F28DM Database Management Systems

Assignment 1: Database Design and Implementation

Aunie Aqielah Ahmad Sazali

Nurul Sabrina Batrisyia Binti Mohd Shaifuddin

Candra Sy Twee Jia Yee

Nur Adlin Fadhlina Binti Hedilisyam

Natasha Hannah Joseph

Marium Noor Bhaduri

16 February 2024

Student Declaration of Authorship

HERIOT WATT UNIVERSITY
UK | DUBAI | MALAYSIA

Course code and name:	F28DM Database Management Systems
Type of assessment:	**Group**
Coursework Title:	Assignment One: Database Design and Implementation
Student Name:	Aunie Aqielah Ahmad Sazali
Student ID Number:	H00459714

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Date: *16/02/2024*

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Course code and name:	F28DM Database Management Systems
Type of assessment:	**Group**
Coursework Title:	Assignment One: Database Design and Implementation
Student Name:	Candra Sy Twee Jia Yee
Student ID Number:	H00410760

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Course code and name:	F28DM Database Management Systems
Type of assessment:	**Group**
Coursework Title:	Assignment One: Database Design and Implementation
Student Name:	NUR ADLIN FADHLINA BINTI HEDILISYAM
Student ID Number:	H00415595

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Course code and name:	F28DM Database Management Systems
Type of assessment:	**Group**
Coursework Title:	Assignment One: Database Design and Implementation
Student Name:	Nurul Sabrina Batrisyia Binti Mohd Shaifuddin
Student ID Number:	H00415671

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Course code and name:	F28DM Database Management Systems
Type of assessment:	**Group**
Coursework Title:	Assignment One: Database Design and Implementation
Student Name:	Marium Noor Bhaduri
Student ID Number:	H00448073

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Student Declaration of Authorship

Course code and name:	F28DM Database Management Systems
Type of assessment:	**Group**
Coursework Title:	Assignment One: Database Design and Implementation
Student Name:	Natasha Hannah Joseph
Student ID Number:	H00416365

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Student Signature *(type your name):* *Tasha*

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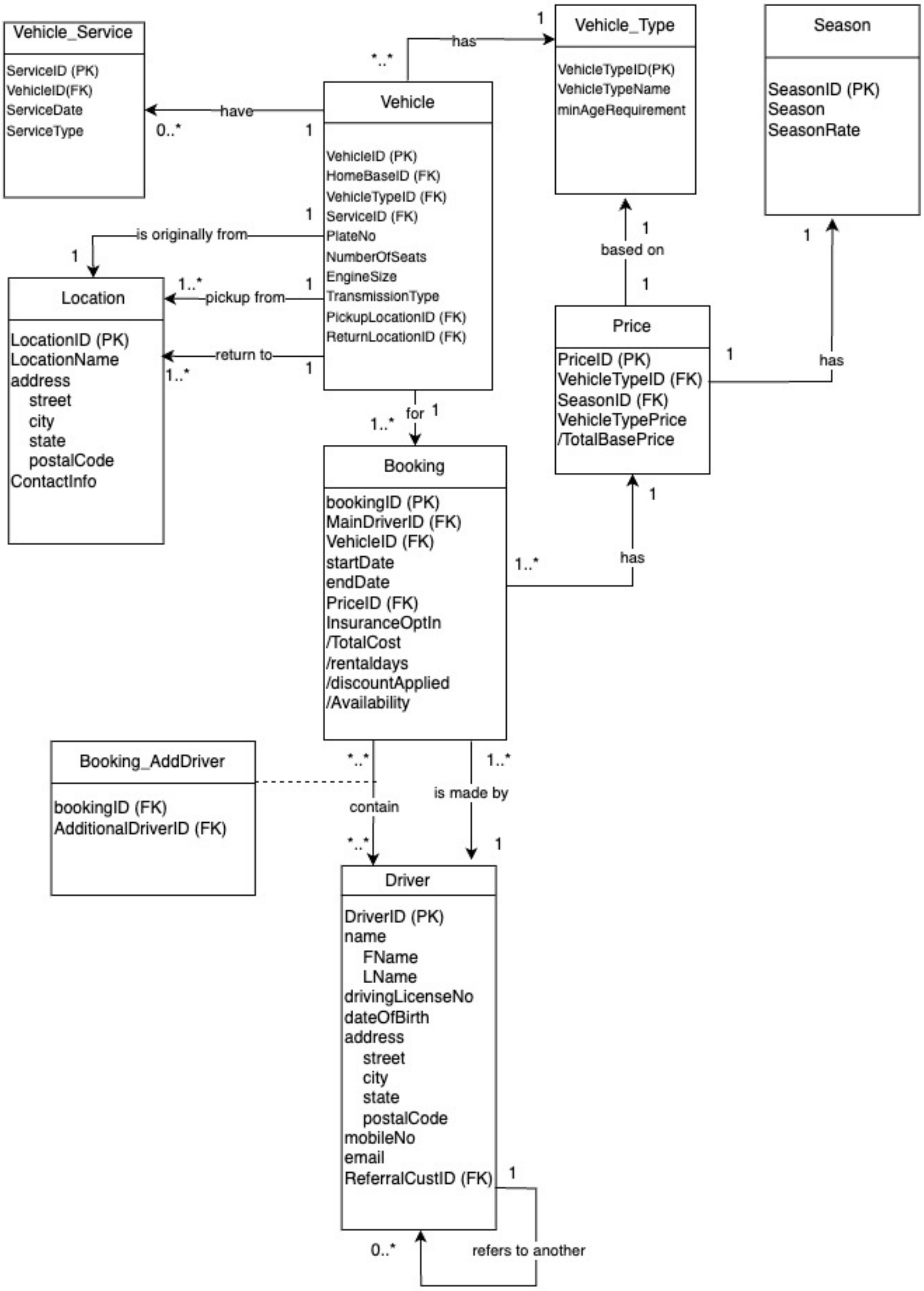
Table of Contents

T1 Conceptual Model

- We assume that the booking is being made via webpage/ mobile app and the user ID used to do the booking is the same as the user’s ‘DriverID’
- We assume that the website will display the picture of the vehicle.
- We assume that there is only one insurance policy that will be provided by HW Motors.
- We assume that there will be a trigger that makes sure the main driver and the additional driver is not the same person.
- We assume that the ReferralCustID is a referral code from a driver to another driver for recursive relationship.
- We assume that the renter is guaranteed to get the exact vehicle rather an alternative model.



Based on the ER Diagram, there are **four** derived attributes in the Booking entity. Below is the list of the derived attributes and the description of the attributes in the booking entity:

Derived Attributes	Description
TotalCost	The total cost of the booking considering the discount applied.
rentalDays	Number of days the vehicle is being booked for.
DiscountApplied	Booking of 7 days or more will receive 20% discount from the total cost. This attribute will show whether the booking is eligible for discount or not based on the booker's number of rental days.
Availability	This attribute determines the vehicle's rental availability by verifying that its service date does not overlap with the rental periods.

Then, there is **one** derived attribute in the price entity. Below is the list of the derived attributes and the description of the attributes in the price entity:

Derived Attributes	Description
TotalBasePrice	Total base price per day for each vehicle type on each season.

T2 Translation into Relational Schema

Relational Schema

Vehicle

Vehicle (VehicleID:INTEGER(6), HomeBaseID:VARCHAR(6), VehicleTypeID:INTEGER(20), ServiceID:INTEGER(6), PlateNo:VARCHAR(10), NumberofSeats:INTEGER(1), EngineSize:INTEGER(3), TransmissionType:ENUM(‘Automatic’, ‘Manual’), PickupLocationID:VARCHAR(6), ReturnLocationID:VARCHAR(6))

Vehicle_Service

VehicleService (ServiceID:INTEGER(6), VehicleID:INTEGER(6), ServiceDate:DATE, ServiceType:VARCHAR(50))

Vehicle_Type

VehicleType (VehicleTypeID:INTEGER(11), VehicleTypeName:VARCHAR(50), minAgeRequirement:INTEGER(3))

Booking

Booking (bookingID:INTEGER(20), DriverID:INTEGER(20), VehicleID:INTEGER(6), startDate:DATE, endDate:DATE, PriceID:INTEGER(20) InsuranceOpt:BOOLEAN)

Booking_AddDriver

Booking_AddDriver (bookingID:INTEGER(20), AdditionalDriverID:INTEGER(20))

Location

Location (LocationID:VARCHAR(6), LocationName: VARCHAR(100), street:VARCHAR(100), city:VARCHAR(50), state:VARCHAR(50), postalCode:VARCHAR(20), ContactInfo:VARCHAR(100))

Driver

Driver (DriverID:INTEGER(20), FName:TEXT, LName:TEXT, drivingLicenseNo:VARCHAR(16), dateOfBirth:DATE, street:VARCHAR(50), city:TEXT, state:VARCHAR(50), postalCode:VARCHAR(20), mobileNo: VARCHAR(50), email:VARCHAR(50), ReferralCustID:INTEGER(20))

Price

Price (PriceID:INTEGER(20), VehicleTypeID:INTEGER(11), SeasonID:INTEGER(6), VehicleTypePrice:DECIMAL(5,2))

Season

Season (SeasonID:INTEGER(6), Season:VARCHAR(20), SeasonRate:DECIMAL(3,2))

Relational Instance

Vehicle

VehicleID	20000	20001	20002
HomeBaseID	UK04	UK02	UK04
VehicleTypeID	134679	134677	134680
ServiceID	30043	30066	30072
PlateNo	KZZ 6103	VYE 0002	APV 1887
NumberofSeats	6	7	8
EngineSize	80	34	38
TransmissionType	Automatic	Manual	Automatic
PickupLocationID	UK04	UK01	UK04
ReturnLocationID	UK03	UK02	UK04

Vehicle_Service

ServiceID	30000	30001	30002
VehicleID	20076	20074	20022
ServiceDate	2025-04-27	2024-03-02	2024-03-10
ServiceType	Cleaning	MOT Test	MOT Test

Vehicle_Type

VehicleTypeID	134675	134676	134677
VehicleTypeName	Small Town Car	Family Car	MPV
minAgeRequirement	18	23	25

Location

LocationID	UK01	UK02	UK03
LocationName	HWM Rowton	HWM Wales	HWM London
street	78 Argyll Road	37 Tavistock Place	49 Harehills
city	Rowton	Thuxton	Russell
state	Chester	York	Camden
postalCode	BS24 7AH	LE3 9LB	WF10 2AL
ContactInfo	+44(0)716910259	(0264) 713 3004	08638 21706

