROM UNI rcDriver::RentalCase*Person)
      DELETE FROM rcRenter[RentalCase*Person]
      SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcRenter) /\ V[RentalCase*Person]

      (TO MAINTAIN  -(rcRenter~;rcRenter) /\ I[Person] FROM UNI rcRenter::RentalCase*Person)
      DELETE FROM validDrivingLicense[Person*DrivingLicense]
      SELECTFROM Delta;V[Person*DrivingLicense]

ONE OF DELETE FROM rcDriver[RentalCase*Person]
      SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriver;(-rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriver)

      (TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriver)
      DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
      SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriver)

      (TO MAINTAIN  -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriver)

```

```

DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDriver;(-

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
(MAINTAINING -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDri
ONE OF DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;rcDrive

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;rcDrive

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
(MAINTAINING -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;rc
ONE OF DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcRenter;(-

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested

```

```

DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcRenter;(-

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcUserRequestedQ;'Yes'[Ye

(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequested
(MAINTAINING -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcRen
ONE OF DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;rcRente

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;rcRente

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcBranchRequestedQ;'Yes'[

(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReque
(MAINTAINING -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;r
ONE OF DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rcDriver;

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOv
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes'[Y

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOv

```

```

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcDriver;

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcDriver[RentalCase*Person]
SELECTFROM rcDriver;(-I[Person] /\ rcDriver~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
(MAINTAINING -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcD
ONE OF DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcRenter;

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcRenter;

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
DELETE FROM rcRenter[RentalCase*Person]
SELECTFROM rcRenter;(-I[Person] /\ rcRenter~;rcKeysHandedOverQ;'Yes' [Y

(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOv
(MAINTAINING -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~;rcR
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -rcDriver \/ rcDriver;(I[Person] /\ validDrivingLicense;validDrivingLice
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ r
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \/ r
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \/
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \/

```

```
(MAINTAINING -(rcRenter~;rcRenter) \/ I[Person] FROM UNI rcRenter::RentalCase*Person)
(MAINTAINING -(rcDriver~;rcDriver) \/ I[Person] FROM UNI rcDriver::RentalCase*Person)
```

<-----End Derivation --

```
ON DELETE Delta FROM Isn{dety=DrivingLicense} EXECUTE      -- (ECA rule 132)
DELETE FROM validDrivingLicense[Person*DrivingLicense]
SELECTFROM V[Person*DrivingLicense];Delta
```

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

```
DELETE FROM validDrivingLicense[Person*DrivingLicense]
SELECTFROM V[Person*DrivingLicense];Delta
```

<-----End Derivation --