Booking

bookingID	10000	10001	10002
MainDriverID	1015	1008	1055
VehicleID	20091	20033	20005
startDate	2024-08-15	2024-05-22	2024-03-19
endDate	2025-07-06	2025-01-03	2025-01-15
PriceID	34567894	34567906	34567907
InsuranceOpt	1	0	1

Booking_AddDriver

bookingID	10040	10047	10060
AdditionalDriverID	2070	2034	2040

Price

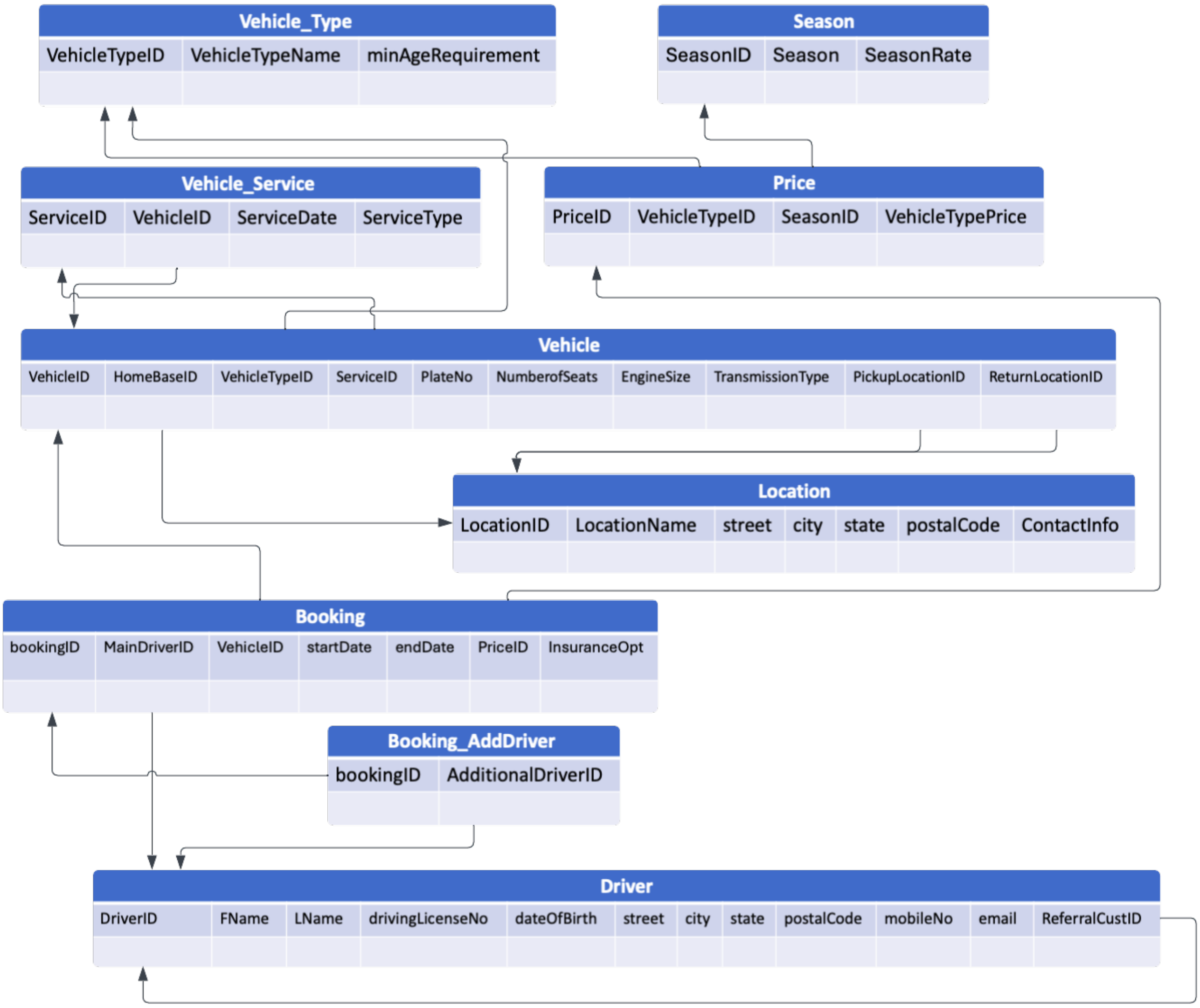
PriceID	34567893	34567894	34567895
VehicleTypeID	134675	134675	134675
SeasonID	1	2	3
VehicleTypePrice	30.00	30.00	30.00

Driver

DriverID	1000	1001	1002
FName	Natasha	Delaney	Meredith
LName	Denial	Jandak	Franschetti
drivingLicenseNo	LN533578	CK846380	NV334863
dateOfBirth	1959-08-10	2000-10-20	1961-04-07
street	654 Pine Blvd	123 Main St	456 Elm Ave
city	Sheffield	Edinburgh	Leeds
state	Northern Ireland	England	Scotland
postalCode	TR 3WX	N51 3UA	VRL 8MV
mobileNo	+44 95405638930	+44 89181225412	+44 78415489687
email	taylorswift@gmail.com	Sabriqwell3294@gmail.com	Arianagrandeluv@gmail.com
ReferralCustID	RCODE1	RCODE2	RCODE3

Season

SeasonID	1	2	3
Season	Off- Peak	Moderate	Peak
SeasonRate	1.00	1.20	1.40



Data Dictionary

Vehicle					
Attribute Name	**Description**	**Domain**	**Null ?**	**Primary Key**	**Foreign key**
VehicleID	A unique identifier for each vehicle	INTEGER (6)	N	Y	
HomeBaseID	The home base location where the vehicle is serviced.	VARCHAR (6)	N	N	Location.LocationID
VehicleTypeID	A reference to the type of the vehicle.	INTEGER(20)	N	N	VehicleType.VehicleTypeID
ServiceID	Reference to the service record of the vehicle	INTEGER(6)	Y	N	VehicleService.ServiceID
PlateNo	The official license plate number of the vehicle	VARCHAR (10)	N	N	
NumberOfSeats	The number of seats available in the vehicle.	INTEGER (1)	N	N	
EngineSize	The size of the vehicle's engine.	INTEGER(3)	N	N	
TransmissionType	The type of transmission the vehicle has.	ENUM (‘Automatic’, ‘Manual’)	N	N	
PickupLocationID	The location where the vehicle is	VARCHAR (6)	N	N	Location.LocationID

	picked up for rental.				
ReturnLocationID	The location where the vehicle is returned after rental.	VARCHAR (6)	Y	N	Location.LocationID

Vehicle_Service					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
ServiceID	Unique identifier for each service record	INTEGER (6)	N	Y	
VehicleID	Identifier for the /vehicle being serviced	INTEGER (6)	N	N	Vehicle.VehicleID
ServiceDate	Date when the service is scheduled to take place	DATE	N	N	
ServiceType	Description of the type of service being performed	VARCHAR(50)	N	N	

Vehicle_Type					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
VehicleTypeID	Unique identifier for a type of vehicle	INTEGER(11)	N	Y	
VehicleTypeName	Name of the vehicle type	VARCHAR(50)	N	N	
minAgeRequirement	The minimum age required to rent different type of vehicle	INTEGER (3)	N	N	

Booking_AddDriver					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
bookingID	A unique identifier for each booking	INTEGER (20)	N	N	Booking.bookingID
AdditionalDriverID	A unique identifier for each additional driver	INTEGER (20)	N	N	Driver.DriverID

Location					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
LocationID	Unique identifier for each location	VARCHAR (6)	N	Y	
LocationName	Descriptive name of the location	VARCHAR (100)	N	N	
street	Street part of the location's address	VARCHAR (100)	N	N	
city	City part of the location's address	VARCHAR (50)	N	N	
state	State part of the location's address	VARCHAR (50)	N	N	
postalCode	Postal code part of the location's address	VARCHAR (20)	N	N	
ContactInfo	Contact information for the location	VARCHAR (100)	N	N	

Booking					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
bookingID	Unique ID for each booking	INTEGER (20)	N	Y	
MainDriverID	Unique ID for each customer	INTEGER (20)	N	N	Driver.DriverID
VehicleID	Unique ID for each vehicle	INTEGER (6)	N	N	Vehicle.VehicleID
startDate	Start of booking date	DATE	N	N	
endDate	End of booking date	DATE	N	N	
PriceID	Unique identifier for the pricing record	INTEGER (20)	N	N	Price.PriceID
InsuranceOpt	Option to take out any insurance extras	BOOLEAN	Y	N	

Season					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
SeasonID	Unique identifier for each season	INTEGER (6)	N	Y	
Season	Name or description of the season	VARCHAR (20)	N	N	
SeasonRate	The rate modifier or multiplier for the season	DECIMAL (3,2)	N	N	

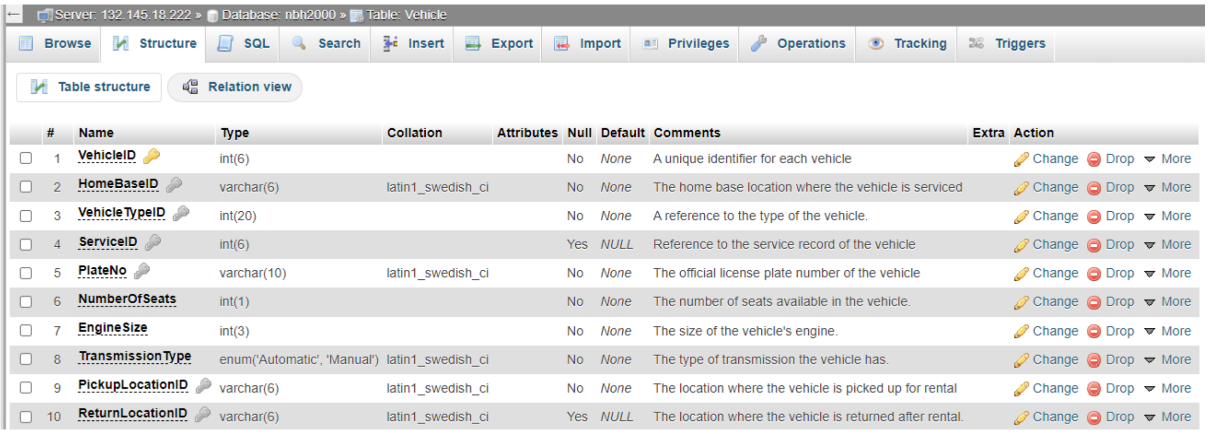
Driver					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
DriverID	Unique ID for each driver	INTEGER (20)	N	Y	
FName	First name of driver	TEXT	N	N	
LName	Last name of driver	TEXT	N	N	
drivingLicenseNo	Driver's licence number	VARCHAR (16)	N	N	
dateOfBirth	Driver's date of birth	DATE	N	N	
street	Driver's street home address	VARCHAR (50)	N	N	
city	Driver's city home address	TEXT	N	N	
state	Driver's state home address	VARCHAR (50)	N	N	
postalCode	Driver's postal code home address	VARCHAR (20)	N	N	
mobileNo	Driver's mobile number	VARCHAR (50)	N	N	
email	Driver's email address	VARCHAR (50)	N	N	
ReferralCustID	A unique identifier for each customer referral	INTEGER (20)	N	N	Driver.ReferralCustID