```
ON INSERT Delta IN Isn{dety=YesNo} EXECUTE      -- (ECA rule 133)
ALL of INSERT INTO Isn{dety=Branch}
    SELECTFROM (contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
    (TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcU
    (TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNo];r
    (TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNo];rc
    (TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNo];
INSERT INTO Isn{dety=Date}
    SELECTFROM (contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReq
    (TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUser
    (TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
    (TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
    (TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
INSERT INTO Isn{dety=CarType}
    SELECTFROM (contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
    (TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
    (TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBr
INSERT INTO Isn{dety=Person}
    SELECTFROM (rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rc
    (TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
    (TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequest
    (TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
    (TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequest
```

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(TO MAINTAIN  -(rcDriver~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
(TO MAINTAIN  -(rcRenter~;rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
  SELECTFROM rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIssuedQ~

(TO MAINTAIN  -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ rcIsRentedQ~
INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
  SELECTFROM rentalIsPaidQ;'Yes' [YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranchQ~

(TO MAINTAIN  -(rentalIsPaidQ;'Yes' [YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranchQ~
INSERT INTO Isn{dety=Amount}
  SELECTFROM rentalCharge~;rentalIsPaidQ;'Yes' [YesNo];rentalIsPaidQ~;rentalIsPaidQ~

(TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes' [YesNo];rentalIsPaidQ~;rentalIsPaidQ~
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
  THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
    SELECTFROM 'a' [RentalCase]*'b' [Branch]

    (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
    PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
    THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'b' [RentalCase]*'a' [Branch]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
      (MAINTAINING  -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ rcUserRequestedQ~
      NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
        SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ rcUserRequestedQ~

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
        (MAINTAINING  -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ rcUserRequestedQ~
        (MAINTAINING  -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I [RentalCase]
        ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
        THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
          SELECTFROM 'a' [RentalCase]*'b' [Branch]

          (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
          PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
          THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
            SELECTFROM 'b' [RentalCase]*'a' [Branch]

            (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
            (MAINTAINING  -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ rcBranchRequestedQ~
            NEW x:Branch;
            INSERT INTO contractedPickupBranch[RentalCase*Branch]
              SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ rcBranchRequestedQ~

              (TO MAINTAIN  -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
              (MAINTAINING  -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ rcBranchRequestedQ~
              (MAINTAINING  -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I [RentalCase]

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ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'a' [RentalCase]*'b' [Branch]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Y
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b' [RentalCase]*'a' [Branch]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:Branch;
    INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~
    (MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Renta
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' [YesNo];rcBranch
PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;
    THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM 'b' [RentalCase]*'a' [Branch]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranch
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
NEW x:Branch;
    INSERT INTO contractedDropoffBranch[RentalCase*Branch]
        SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequeste
    (MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
    (MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'a' [RentalCase]*'b' [Date]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes' [
    THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'b' [RentalCase]*'a' [Date]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRe
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\
NEW x:Date;
    INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\

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        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranch
        PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes'[
        THEN INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Date;
        INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
        PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes'[Ye
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
        (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranch
        PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes'[
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch

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(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
NEW x:Date;
    INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'a'[RentalCase]*'b'[CarType]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
    PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes'[Ye
    THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b'[RentalCase]*'a'[CarType]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
    (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
    NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
    (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
    (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
    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'[YesNo];rcBranch
    PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes'[
    THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'b'[RentalCase]*'a'[CarType]

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
    NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

    (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
    (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
    ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'a'[RentalCase]*'b'[Person]

    (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
    PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes'[YesNo];rcUs

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        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

            (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

            (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
            (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
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'[YesNo];rcBranch
PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

            (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranch
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~

            (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequeste
            (MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[R
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[
        THEN INSERT INTO rcRenter[RentalCase*Person]
            SELECTFROM 'a'[RentalCase]*'b'[Person]

            (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes'[YesNo];rcUser
        THEN INSERT INTO rcRenter[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

            (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
NEW x:Person;
        INSERT INTO rcRenter[RentalCase*Person]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\

            (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~
            (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Renta
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes
        THEN INSERT INTO rcRenter[RentalCase*Person]

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SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I [RentalCase]
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM (rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\ I [RentalCase]
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~
(MAINTAINING -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM (rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~ /\

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes' [YesNo];rcKeysHandedOverQ~

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        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[Ren
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[Yes
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
                SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Ren
        PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Ren
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
                SELECTFROM 'b'[RentalCase]*'a'[Amount]

        (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Ren
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Ren
NEW x:Amount;
        INSERT INTO rentalCharge[RentalCase*Amount]
                SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Ren

        (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[R
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Ren
        (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]

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(MAINTEINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]
(MAINTEINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]
(MAINTEINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]
(MAINTEINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;r
(MAINTEINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ / re
(MAINTEINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ / re

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

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ALL of INSERT INTO Isn{dety=Branch}
    SELECTFROM (contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque

(TO MAINTAIN -(contractedPickupBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserRe
(TO MAINTAIN -(contractedPickupBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBranch
(TO MAINTAIN -(contractedDropoffBranch~;rcUserRequestedQ;'Yes'[YesNo];rcUserR
(TO MAINTAIN -(contractedDropoffBranch~;rcBranchRequestedQ;'Yes'[YesNo];rcBra
INSERT INTO Isn{dety=Date}
    SELECTFROM (contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequeste

(TO MAINTAIN -(contractedStartDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserReque
(TO MAINTAIN -(contractedStartDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchR
(TO MAINTAIN -(contractedEndDate~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(TO MAINTAIN -(contractedEndDate~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
INSERT INTO Isn{dety=CarType}
    SELECTFROM (contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ

(TO MAINTAIN -(contractedCarType~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(TO MAINTAIN -(contractedCarType~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
INSERT INTO Isn{dety=Person}
    SELECTFROM (rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDrive

(TO MAINTAIN -(rcDriver~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcDr
(TO MAINTAIN -(rcDriver~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;
(TO MAINTAIN -(rcRenter~;rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~;rcRe
(TO MAINTAIN -(rcRenter~;rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~;
(TO MAINTAIN -(rcDriver~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rc
(TO MAINTAIN -(rcRenter~;rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~;rc
INSERT INTO rentalHasBeenStarted[RentalCase*RentalCase]
    SELECTFROM rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;r

(TO MAINTAIN -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedC
INSERT INTO rentalHasBeenEnded[RentalCase*RentalCase]
    SELECTFROM rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rc

(TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch
INSERT INTO Isn{dety=Amount}
    SELECTFROM rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rentalChar

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(TO MAINTAIN  -(rentalCharge~;rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~;rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedPickupBranch~;(rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF 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'[YesNo];rcBranchReq
PICK a,b FROM contractedPickupBranch~;(rcBranchRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Ren
NEW x:Branch;
      INSERT INTO contractedPickupBranch[RentalCase*Branch]
      SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Ren

      (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Ren
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedDropoffBranch~;(rcUserRequestedQ;'Yes'[YesNo]
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Branch;
      INSERT INTO contractedDropoffBranch[RentalCase*Branch]

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SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM 'a'[RentalCase]*'b'[Branch]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      PICK a,b FROM contractedDropoffBranch~;(rcBranchRequestedQ;'Yes'
      THEN INSERT INTO contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM 'b'[RentalCase]*'a'[Branch]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
      NEW x:Branch;
      INSERT INTO contractedDropoffBranch[RentalCase*Branch]
      SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
      (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
      PICK a,b FROM contractedStartDate~;(rcUserRequestedQ;'Yes'[YesNo
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
      NEW x:Date;
      INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

      (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
      (MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'a'[RentalCase]*'b'[Date]

      (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
      PICK a,b FROM contractedStartDate~;(rcBranchRequestedQ;'Yes'[Yes
      THEN INSERT INTO contractedStartDate[RentalCase*Date]
      SELECTFROM 'b'[RentalCase]*'a'[Date]

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        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Date;
        INSERT INTO contractedStartDate[RentalCase*Date]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
PICK a,b FROM contractedEndDate~;(rcUserRequestedQ;'Yes'[YesNo];
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINAINING  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'a'[RentalCase]*'b'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
PICK a,b FROM contractedEndDate~;(rcBranchRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM 'b'[RentalCase]*'a'[Date]

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:Date;
        INSERT INTO contractedEndDate[RentalCase*Date]
        SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
        (MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINAINING  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo]
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
        SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN  -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest

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        PICK a,b FROM contractedCarType~;(rcUserRequestedQ;'Yes'[YesNo];
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'a'[RentalCase]*'b'[CarType]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
        PICK a,b FROM contractedCarType~;(rcBranchRequestedQ;'Yes'[YesNo
        THEN INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM 'b'[RentalCase]*'a'[CarType]

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchReq
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
NEW x:CarType;
        INSERT INTO contractedCarType[RentalCase*CarType]
            SELECTFROM (rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I

        (TO MAINTAIN -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
        (MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes'[YesNo
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
        PICK a,b FROM rcDriver~;(rcUserRequestedQ;'Yes'[YesNo];rcUserReq
        THEN INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequest
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
            SELECTFROM (rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren

        (TO MAINTAIN -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[
        (MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcBranchRequestedQ;'Yes'[Yes

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THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchReq
PICK a,b FROM rcDriver~;(rcBranchRequestedQ;'Yes' [YesNo];rcBranch
THEN INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
NEW x:Person;
INSERT INTO rcDriver[RentalCase*Person]
SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcUserRequestedQ;'Yes' [YesNo]
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'a' [RentalCase]*'b' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequest
PICK a,b FROM rcRenter~;(rcUserRequestedQ;'Yes' [YesNo];rcUserReq
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequest
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Ren
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM (rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Ren

(TO MAINTAIN -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[Ren
(MAINTAINING -(rcUserRequestedQ;'Yes' [YesNo];rcUserRequestedQ~ /\ I[RentalCase
ONE OF 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' [YesNo];rcBranchReq
PICK a,b FROM rcRenter~;(rcBranchRequestedQ;'Yes' [YesNo];rcBranch
THEN INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM 'b' [RentalCase]*'a' [Person]

(TO MAINTAIN -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchReq
(MAINTAINING -(rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I
NEW x:Person;
INSERT INTO rcRenter[RentalCase*Person]
SELECTFROM (rcBranchRequestedQ;'Yes' [YesNo];rcBranchRequestedQ~ /\ I

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        (TO MAINTAIN  -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\
        (MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[Rental
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesN
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
        PICK a,b FROM rcDriver~;(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHa
        THEN INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
NEW x:Person;
        INSERT INTO rcDriver[RentalCase*Person]
        SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rcKeysHandedOverQ;'Yes'[YesN
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'a'[RentalCase]*'b'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
        PICK a,b FROM rcRenter~;(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHa
        THEN INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM 'b'[RentalCase]*'a'[Person]

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHanded
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
NEW x:Person;
        INSERT INTO rcRenter[RentalCase*Person]
        SELECTFROM (rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R

        (TO MAINTAIN  -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\
        (MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[R
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCa
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (rentalIsPaidQ;'Yes'[YesNo];r
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'a'[RentalCase]*'b'[Amount]

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\
        PICK a,b FROM rentalCharge~;(rentalIsPaidQ;'Yes'[YesNo];rentalIs
        THEN INSERT INTO rentalCharge[RentalCase*Amount]
        SELECTFROM 'b'[RentalCase]*'a'[Amount]

        (TO MAINTAIN  -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCas

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NEW x:Amount;
INSERT INTO rentalCharge[RentalCase*Amount]
SELECTFROM (rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCas

      (TO MAINTAIN -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[Rental
      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCas
      (MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ /
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / c
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / r
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / r
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / r
(MAINTAINING -(rcUserRequestedQ;'Yes'[YesNo];rcUserRequestedQ~ /\ I[RentalCase]) \ / r
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcBranchRequestedQ;'Yes'[YesNo];rcBranchRequestedQ~ /\ I[RentalCase])
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ rcIssuedCar;rcIss
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \ /
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \ /
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \ /
(MAINTAINING -(rcKeysHandedOverQ;'Yes'[YesNo];rcKeysHandedOverQ~ /\ I[RentalCase]) \ /
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ rcDroppedOffBranch;rcDrop
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ / rentalC
(MAINTAINING -(rentalIsPaidQ;'Yes'[YesNo];rentalIsPaidQ~ /\ I[RentalCase]) \ / rentalC

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<-----End Derivation --

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ON DELETE Delta FROM Isn{dety=YesNo} EXECUTE      -- (ECA rule 134)
ALL of DELETE FROM rcUserRequestedQ[RentalCase*YesNo]

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SELECTFROM V[RentalCase*YesNo];Delta

DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

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

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ALL of DELETE FROM rcUserRequestedQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

DELETE FROM rcBranchRequestedQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

DELETE FROM rcKeysHandedOverQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

DELETE FROM rentalIsPaidQ[RentalCase*YesNo]
SELECTFROM V[RentalCase*YesNo];Delta