Price					
Attribute Name	**Description**	**Domain**	**Null?**	**Primary Key**	**Foreign key**
PriceID	Unique identifier for the pricing record	INTEGER (20)	N	Y	
VehicleTypeID	Reference to the type of vehicle	INTEGER (11)	N	N	VehicleType.VehicleTypeID
SeasonID	Reference to the season during which the price is applicable	INTEGER (6)	N	N	Season.SeasonID
VehicleTypePrice	Base price for renting a vehicle of a specific type	DECIMAL(5,2)	N	N	

T3 Implementation of the Schema in MariaDB

Vehicle Table

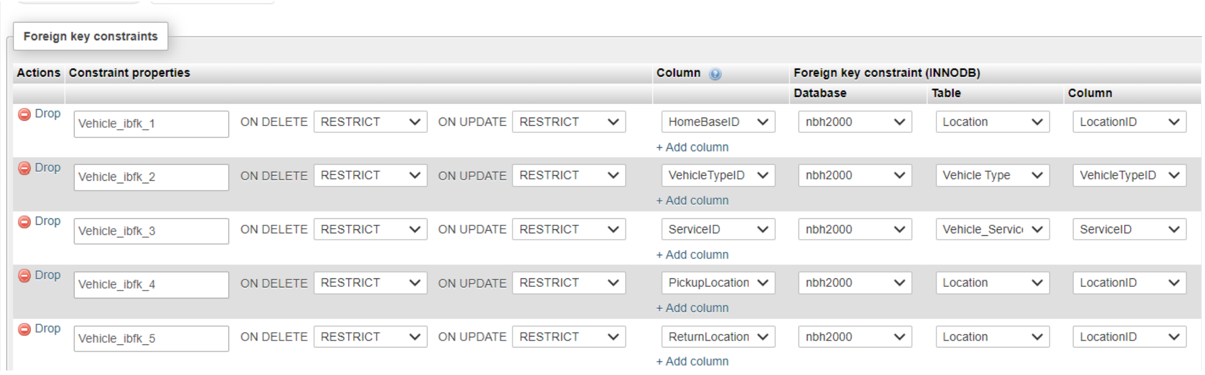
```
Table structure for table `Vehicle`

CREATE TABLE `Vehicle` (
  `VehicleID` int(6) NOT NULL COMMENT 'A unique identifier for each vehicle ',

  `HomeBaseID` varchar(6) NOT NULL COMMENT 'The home base location where the
vehicle is serviced',

  `VehicleTypeID` int(20) NOT NULL COMMENT 'A reference to the type of the
vehicle.',

  `ServiceID` int(6) DEFAULT NULL COMMENT 'Reference to the service record of the
vehicle ',

  `PlateNo` varchar(10) NOT NULL COMMENT 'The official license plate number of the
vehicle',

  `NumberOfSeats` int(1) NOT NULL COMMENT 'The number of seats available in the
vehicle.',

  `EngineSize` int(3) NOT NULL COMMENT 'The size of the vehicle's engine.',

  `TransmissionType` enum('Automatic','Manual') NOT NULL COMMENT 'The type of
transmission the vehicle has.',

  `PickupLocationID` varchar(6) NOT NULL COMMENT 'The location where the vehicle
is picked up for rental',

  `ReturnLocationID` varchar(6) DEFAULT NULL COMMENT 'The location where the
vehicle is returned after rental. '

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	VehicleID	int(6)			No	*None*	A unique identifier for each vehicle		Change Drop More
□	2	HomeBaseID	varchar(6)	latin1_swedish_ci		No	*None*	The home base location where the vehicle is serviced		Change Drop More
□	3	VehicleTypeID	int(20)			No	*None*	A reference to the type of the vehicle.		Change Drop More
□	4	ServiceID	int(6)			Yes	*NULL*	Reference to the service record of the vehicle		Change Drop More
□	5	PlateNo	varchar(10)	latin1_swedish_ci		No	*None*	The official license plate number of the vehicle		Change Drop More
□	6	NumberOfSeats	int(1)			No	*None*	The number of seats available in the vehicle.		Change Drop More
□	7	EngineSize	int(3)			No	*None*	The size of the vehicle's engine.		Change Drop More
□	8	TransmissionType	enum('Automatic', 'Manual')	latin1_swedish_ci		No	*None*	The type of transmission the vehicle has.		Change Drop More
□	9	PickupLocationID	varchar(6)	latin1_swedish_ci		No	*None*	The location where the vehicle is picked up for rental		Change Drop More
□	10	ReturnLocationID	varchar(6)	latin1_swedish_ci		Yes	*NULL*	The location where the vehicle is returned after rental.		Change Drop More

Below is the declaration of foreign keys in the vehicle table:

```
Constraints for table `Vehicle`

ALTER TABLE `Vehicle`
  ADD CONSTRAINT `Vehicle_ibfk_1` FOREIGN KEY (`HomeBaseID`) REFERENCES `Location`
(`LocationID`),

  ADD CONSTRAINT `Vehicle_ibfk_2` FOREIGN KEY (`VehicleTypeID`) REFERENCES
`Vehicle Type` (`VehicleTypeID`),

  ADD CONSTRAINT `Vehicle_ibfk_3` FOREIGN KEY (`ServiceID`) REFERENCES `Vehicle
Service` (`ServiceID`),

  ADD CONSTRAINT `Vehicle_ibfk_4` FOREIGN KEY (`PickupLocationID`) REFERENCES
`Location` (`LocationID`),

  ADD CONSTRAINT `Vehicle_ibfk_5` FOREIGN KEY (`ReturnLocationID`) REFERENCES
`Location` (`LocationID`);
```

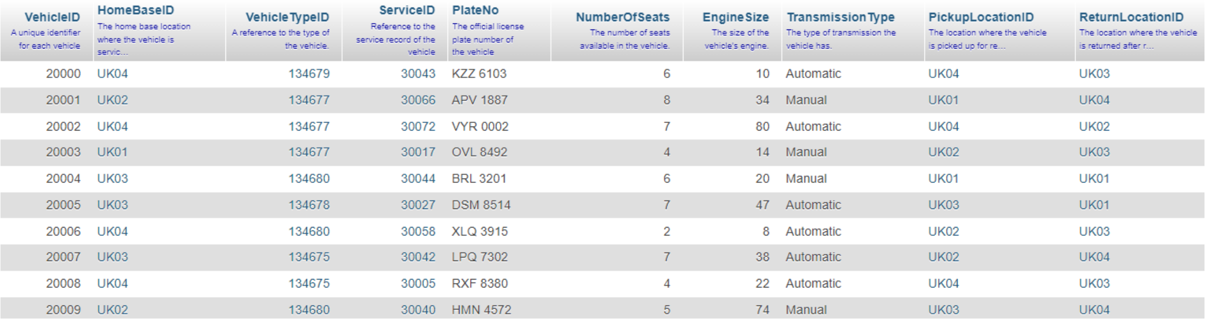


Foreign key constraints

Actions	Constraint properties					Column	Foreign key constraint (INNODB)		
							Database	Table	Column
Drop	Vehicle_ibfk_1	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	HomeBaseID + Add column	nbh2000	Location	LocationID
Drop	Vehicle_ibfk_2	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	VehicleTypeID + Add column	nbh2000	Vehicle Type	VehicleTypeID
Drop	Vehicle_ibfk_3	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	ServiceID + Add column	nbh2000	Vehicle_Servic	ServiceID
Drop	Vehicle_ibfk_4	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	PickupLocation + Add column	nbh2000	Location	LocationID
Drop	Vehicle_ibfk_5	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	ReturnLocation + Add column	nbh2000	Location	LocationID

Below is the data for the vehicle table:

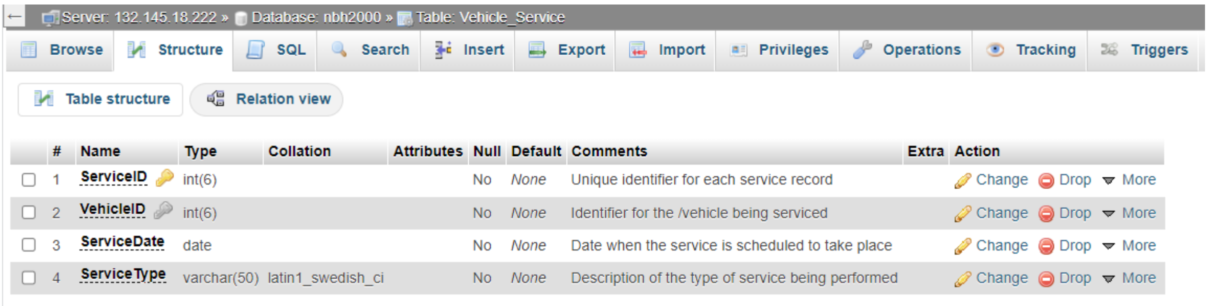
```
INSERT INTO `Vehicle` (`VehicleID`, `HomeBaseID`, `VehicleTypeID`, `ServiceID`,
`PlateNo`, `NumberOfSeats`, `EngineSize`, `TransmissionType`, `PickupLocationID`,
`ReturnLocationID`) VALUES
(20000, 'UK04', 134679, 30043, 'KZZ 6103', 6, 10, 'Automatic', 'UK04', 'UK03'),
(20001, 'UK02', 134677, 30066, 'APV 1887', 8, 34, 'Manual', 'UK01', 'UK04'),
(20002, 'UK04', 134677, 30072, 'VYR 0002', 7, 80, 'Automatic', 'UK04', 'UK02'),
(20003, 'UK01', 134677, 30017, 'OVL 8492', 4, 14, 'Manual', 'UK02', 'UK03'),
(20004, 'UK03', 134680, 30044, 'BRL 3201', 6, 20, 'Manual', 'UK01', 'UK01'),
(20005, 'UK03', 134678, 30027, 'DSM 8514', 7, 47, 'Automatic', 'UK03', 'UK01'),
(20006, 'UK04', 134680, 30058, 'XLQ 3915', 2, 8, 'Automatic', 'UK02', 'UK03'),
(20007, 'UK03', 134675, 30042, 'LPQ 7302', 7, 38, 'Automatic', 'UK02', 'UK04'),
(20008, 'UK04', 134675, 30005, 'RXF 8380', 4, 22, 'Automatic', 'UK04', 'UK03'),
(20009, 'UK02', 134680, 30040, 'HMN 4572', 5, 74, 'Manual', 'UK03', 'UK04');
```



VehicleID A unique identifier for each vehicle	HomeBaseID The home base location where the vehicle is servic...	VehicleTypeID A reference to the type of the vehicle.	ServiceID Reference to the service record of the vehicle	PlateNo The official license plate number of the vehicle	NumberOfSeats The number of seats available in the vehicle.	EngineSize The size of the vehicle's engine.	TransmissionType The type of transmission the vehicle has.	PickupLocationID The location where the vehicle is picked up for re...	ReturnLocationID The location where the vehicle is returned after r...
20000	UK04	134679	30043	KZZ 6103	6	10	Automatic	UK04	UK03
20001	UK02	134677	30066	APV 1887	8	34	Manual	UK01	UK04
20002	UK04	134677	30072	VYR 0002	7	80	Automatic	UK04	UK02
20003	UK01	134677	30017	OVL 8492	4	14	Manual	UK02	UK03
20004	UK03	134680	30044	BRL 3201	6	20	Manual	UK01	UK01
20005	UK03	134678	30027	DSM 8514	7	47	Automatic	UK03	UK01
20006	UK04	134680	30058	XLQ 3915	2	8	Automatic	UK02	UK03
20007	UK03	134675	30042	LPQ 7302	7	38	Automatic	UK02	UK04
20008	UK04	134675	30005	RXF 8380	4	22	Automatic	UK04	UK03
20009	UK02	134680	30040	HMN 4572	5	74	Manual	UK03	UK04

Vehicle_Service Table

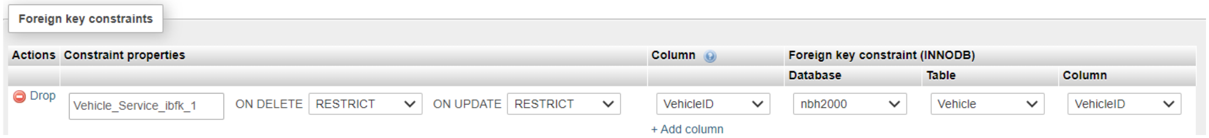
```
Table structure for table `Vehicle Service`