```

<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=Integer} EXECUTE -- (ECA rule 136)
ONE OF DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM (contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)
DELETE FROM contractedStartDate[RentalCase*Date]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)
DELETE FROM earliestDate[DateDifferencePlusOne*Date]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate)
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 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 ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM ctcNrOfDays;(-I[Integer] /\ ctcNrOfDays~;ctcNrOfDays)

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```

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

DELETE FROM rentalExcessPeriod[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

(MAINTAINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate
(MAINTAINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);comp
(MAINTAINING -I[DateDifferencePlusOne] /\ computedRentalPeriod;computedRentalPer
(MAINTAINING -I[DateDifference] /\ computedNrOfExcessDays;computedNrOfExcessDays
(MAINTAINING -(rentalPeriod~;rentalPeriod) /\ I[Integer] FROM UNI rentalPeriod::
(MAINTAINING -(rentalExcessPeriod~;rentalExcessPeriod) /\ I[Integer] FROM UNI re
(MAINTAINING -(computedRentalPeriod~;computedRentalPeriod) /\ I[Integer] FROM UN
(MAINTAINING -(ctcNrOfDays~;ctcNrOfDays) /\ I[Integer] FROM UNI ctcNrOfDays::Comp
(MAINTAINING -I[CompTariffedCharge] /\ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOf
(MAINTAINING -(computedNrOfExcessDays~;computedNrOfExcessDays) /\ I[Integer] FROM

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

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ONE OF 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~ /\ rcDroppedOffDate~)
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM (earliestDate;contractedStartDate~ /\ latestDate;rcDroppedOffDate~)

(TO MAINTAIN -(rentalPeriod~;(contractedStartDate;earliestDate~ /\ rcDroppedOffDate~)
DELETE FROM rentalExcessPeriod[RentalCase*Integer]
SELECTFROM (rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedRentalPeriod~)

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)
DELETE FROM rcDroppedOffDate[RentalCase*Date]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)
DELETE FROM lastDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays~;(lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~);rentalExcessPeriod~)

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)
DELETE FROM contractedEndDate[RentalCase*Date]
SELECTFROM rentalExcessPeriod;(-I[Integer] /\ rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)
DELETE FROM firstDate[DateDifference*Date]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays~;(lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~);rentalExcessPeriod~)

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM (lastDate;rcDroppedOffDate~ /\ firstDate;contractedEndDate~);rentalExcessPeriod~)

(TO MAINTAIN -(rentalExcessPeriod~;(rcDroppedOffDate;lastDate~ /\ contractedEndDate~)
DELETE FROM computedRentalPeriod[DateDifferencePlusOne*Integer]
SELECTFROM computedRentalPeriod;(-I[Integer] /\ computedRentalPeriod~;computedNrOfExcessDays~)