CREATE TABLE `Vehicle_Service` (
  `ServiceID` int(6) NOT NULL COMMENT 'Unique identifier for each service record
',

  `VehicleID` int(6) NOT NULL COMMENT 'Identifier for the /vehicle being serviced
',

  `ServiceDate` date NOT NULL COMMENT 'Date when the service is scheduled to take
place',

  `ServiceType` varchar(50) NOT NULL COMMENT 'Description of the type of service
being performed '

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	ServiceID	int(6)			No	*None*	Unique identifier for each service record		Change Drop More
□	2	VehicleID	int(6)			No	*None*	Identifier for the /vehicle being serviced		Change Drop More
□	3	ServiceDate	date			No	*None*	Date when the service is scheduled to take place		Change Drop More
□	4	ServiceType	varchar(50)	latin1_swedish_ci		No	*None*	Description of the type of service being performed		Change Drop More

Below is the declaration of foreign keys in the Vehicle_Service table:

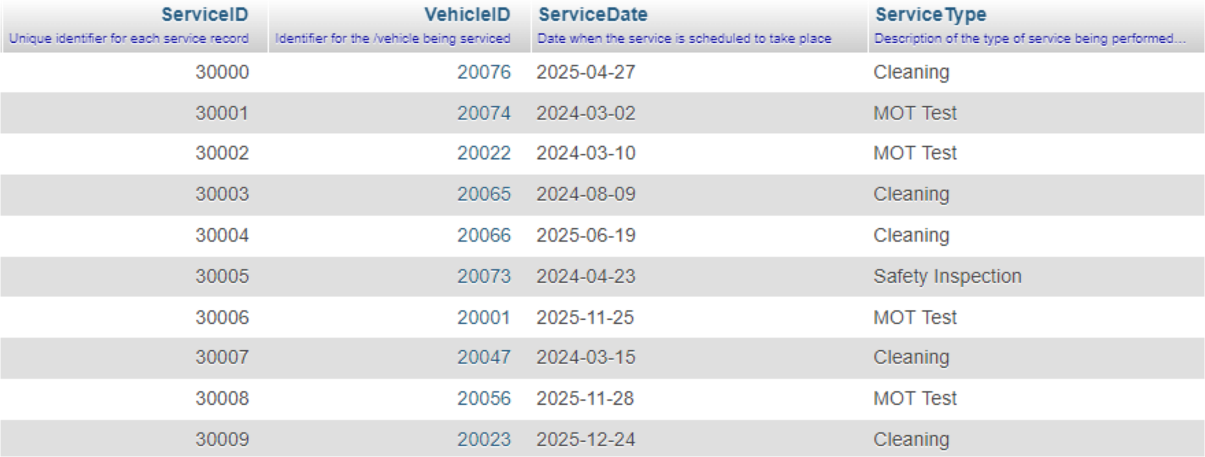
```
Constraints for table `Vehicle Service`

ALTER TABLE `Vehicle Service`
  ADD CONSTRAINT `Vehicle Service_ibfk_1` FOREIGN KEY (`VehicleID`) REFERENCES
`Vehicle` (`VehicleID`);
```



Actions	Constraint properties					Column	Foreign key constraint (INNODB)		
							Database	Table	Column
Drop	Vehicle_Service_ibfk_1	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	VehicleID	nbh2000	Vehicle	VehicleID

Below is the data for the Vehicle_Service table:

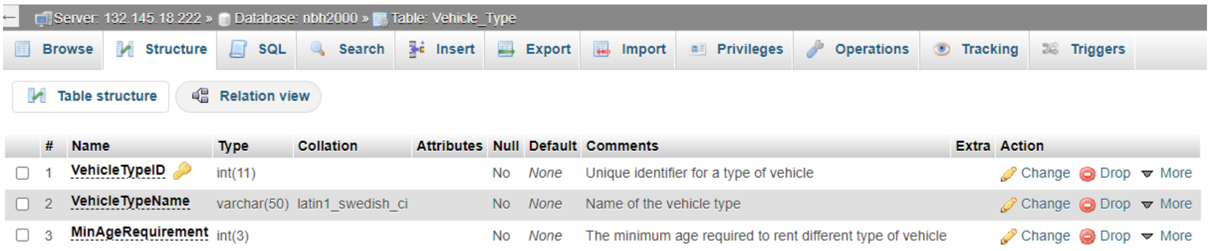
```
INSERT INTO `Vehicle_Service` (`ServiceID`, `VehicleID`, `ServiceDate`,
`ServiceType`) VALUES
(30000, 20076, '2025-04-27', 'Cleaning'),
(30001, 20074, '2024-03-02', 'MOT Test'),
(30002, 20022, '2024-03-10', 'MOT Test'),
(30003, 20065, '2024-08-09', 'Cleaning'),
(30004, 20066, '2025-06-19', 'Cleaning'),
(30005, 20073, '2024-04-23', 'Safety Inspection'),
(30006, 20001, '2025-11-25', 'MOT Test'),
(30007, 20047, '2024-03-15', 'Cleaning'),
(30008, 20056, '2025-11-28', 'MOT Test'),
(30009, 20023, '2025-12-24', 'Cleaning');
```



ServiceID Unique identifier for each service record	VehicleID Identifier for the /vehicle being serviced	ServiceDate Date when the service is scheduled to take place	Service Type Description of the type of service being performed...
30000	20076	2025-04-27	Cleaning
30001	20074	2024-03-02	MOT Test
30002	20022	2024-03-10	MOT Test
30003	20065	2024-08-09	Cleaning
30004	20066	2025-06-19	Cleaning
30005	20073	2024-04-23	Safety Inspection
30006	20001	2025-11-25	MOT Test
30007	20047	2024-03-15	Cleaning
30008	20056	2025-11-28	MOT Test
30009	20023	2025-12-24	Cleaning