(TO MAINTAIN -(computedRentalPeriod~;I[DateDifferencePlusOne];computedNrOfExcessDays~)
DELETE FROM computedNrOfExcessDays[DateDifference*Integer]
SELECTFROM computedNrOfExcessDays;(-I[Integer] /\ computedNrOfExcessDays~;computedRentalPeriod~)

(TO MAINTAIN -(computedNrOfExcessDays~;I[DateDifference];computedNrOfExcessDays~)
DELETE FROM rentalPeriod[RentalCase*Integer]
SELECTFROM rentalPeriod;(-I[Integer] /\ rentalPeriod~;rentalPeriod)

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

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

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

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```

SELECTFROM V[RentalCase*Integer];Delta

DELETE FROM rentalExcessPeriod[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

(MAINTEINING -((contractedStartDate;earliestDate~ /\ rcDroppedOffDate;latestDate~);co
(MAINTEINING -((rcDroppedOffDate;lastDate~ /\ contractedEndDate;firstDate~);computedN
(MAINTEINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~
(MAINTEINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~ FRO
(MAINTEINING -(rentalPeriod~;rentalPeriod) \/ I[Integer] FROM UNI rentalPeriod::Renta
(MAINTEINING -(rentalExcessPeriod~;rentalExcessPeriod) \/ I[Integer] FROM UNI rentalE
(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

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<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=DateDifferencePlusOne} EXECUTE    -- (ECA rule 137)
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
(MAINTEINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRe
NEW x:Integer;
    INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
        SELECTFROM (I[DateDifferencePlusOne] /\ -(computedRentalPeriod;compute

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;compute
(MAINTEINING -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]

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        (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date]
        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]
        (MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~)
        NEW x:Date;
        INSERT INTO earliestDate[DateDifferencePlusOne*Date]
            SELECTFROM (I[DateDifferencePlusOne] /\ -(earliestDate;earliestDate~))

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~)
        (MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;I[Date];earliestDate~)
        ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(earliestDate~))
        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;computedRentalPeriod~)
        (MAINTAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDifferencePlusOne)
        (MAINTAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earliestDate)
        (MAINTAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifferencePlusOne)
        (MAINTAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate)

```

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

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifferencePlusOne] /\ -(computedRentalPeriod~))
    THEN INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
        SELECTFROM 'a'[DateDifferencePlusOne]*'b'[Integer]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~)
        PICK a,b FROM computedRentalPeriod~;(I[DateDifferencePlusOne] /\ -(computedRentalPeriod~))
        THEN INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
            SELECTFROM 'b'[DateDifferencePlusOne]*'a'[Integer]

        (TO MAINTAIN -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~)
        (MAINTAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~)
        NEW x:Integer;
        INSERT INTO computedRentalPeriod[DateDifferencePlusOne*Integer]
            SELECTFROM (I[DateDifferencePlusOne] /\ -(computedRentalPeriod;computedRentalPeriod~))

```

```

      (TO MAINTAIN  -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRent
(MAINAINING -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
(MAINAINING -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
(MAINAINING -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
(MAINAINING -I[DateDifferencePlusOne] \/ latestDate;I[Date];latestDate~ FROM
(MAINAINING -I[DateDifferencePlusOne] \/ computedRentalPeriod;computedRentalPeriod~
(MAINAINING -(earliestDate~;earliestDate) \/ I[Date] FROM UNI earliestDate::DateDiff
(MAINAINING -I[DateDifferencePlusOne] \/ earliestDate;earliestDate~ FROM TOT earlies
(MAINAINING -(latestDate~;latestDate) \/ I[Date] FROM UNI latestDate::DateDifference
(MAINAINING -I[DateDifferencePlusOne] \/ latestDate;latestDate~ FROM TOT latestDate:

<-----End Derivation --

```

```

ON DELETE Delta FROM Isn{dety=DateDifferencePlusOne} EXECUTE  -- (ECA rule 13
ALL of ONE OF DELETE FROM earliestDate[DateDifferencePlusOne*Date]
      SELECTFROM (-I[DateDifferencePlusOne] /\ earliestDate;earliestDat

      (TO MAINTAIN  -(earliestDate;earliestDate~ /\ latestDate;latestDat
DELETE FROM latestDate[DateDifferencePlusOne*Date]
      SELECTFROM (-I[DateDifferencePlusOne] /\ earliestDate;earliestDat

      (TO MAINTAIN  -(earliestDate;earliestDate~ /\ latestDate;latestDat
(MAINAINING -(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 ----->

```

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 --

```

ON INSERT Delta IN Isn{dety=CompTariffedCharge} EXECUTE -- (ECA rule 139)
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
PICK a,b FROM computedTariffedCharge~;(I[CompTariffedCharge] /\ -(com
THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM 'b'[CompTariffedCharge]*'a'[Amount]

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge
(MAINTAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTar

```

```

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;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;ctcNrOfDays)
THEN INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM 'b'[CompTariffedCharge]*'a'[Integer]

(TO MAINTAIN -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer])
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays;ctcNrOfDays)
NEW x:Integer;
INSERT INTO ctcNrOfDays[CompTariffedCharge*Integer]
SELECTFROM (I[CompTariffedCharge] /\ -(ctcNrOfDays;ctcNrOfDays~))*'x'[,

(TO MAINTAIN -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays;ctcNrOfDays)
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;I[Integer];ctcNrOfDays;ctcNrOfDays)
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(ctcNrOfDays;ctcNrOfDays)
THEN INSERT INTO ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM 'a'[CompTariffedCharge]*'b'[Amount]

(TO MAINTAIN -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount])
PICK a,b FROM ctcDailyAmount~;(I[CompTariffedCharge] /\ -(ctcDailyAmount;ctcDailyAmount)
THEN INSERT INTO ctcDailyAmount[CompTariffedCharge*Amount]
SELECTFROM 'b'[CompTariffedCharge]*'a'[Amount]

(TO MAINTAIN -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount])
(MAINTAINING -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDailyAmount;ctcDailyAmount)
(MAINTAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge)
(MAINTAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTariffedCharge)
(MAINTAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays)
(MAINTAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount)
(MAINTAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDailyAmount)

```

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

```

ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompTariffedCharge] /\ -(computedTariffedCharge;computedTariffedCharge)
THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
SELECTFROM 'a'[CompTariffedCharge]*'b'[Amount]

(TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge)
PICK a,b FROM computedTariffedCharge~;(I[CompTariffedCharge] /\ -(computedTariffedCharge;computedTariffedCharge)

```

```

THEN INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
      SELECTFROM 'b'[CompTariffedCharge]*'a'[Amount]

      (TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;com
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffed
NEW x:Amount;
      INSERT INTO computedTariffedCharge[CompTariffedCharge*Amount]
      SELECTFROM (I[CompTariffedCharge] /\ -(computedTariffedCharge;computedTariff

      (TO MAINTAIN -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariff
(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
(MAINAINING -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~
(MAINAINING -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
(MAINAINING -I[CompTariffedCharge] \/ ctcDailyAmount;I[Amount];ctcDailyAmount
(MAINAINING -I[CompTariffedCharge] \/ computedTariffedCharge;computedTariffedCharge~
(MAINAINING -(ctcNrOfDays~;ctcNrOfDays) \/ I[Integer] FROM UNI ctcNrOfDays::CompTari
(MAINAINING -I[CompTariffedCharge] \/ ctcNrOfDays;ctcNrOfDays~ FROM TOT ctcNrOfDays:
(MAINAINING -(ctcDailyAmount~;ctcDailyAmount) \/ I[Amount] FROM UNI ctcDailyAmount::
(MAINAINING -I[CompTariffedCharge] \/ ctcDailyAmount;ctcDailyAmount~ FROM TOT ctcDai
<-----End Derivation --

```

ON DELETE Delta FROM Isn{dety=CompTariffedCharge} EXECUTE -- (ECA rule 140)


```

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]

(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[CompT

```

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

```

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]

(MAINTAINING -(ctcDailyAmount;ctcDailyAmount~ /\ ctcNrOfDays;ctcNrOfDays~) \/ I[CompT