Vehicle_Type Table

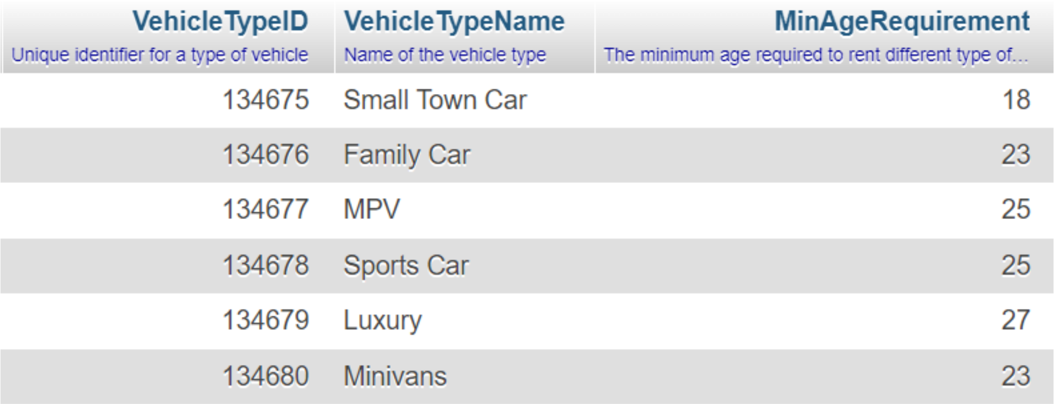
```
Table structure for table `Vehicle Type`

CREATE TABLE `Vehicle_Type` (
  `VehicleTypeID` int(11) NOT NULL COMMENT 'Unique identifier for a type of
vehicle',

  `VehicleTypeName` varchar(50) NOT NULL COMMENT 'Name of the vehicle type',

  `MinAgeRequirement` int(3) NOT NULL COMMENT 'The minimum age required to rent
different type of vehicle '

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	VehicleTypeID	int(11)			No	*None*	Unique identifier for a type of vehicle		Change Drop More
□	2	VehicleTypeName	varchar(50)	latin1_swedish_ci		No	*None*	Name of the vehicle type		Change Drop More
□	3	MinAgeRequirement	int(3)			No	*None*	The minimum age required to rent different type of vehicle		Change Drop More

Below is the data for the vehicle type table:

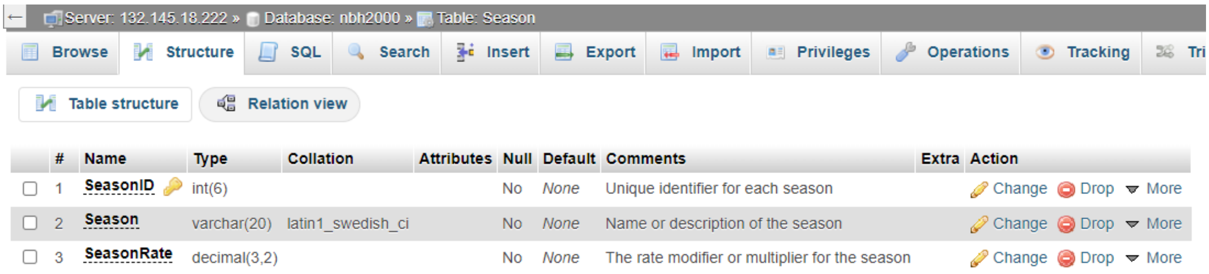
```
INSERT INTO `Vehicle_Type` (`VehicleTypeID`, `VehicleTypeName`,
`MinAgeRequirement`) VALUES
(134675, 'Small Town Car', 18),
(134676, 'Family Car', 23),
(134677, 'MPV', 25),
(134678, 'Sports Car ', 25),
(134679, 'Luxury', 27),
(134680, 'Minivans', 23);
```



VehicleTypeID Unique identifier for a type of vehicle	VehicleTypeName Name of the vehicle type	MinAgeRequirement The minimum age required to rent different type of...
134675	Small Town Car	18
134676	Family Car	23
134677	MPV	25
134678	Sports Car	25
134679	Luxury	27
134680	Minivans	23

Season Table

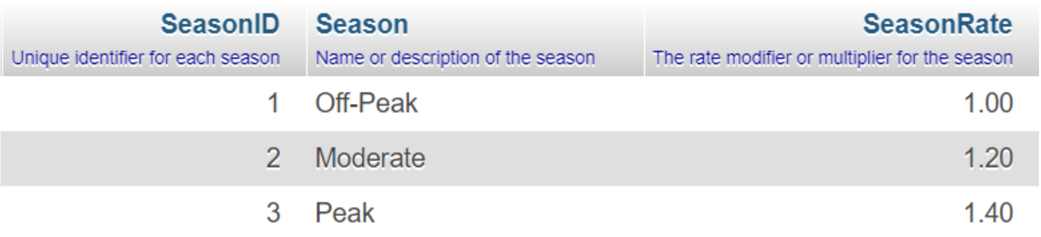
```
Table structure for table `Season`

CREATE TABLE `Season` (
  `SeasonID` int(6) NOT NULL COMMENT 'Unique identifier for each season ',

  `Season` varchar(20) NOT NULL COMMENT 'Name or description of the season ',

  `SeasonRate` decimal(3,2) NOT NULL COMMENT 'The rate modifier or multiplier for
the season '

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	SeasonID	int(6)			No	*None*	Unique identifier for each season		Change Drop More
□	2	Season	varchar(20)	latin1_swedish_ci		No	*None*	Name or description of the season		Change Drop More
□	3	SeasonRate	decimal(3,2)			No	*None*	The rate modifier or multiplier for the season		Change Drop More

Below is the data for the season table:

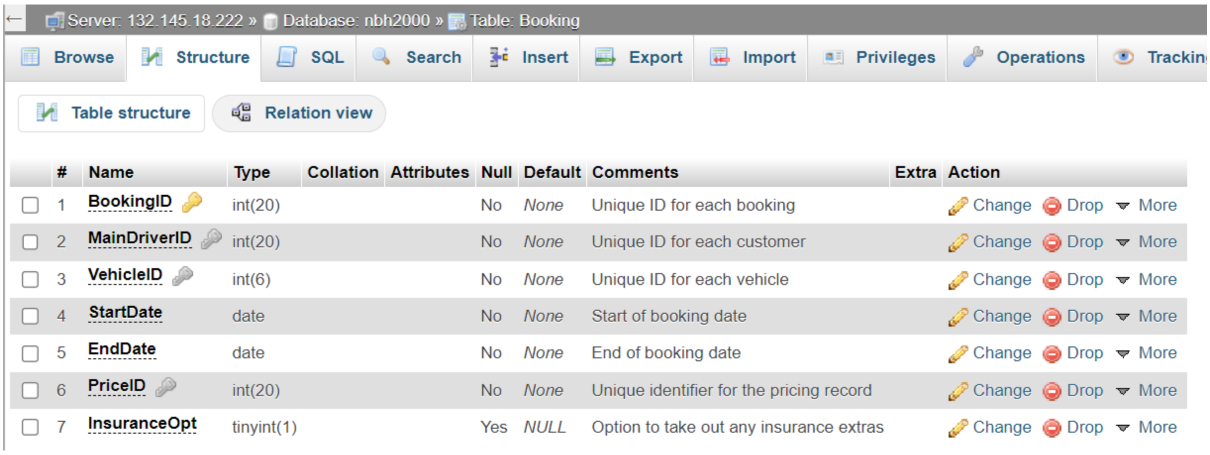
```
INSERT INTO `Season` (`SeasonID`, `Season`, `SeasonRate`) VALUES
(1, 'Off-Peak', '1.00'),
(2, 'Moderate', '1.20'),
(3, 'Peak', '1.40');
```



SeasonID Unique identifier for each season	Season Name or description of the season	SeasonRate The rate modifier or multiplier for the season
1	Off-Peak	1.00
2	Moderate	1.20
3	Peak	1.40

Booking table

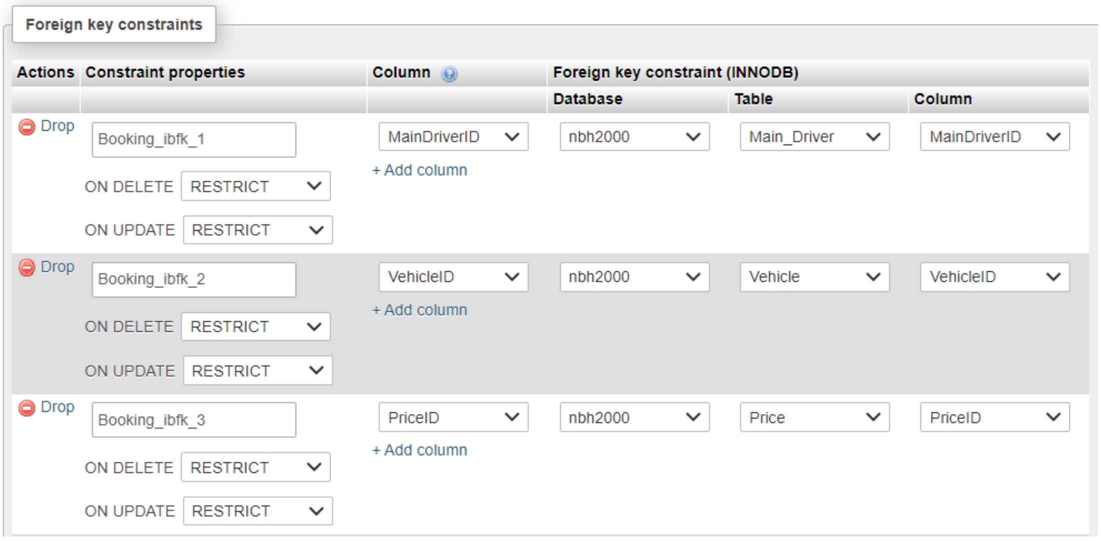
```
Table structure for table `Booking`

CREATE TABLE `Booking` (
  `BookingID` int(20) NOT NULL COMMENT 'Unique ID for each booking',

  `MainDriverID` int(20) NOT NULL COMMENT 'Unique ID for each customer',

  `VehicleID` int(6) NOT NULL COMMENT 'Unique ID for each vehicle',

  `StartDate` date NOT NULL COMMENT 'Start of booking date ',

  `EndDate` date NOT NULL COMMENT 'End of booking date',

  `PriceID` int(20) NOT NULL COMMENT 'Unique identifier for the pricing record',

  `InsuranceOpt` tinyint(1) DEFAULT NULL COMMENT 'Option to take out any insurance
extras',

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	BookingID	int(20)			No	*None*	Unique ID for each booking		Change Drop More
□	2	MainDriverID	int(20)			No	*None*	Unique ID for each customer		Change Drop More
□	3	VehicleID	int(6)			No	*None*	Unique ID for each vehicle		Change Drop More
□	4	StartDate	date			No	*None*	Start of booking date		Change Drop More
□	5	EndDate	date			No	*None*	End of booking date		Change Drop More
□	6	PriceID	int(20)			No	*None*	Unique identifier for the pricing record		Change Drop More
□	7	InsuranceOpt	tinyint(1)			Yes	*NULL*	Option to take out any insurance extras		Change Drop More

Below is the declaration of foreign keys in the booking table:

```
Constraints for table `Booking`

ALTER TABLE `Booking`
  ADD CONSTRAINT `Booking_ibfk_1` FOREIGN KEY (`MainDriverID`) REFERENCES
`MainDriver` (`MainDriverID`),

  ADD CONSTRAINT `Booking_ibfk_2` FOREIGN KEY (`VehicleID`) REFERENCES `Vehicle`
(`VehicleID`),