```

<-----End Derivation --

```

ON INSERT Delta IN Isn{dety=DateDifference} EXECUTE    -- (ECA rule 141)
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;com
PICK a,b FROM computedNrOfExcessDays~;(I[DateDifference] /\ -(comp
THEN INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
      SELECTFROM 'b'[DateDifference]*'a'[Integer]

      (TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;com
(MAINTAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExc
NEW x:Integer;
      INSERT INTO computedNrOfExcessDays[DateDifference*Integer]
      SELECTFROM (I[DateDifference] /\ -(computedNrOfExcessDays;computedNrOf

      (TO MAINTAIN -I[DateDifference] \/ computedNrOfExcessDays;computedNrOf
(MAINTAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExc
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(firstDa
      THEN INSERT INTO firstDate[DateDifference*Date]
      SELECTFROM 'a'[DateDifference]*'b'[Date]

      (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDa
PICK a,b FROM firstDate~;(I[DateDifference] /\ -(firstDate;firstDa
      THEN INSERT INTO firstDate[DateDifference*Date]
      SELECTFROM 'b'[DateDifference]*'a'[Date]

      (TO MAINTAIN -I[DateDifference] \/ firstDate;I[Date];firstDa
(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 U
(MAINTAINING -I[DateDifference] \/ firstDate;I[Date];firstDate~ FROM UNI
ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[DateDifference] /\ -(lastDa
      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
      (MAINTAINING -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
        (MAINTAINING -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
        (MAINTAINING -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
          (MAINTAINING -I[DateDifference] \/ lastDate;I[Date];lastDate~ FROM UNI lastDat
          (MAINTAINING -I[DateDifference] \/ computedNrOfExcessDays;computedNrOfExcessDays~ FRO
          (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)

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```

(MAINAINING -I[DateDifference] /\ lastDate;lastDate~ FROM TOT lastDate::DateDifferen

<-----End Derivation --

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```

ON DELETE Delta FROM Isn{dety=DateDifference} EXECUTE      -- (ECA rule 142)
ALL of ONE OF DELETE FROM lastDate[DateDifference*Date]
    SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    (TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    DELETE FROM firstDate[DateDifference*Date]
    SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    (TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    (MAINTAINING -(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

```

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

```

ALL of ONE OF DELETE FROM lastDate[DateDifference*Date]
    SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    (TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    DELETE FROM firstDate[DateDifference*Date]
    SELECTFROM (-I[DateDifference] /\ lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    (TO MAINTAIN -(lastDate;lastDate~ /\ firstDate;firstDate~) /\ I[DateDifference]
    (MAINTAINING -(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
            (MAINTAINING -I[DistanceBetweenLocations] /\ computedLocationPenaltyCharge
            NEW x:Amount;
            INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations*Amount]
                SELECTFROM (I[DistanceBetweenLocations] /\ -(computedLocationPenaltyCharge~))
                (TO MAINTAIN -I[DistanceBetweenLocations] /\ computedLocationPenaltyCharge
                (MAINTAINING -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~
                            (MAINTAINING -I[DistanceBetweenLocations] /\ distbranch;distbranch~ FROM '
                            NEW x:Branch;
                            INSERT INTO distbranch[DistanceBetweenLocations*Branch]
                                SELECTFROM (I[DistanceBetweenLocations] /\ -(distbranch;distbranch~))*

                                (TO MAINTAIN -I[DistanceBetweenLocations] /\ distbranch;distbranch~ FROM '
                                (MAINTAINING -I[DistanceBetweenLocations] /\ distbranch;distbranch~ FROM '
                                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]
                                            (MAINTAINING -I[DistanceBetweenLocations] /\ distance;I[Distance];distance~
                                            NEW x:Distance;