  ADD CONSTRAINT `Booking_ibfk_3` FOREIGN KEY (`PriceID`) REFERENCES `Price`
(`PriceID`);
```

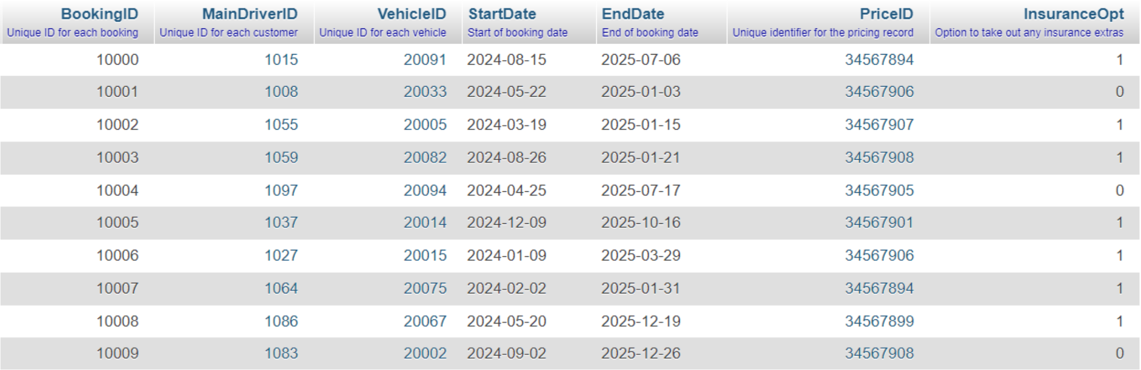


Foreign key constraints

Actions	Constraint properties	Column	Foreign key constraint (INNODB)		
			Database	Table	Column
Drop	Booking_ibfk_1 ON DELETE RESTRICT ON UPDATE RESTRICT	MainDriverID + Add column	nbh2000	Main_Driver	MainDriverID
Drop	Booking_ibfk_2 ON DELETE RESTRICT ON UPDATE RESTRICT	VehicleID + Add column	nbh2000	Vehicle	VehicleID
Drop	Booking_ibfk_3 ON DELETE RESTRICT ON UPDATE RESTRICT	PriceID + Add column	nbh2000	Price	PriceID

Below is the data for the Booking table:

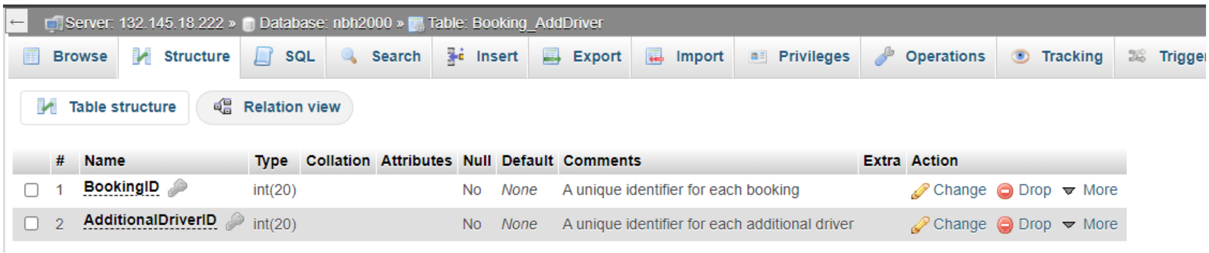
```
INSERT INTO `Booking` (`BookingID`, `MainDriverID`, `VehicleID`, `StartDate`,
`EndDate`, `PriceID`, `InsuranceOpt`) VALUES
(10000, 1015, 20091, '2024-08-15', '2025-07-06', 34567894, 1),
(10001, 1008, 20033, '2024-05-22', '2025-01-03', 34567906, 0),
(10002, 1055, 20005, '2024-03-19', '2025-01-15', 34567907, 1),
(10003, 1059, 20082, '2024-08-26', '2025-01-21', 34567908, 1),
(10004, 1097, 20094, '2024-04-25', '2025-07-17', 34567905, 0),
(10005, 1037, 20014, '2024-12-09', '2025-10-16', 34567901, 1),
(10006, 1027, 20015, '2024-01-09', '2025-03-29', 34567906, 1),
(10007, 1064, 20075, '2024-02-02', '2025-01-31', 34567894, 1),
(10008, 1086, 20067, '2024-05-20', '2025-12-19', 34567899, 1),
(10009, 1083, 20002, '2024-09-02', '2025-12-26', 34567908, 0);
```



BookingID Unique ID for each booking	MainDriverID Unique ID for each customer	VehicleID Unique ID for each vehicle	StartDate Start of booking date	EndDate End of booking date	PriceID Unique identifier for the pricing record	InsuranceOpt Option to take out any insurance extras
10000	1015	20091	2024-08-15	2025-07-06	34567894	1
10001	1008	20033	2024-05-22	2025-01-03	34567906	0
10002	1055	20005	2024-03-19	2025-01-15	34567907	1
10003	1059	20082	2024-08-26	2025-01-21	34567908	1
10004	1097	20094	2024-04-25	2025-07-17	34567905	0
10005	1037	20014	2024-12-09	2025-10-16	34567901	1
10006	1027	20015	2024-01-09	2025-03-29	34567906	1
10007	1064	20075	2024-02-02	2025-01-31	34567894	1
10008	1086	20067	2024-05-20	2025-12-19	34567899	1
10009	1083	20002	2024-09-02	2025-12-26	34567908	0

Booking_AddDriver Table

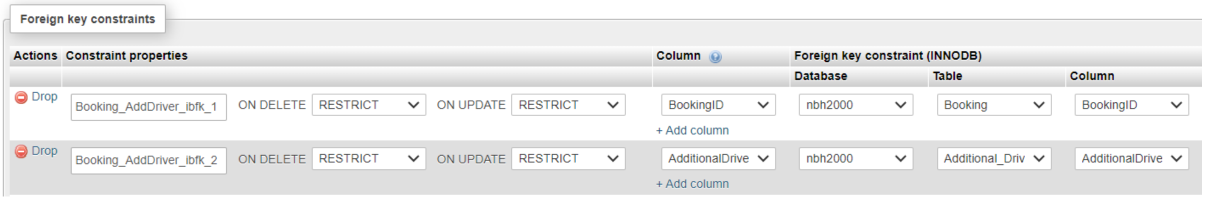
```
Table structure for table `Booking_AddDriver`

CREATE TABLE `Booking_AddDriver` (
  `BookingID` int(20) NOT NULL COMMENT 'A unique identifier for each booking',

  `AdditionalDriverID` int(20) NOT NULL COMMENT 'A unique identifier for each
additional driver'

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	BookingID	int(20)			No	*None*	A unique identifier for each booking		Change Drop More
□	2	AdditionalDriverID	int(20)			No	*None*	A unique identifier for each additional driver		Change Drop More

Below is the declaration of foreign keys in the Booking AddDriver table:

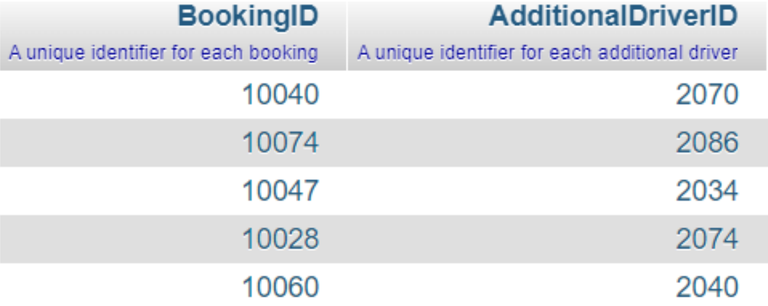
```
Constraints for table `Booking_AddDriver`

ALTER TABLE `Booking_AddDriver`
  ADD CONSTRAINT `Booking_AddDriver_ibfk_1` FOREIGN KEY (`BookingID`) REFERENCES
`Booking` (`BookingID`),

  ADD CONSTRAINT `Booking_AddDriver_ibfk_2` FOREIGN KEY (`AdditionalDriverID`)
REFERENCES `AdditionalDriver` (`AdditionalDriverID`);
```



Actions	Constraint properties					Column	Foreign key constraint (INNODB)		
							Database	Table	Column
Drop	Booking_AddDriver_ibfk_1	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	BookingID	nbh2000	Booking	BookingID
Drop	Booking_AddDriver_ibfk_2	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	AdditionalDrive	nbh2000	Additional_Driv	AdditionalDrive

Below is the data for the Booking AddDriver table:

```
INSERT INTO `Booking_AddDriver` (`BookingID`, `AdditionalDriverID`) VALUES
(10040, 2070),
(10074, 2086),
(10047, 2034),
(10028, 2074),
(10060, 2040),
(10029, 2018),
(10073, 2078),
(10097, 2053),
(10087, 2052),
(10019, 2083);
```

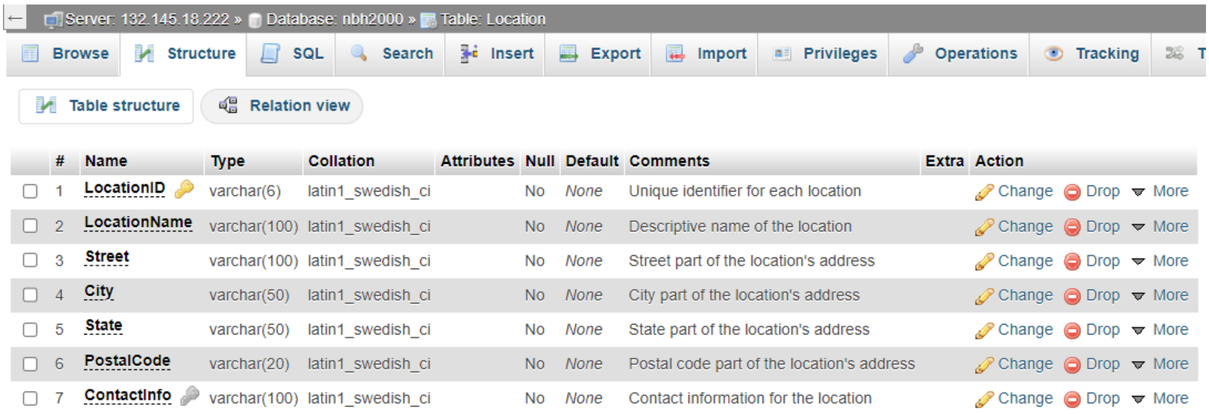


BookingID	AdditionalDriverID
A unique identifier for each booking	A unique identifier for each additional driver
10040	2070
10074	2086
10047	2034
10028	2074
10060	2040

Location Table

Table structure for table `Location`

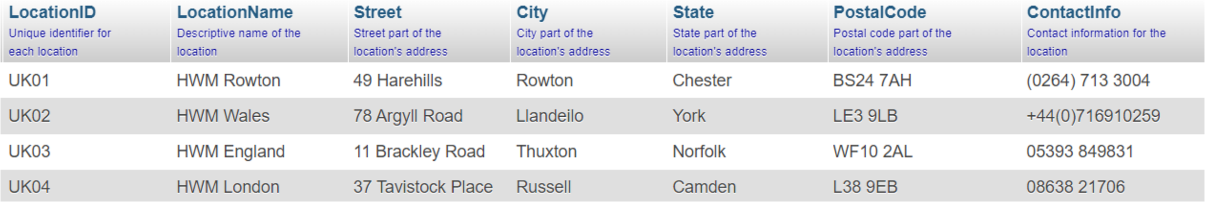
```
CREATE TABLE `Location` (
  `LocationID` varchar(6) NOT NULL COMMENT 'Unique identifier for each location',

  `LocationName` varchar(100) NOT NULL COMMENT 'Descriptive name of the location
',

  `Street` varchar(100) NOT NULL COMMENT 'Street part of the location''s address
',

  `City` varchar(50) NOT NULL COMMENT 'City part of the location''s address ',

  `State` varchar(50) NOT NULL COMMENT 'State part of the location''s address',

  `PostalCode` varchar(20) NOT NULL COMMENT 'Postal code part of the location''s
address',

  `ContactInfo` varchar(100) NOT NULL COMMENT 'Contact information for the
location'

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	LocationID	varchar(6)	latin1_swedish_ci		No	*None*	Unique identifier for each location		Change Drop More
□	2	LocationName	varchar(100)	latin1_swedish_ci		No	*None*	Descriptive name of the location		Change Drop More
□	3	Street	varchar(100)	latin1_swedish_ci		No	*None*	Street part of the location's address		Change Drop More
□	4	City	varchar(50)	latin1_swedish_ci		No	*None*	City part of the location's address		Change Drop More
□	5	State	varchar(50)	latin1_swedish_ci		No	*None*	State part of the location's address		Change Drop More
□	6	PostalCode	varchar(20)	latin1_swedish_ci		No	*None*	Postal code part of the location's address		Change Drop More
□	7	ContactInfo	varchar(100)	latin1_swedish_ci		No	*None*	Contact information for the location		Change Drop More

Below is the data for the location table:

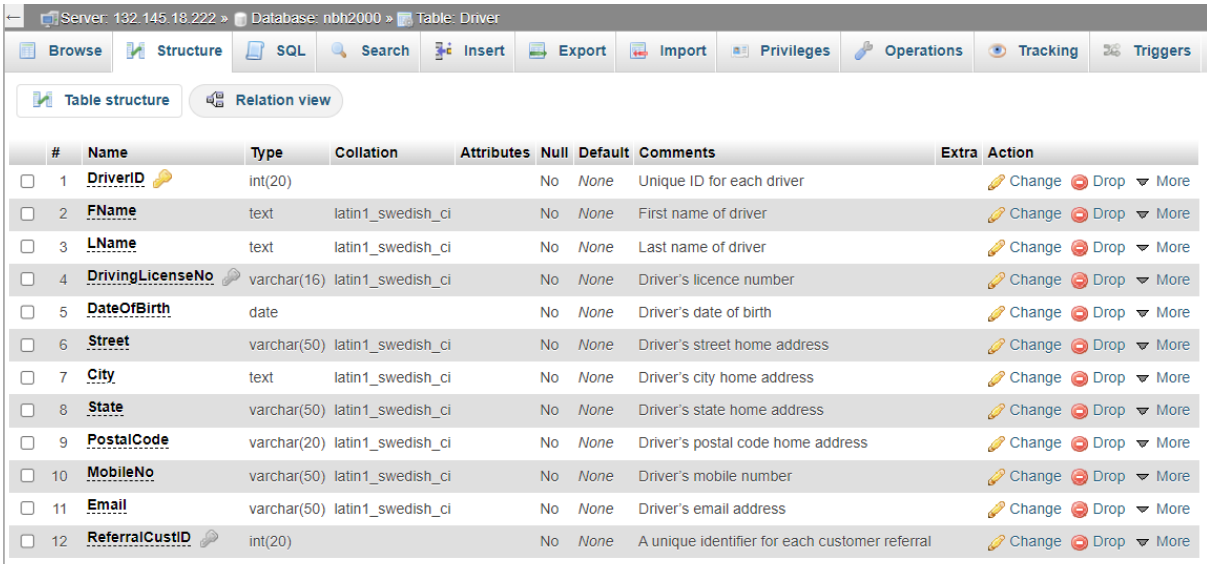
```
INSERT INTO `Location` (`LocationID`, `LocationName`, `Street`, `City`, `State`,
`PostalCode`, `ContactInfo`) VALUES
('UK01', 'HWM Rowton', '49 Harehills', 'Rowton', 'Chester', 'BS24 7AH', '(0264)
713 3004'),
('UK02', 'HWM Wales', '78 Argyll Road', 'Llandeilo', 'York', 'LE3 9LB',
'+44(0)716910259'),
('UK03', 'HWM England', '11 Brackley Road', 'Thuxton', 'Norfolk', 'WF10 2AL',
'05393 849831'),
('UK04', 'HWM London', '37 Tavistock Place', 'Russell', 'Camden', 'L38 9EB',
'08638 21706');
```



LocationID Unique identifier for each location	LocationName Descriptive name of the location	Street Street part of the location's address	City City part of the location's address	State State part of the location's address	PostalCode Postal code part of the location's address	ContactInfo Contact information for the location
UK01	HWM Rowton	49 Harehills	Rowton	Chester	BS24 7AH	(0264) 713 3004
UK02	HWM Wales	78 Argyll Road	Llandeilo	York	LE3 9LB	+44(0)716910259
UK03	HWM England	11 Brackley Road	Thuxton	Norfolk	WF10 2AL	05393 849831
UK04	HWM London	37 Tavistock Place	Russell	Camden	L38 9EB	08638 21706

Driver Table

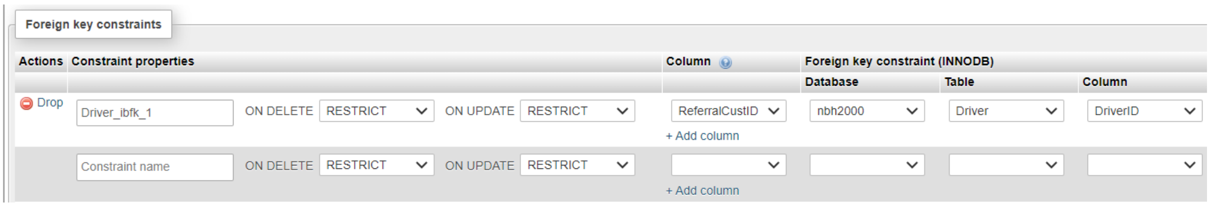
```
Table structure for table `Driver`

CREATE TABLE `Driver` (
  `DriverID` int(20) NOT NULL COMMENT 'Unique ID for each driver ',

  `FName` text NOT NULL COMMENT 'First name of driver',

  `LName` text NOT NULL COMMENT 'Last name of driver ',

  `DrivingLicenseNo` varchar(16) NOT NULL COMMENT 'Driver’s licence number',

  `DateOfBirth` date NOT NULL COMMENT 'Driver’s date of birth ',

  `Street` varchar(50) NOT NULL COMMENT 'Driver’s street home address',

  `City` text NOT NULL COMMENT 'Driver’s city home address ',

  `State` varchar(50) NOT NULL COMMENT 'Driver’s state home address ',

  `PostalCode` varchar(20) NOT NULL COMMENT 'Driver’s postal code home address ',

  `MobileNo` varchar(50) NOT NULL COMMENT 'Driver’s mobile number ',

  `Email` varchar(50) NOT NULL COMMENT 'Driver’s email address ',

  `ReferralCustID` int(20) NOT NULL COMMENT 'A unique identifier for each customer
referral '

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	DriverID	int(20)			No	*None*	Unique ID for each driver		Change Drop More
□	2	FName	text	latin1_swedish_ci		No	*None*	First name of driver		Change Drop More
□	3	LName	text	latin1_swedish_ci		No	*None*	Last name of driver		Change Drop More
□	4	DrivingLicenseNo	varchar(16)	latin1_swedish_ci		No	*None*	Driver's licence number		Change Drop More
□	5	DateOfBirth	date			No	*None*	Driver's date of birth		Change Drop More
□	6	Street	varchar(50)	latin1_swedish_ci		No	*None*	Driver's street home address		Change Drop More
□	7	City	text	latin1_swedish_ci		No	*None*	Driver's city home address		Change Drop More
□	8	State	varchar(50)	latin1_swedish_ci		No	*None*	Driver's state home address		Change Drop More
□	9	PostalCode	varchar(20)	latin1_swedish_ci		No	*None*	Driver's postal code home address		Change Drop More
□	10	MobileNo	varchar(50)	latin1_swedish_ci		No	*None*	Driver's mobile number		Change Drop More
□	11	Email	varchar(50)	latin1_swedish_ci		No	*None*	Driver's email address		Change Drop More
□	12	ReferralCustID	int(20)			No	*None*	A unique identifier for each customer referral		Change Drop More

Below is the declaration of foreign keys in the Driver table:

```
Constraints for table `Driver`

ALTER TABLE `Driver`
  ADD CONSTRAINT `Driver_ibfk_1` FOREIGN KEY (`ReferralCustID`) REFERENCES
`Driver` (`DriverID`);
```

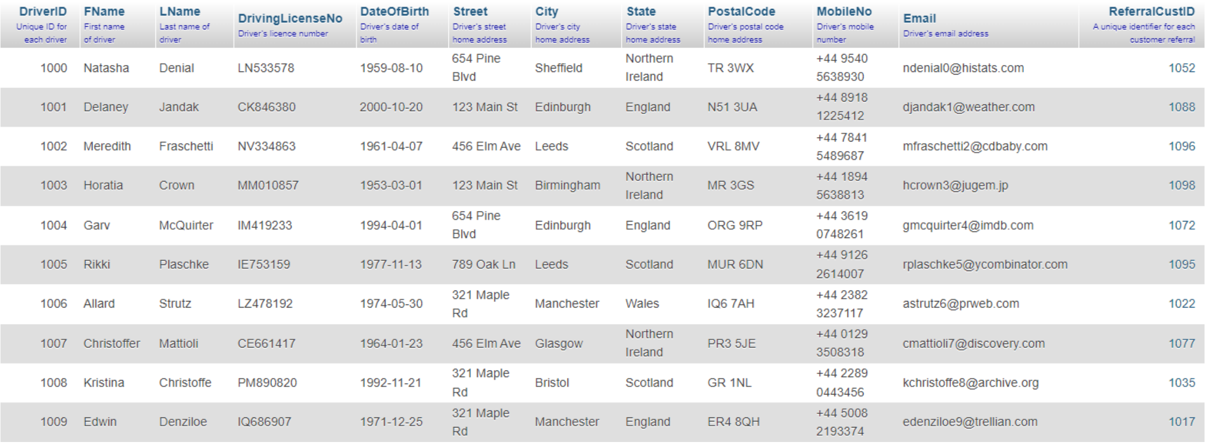


Foreign key constraints

Actions	Constraint properties					Column	Foreign key constraint (INNODB)		
							Database	Table	Column
Drop	Driver_ibfk_1	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	ReferralCustID + Add column	nbh2000	Driver	DriverID
	Constraint name	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	+ Add column			