```

```

INSERT INTO distance[DistanceBetweenLocations*Distance]
  SELECTFROM (I[DistanceBetweenLocations] /\ -(distance;distance~))*'x' [
    (TO MAINTAIN -I[DistanceBetweenLocations] \/ distance;I[Distance];dist
    (MAINTAINING -I[DistanceBetweenLocations] \/ distance;I[Distance];distance
    (MAINTAINING -(computedLocationPenaltyCharge~;computedLocationPenaltyCharge) \/
    (MAINTAINING -I[DistanceBetweenLocations] \/ computedLocationPenaltyCharge;compu
    (MAINTAINING -I[DistanceBetweenLocations] \/ distbranch;distbranch~ FROM TOT dist
    (MAINTAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBet
    (MAINTAINING -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] \/ computedLocationPena
  PICK a,b FROM computedLocationPenaltyCharge~;(I[DistanceBetweenLocation
  THEN INSERT INTO computedLocationPenaltyCharge[DistanceBetweenLocations]
    SELECTFROM 'b' [DistanceBetweenLocations]*'a' [Amount]

    (TO MAINTAIN -I[DistanceBetweenLocations] \/ computedLocationPena
  (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
  (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' [Distanc

    (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 145)
ONE OF ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(computedRentalCharge*Amount)
      THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM 'a'[CompRentalCharge]*'b'[Amount]

      (TO MAINTAIN -I[CompRentalCharge] /\ computedRentalCharge;computedRentalCharge
      PICK a,b FROM computedRentalCharge~;(I[CompRentalCharge] /\ -(computedRentalCharge*Amount)
      THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

      (TO MAINTAIN -I[CompRentalCharge] /\ computedRentalCharge;computedRentalCharge
      (MAINTAINING -I[CompRentalCharge] /\ computedRentalCharge;computedRentalCharge
      NEW x:Amount;
      INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM (I[CompRentalCharge] /\ -(computedRentalCharge;computedRentalCharge*Amount)

      (TO MAINTAIN -I[CompRentalCharge] /\ computedRentalCharge;computedRentalCharge
      (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 arg1~
      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 arg1~
      (MAINTAINING -I[CompRentalCharge] /\ arg1;I[Amount];arg1~ FROM UNI arg1:::
      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 arg2~
      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 arg2~
      (MAINTAINING -I[CompRentalCharge] /\ arg2;I[Amount];arg2~ FROM UNI arg2:::
      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 arg3~
      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 UNI arg3::CompRentalCharge)
      (MAINTAINING -I[CompRentalCharge] \/ arg3;I[Amount];arg3~ FROM UNI arg3::CompRentalCharge)
      (MAINTAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM UNI arg3::CompRentalCharge)
      (MAINTAINING -(arg1~;arg1) \/ I[Amount] FROM UNI arg1::CompRentalCharge*Amount)
      (MAINTAINING -I[CompRentalCharge] \/ arg1;arg1~ FROM TOT arg1::CompRentalCharge*Amount)
      (MAINTAINING -(arg2~;arg2) \/ I[Amount] FROM UNI arg2::CompRentalCharge*Amount)
      (MAINTAINING -I[CompRentalCharge] \/ arg2;arg2~ FROM TOT arg2::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 ONE NONEMPTY ALTERNATIVE OF PICK a,b FROM (I[CompRentalCharge] /\ -(computedRentalCharge;computedRentalCharge~))
      THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM 'a'[CompRentalCharge]*'b'[Amount]

      (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM UNI arg1::CompRentalCharge)
      PICK a,b FROM computedRentalCharge~;(I[CompRentalCharge] /\ -(computedRentalCharge;computedRentalCharge~))
      THEN INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM 'b'[CompRentalCharge]*'a'[Amount]

      (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM UNI arg2::CompRentalCharge)
      (MAINTAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM UNI arg2::CompRentalCharge)
      NEW x:Amount;
      INSERT INTO computedRentalCharge[CompRentalCharge*Amount]
      SELECTFROM (I[CompRentalCharge] /\ -(computedRentalCharge;computedRentalCharge~))

      (TO MAINTAIN -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM UNI arg1::CompRentalCharge)
      (MAINTAINING -I[CompRentalCharge] \/ computedRentalCharge;computedRentalCharge~ FROM UNI arg1::CompRentalCharge)
      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 UNI arg1::CompRentalCharge)
      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 UNI arg1::CompRentalCharge)
      (MAINTAINING -I[CompRentalCharge] \/ arg1;I[Amount];arg1~ FROM UNI arg1::CompRentalCharge)
      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 UNI arg2::CompRentalCharge)
      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
(MAINAINING -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 146)
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[CompRental
DELETE FROM arg1[CompRentalCharge*Amount]
SELECTFROM (-I[CompRentalCharge] /\ arg3;arg3~ /\ arg2;arg2~ /\ arg1;a

(TO MAINTAIN -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRental
(MAINAINING -(arg3;arg3~ /\ arg2;arg2~ /\ arg1;arg1~) \/ I[CompRentalCharge]
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] FROM Un

<-----End Derivation --

```

```

ON DELETE Delta FROM Isn{dety=Distance} EXECUTE -- (ECA rule 148)
ONE OF DELETE FROM distance[DistanceBetweenLocations*Distance]
SELECTFROM distance;(-I[Distance] /\ distance~;distance)

(TO MAINTAIN -(distance~;distance) \/ I[Distance] FROM UNI distance::Dis
DELETE FROM distance[DistanceBetweenLocations*Distance]
SELECTFROM V[DistanceBetweenLocations*Distance];Delta

(MAINAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBet
(MAINAINING -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance

```

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

```
ONE OF DELETE FROM distance[DistanceBetweenLocations*Distance]
      SELECTFROM distance;(-I[Distance] /\ distance~;distance)
```

```
(TO MAINTAIN -(distance~;distance) \/ I[Distance] FROM UNI distance::Distance
DELETE FROM distance[DistanceBetweenLocations*Distance]
      SELECTFROM V[DistanceBetweenLocations*Distance];Delta
```

```
(MAINTAINING -(distance~;distance) \/ I[Distance] FROM UNI distance::DistanceBetweenL
(MAINTAINING -I[DistanceBetweenLocations] \/ distance;distance~ FROM TOT distance::Di
```

<-----End Derivation --