Below is the data for the vehicle table:

```
INSERT INTO `Driver` (`DriverID`, `FName`, `LName`, `DrivingLicenseNo`,
`DateOfBirth`, `Street`, `City`, `State`, `PostalCode`, `MobileNo`, `Email`,
`ReferralCustID`) VALUES
(1000, 'Natasha', 'Denial', 'LN533578', '1959-08-10', '654 Pine Blvd',
'Sheffield', 'Northern Ireland', 'TR 3WX', '+44 9540 5638930',
'ndenial0@histats.com', 1052),
(1001, 'Delaney', 'Jandak', 'CK846380', '2000-10-20', '123 Main St', 'Edinburgh',
'England', 'N51 3UA', '+44 8918 1225412', 'djandak1@weather.com', 1088),
(1002, 'Meredith', 'Fraschetti', 'NV334863', '1961-04-07', '456 Elm Ave', 'Leeds',
'Scotland', 'VRL 8MV', '+44 7841 5489687', 'mfraschetti2@cdbaby.com', 1096),
(1003, 'Horatia', 'Crown', 'MM010857', '1953-03-01', '123 Main St', 'Birmingham',
'Northern Ireland', 'MR 3GS', '+44 1894 5638813', 'hcrown3@jugem.jp', 1098),
(1004, 'Garv', 'McQuirter', 'IM419233', '1994-04-01', '654 Pine Blvd',
'Edinburgh', 'England', 'ORG 9RP', '+44 3619 0748261', 'gmcquirter4@imdb.com',
1072),
(1005, 'Rikki', 'Plaschke', 'IE753159', '1977-11-13', '789 Oak Ln', 'Leeds',
'Scotland', 'MUR 6DN', '+44 9126 2614007', 'rplaschke5@ycombinator.com', 1095),
(1006, 'Allard', 'Strutz', 'LZ478192', '1974-05-30', '321 Maple Rd', 'Manchester',
'Wales', 'IQ6 7AH', '+44 2382 3237117', 'astrutz6@prweb.com', 1022),
(1007, 'Christoffer', 'Mattioli', 'CE661417', '1964-01-23', '456 Elm Ave',
'Glasgow', 'Northern Ireland', 'PR3 5JE', '+44 0129 3508318',
'cmattioli7@discovery.com', 1077),
(1008, 'Kristina', 'Christoffe', 'PM890820', '1992-11-21', '321 Maple Rd',
'Bristol', 'Scotland', 'GR 1NL', '+44 2289 0443456', 'kchristoffe8@archive.org',
1035),
(1009, 'Edwin', 'Denziloe', 'IQ686907', '1971-12-25', '321 Maple Rd',
'Manchester', 'England', 'ER4 8QH', '+44 5008 2193374', 'edenziloe9@trellian.com',
1017);
```

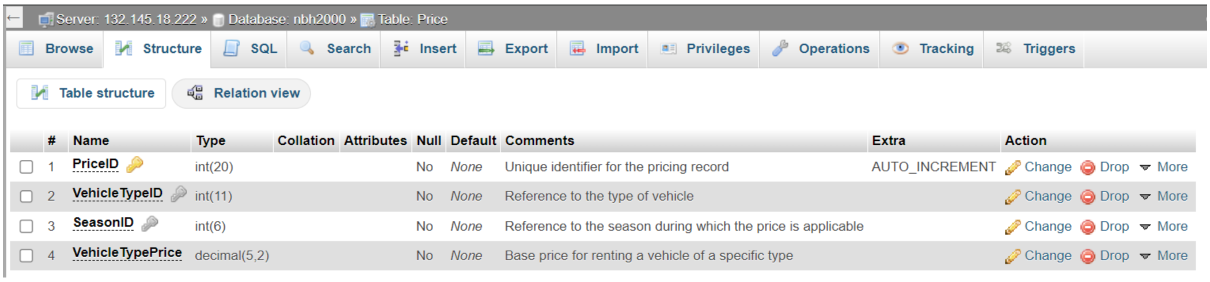


DriverID Unique ID for each driver	FName First name of driver	LName Last name of driver	DrivingLicenseNo Driver's licence number	DateOfBirth Driver's date of birth	Street Driver's street home address	City Driver's city home address	State Driver's state home address	PostalCode Driver's postal code home address	MobileNo Driver's mobile number	Email Driver's email address	ReferralCustID A unique identifier for each customer referral
1000	Natasha	Denial	LN533578	1959-08-10	654 Pine Blvd	Sheffield	Northern Ireland	TR 3WX	+44 9540 5638930	ndenial0@histats.com	1052
1001	Delaney	Jandak	CK846380	2000-10-20	123 Main St	Edinburgh	England	N51 3UA	+44 8918 1225412	djandak1@weather.com	1088
1002	Meredith	Fraschetti	NV334863	1961-04-07	456 Elm Ave	Leeds	Scotland	VRL 8MV	+44 7841 5489687	mfraschetti2@cdbaby.com	1096
1003	Horatia	Crown	MM010857	1953-03-01	123 Main St	Birmingham	Northern Ireland	MR 3GS	+44 1894 5638813	hcrown3@jugem.jp	1098
1004	Garv	McQuirter	IM419233	1994-04-01	654 Pine Blvd	Edinburgh	England	ORG 9RP	+44 3619 0748261	gmcquirter4@imdb.com	1072
1005	Rikki	Plaschke	IE753159	1977-11-13	789 Oak Ln	Leeds	Scotland	MUR 6DN	+44 9126 2614007	rplaschke5@ycombinator.com	1095
1006	Allard	Strutz	LZ478192	1974-05-30	321 Maple Rd	Manchester	Wales	IQ6 7AH	+44 2382 3237117	astrutz6@prweb.com	1022
1007	Christoffer	Mattioli	CE661417	1964-01-23	456 Elm Ave	Glasgow	Northern Ireland	PR3 5JE	+44 0129 3508318	cmattioli7@discovery.com	1077
1008	Kristina	Christoffe	PM890820	1992-11-21	321 Maple Rd	Bristol	Scotland	GR 1NL	+44 2289 0443456	kchristoffe8@archive.org	1035
1009	Edwin	Denziloe	IQ686907	1971-12-25	321 Maple Rd	Manchester	England	ER4 8QH	+44 5008 2193374	edenziloe9@trellian.com	1017

Price Table

Table structure for table `Price`

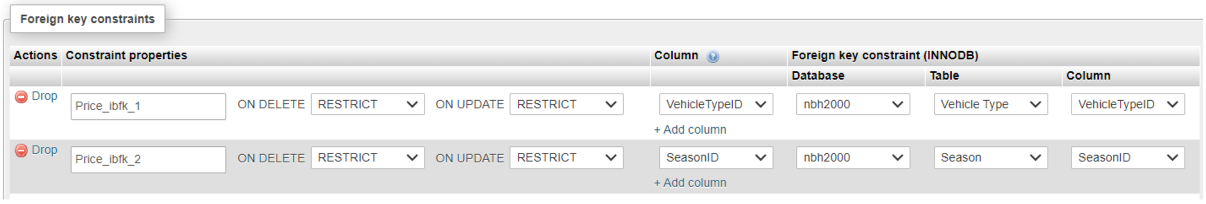
```
CREATE TABLE `Price` (
  `PriceID` int(20) NOT NULL COMMENT 'Unique identifier for the pricing record ',

  `VehicleTypeID` int(11) NOT NULL COMMENT 'Reference to the type of vehicle ',

  `SeasonID` int(6) NOT NULL COMMENT 'Reference to the season during which the
price is applicable ',

  `VehicleTypePrice` decimal(5,2) NOT NULL COMMENT 'Base price for renting a
vehicle of a specific type'

) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	PriceID	int(20)			No	*None*	Unique identifier for the pricing record	AUTO_INCREMENT	Change Drop More
□	2	VehicleTypeID	int(11)			No	*None*	Reference to the type of vehicle		Change Drop More
□	3	SeasonID	int(6)			No	*None*	Reference to the season during which the price is applicable		Change Drop More
□	4	VehicleTypePrice	decimal(5,2)			No	*None*	Base price for renting a vehicle of a specific type		Change Drop More

Below is the declaration of foreign keys in the Price table:

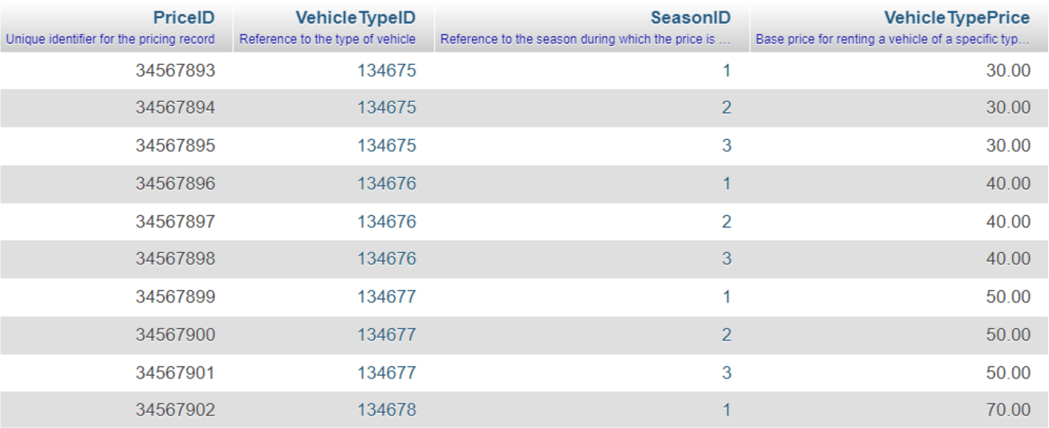
```
Constraints for table `Price`

ALTER TABLE `Price`
  ADD CONSTRAINT `Price_ibfk_1` FOREIGN KEY (`VehicleTypeID`) REFERENCES `Vehicle
Type` (`VehicleTypeID`),

  ADD CONSTRAINT `Price_ibfk_2` FOREIGN KEY (`SeasonID`) REFERENCES `Season`
(`SeasonID`);
```



Actions	Constraint properties					Column	Foreign key constraint (INNODB)		
							Database	Table	Column
Drop	Price_ibfk_1	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	VehicleTypeID	nbh2000	Vehicle Type	VehicleTypeID
Drop	Price_ibfk_2	ON DELETE	RESTRICT	ON UPDATE	RESTRICT	SeasonID	nbh2000	Season	SeasonID

Below is the data for the price table:

```
INSERT INTO `Price` (`PriceID`, `VehicleTypeID`, `SeasonID`, `VehicleTypePrice`)
VALUES
(34567893, 134675, 1, '30.00'),
(34567894, 134675, 2, '30.00'),
(34567895, 134675, 3, '30.00'),
(34567896, 134676, 1, '40.00'),
(34567897, 134676, 2, '40.00'),
(34567898, 134676, 3, '40.00'),
(34567899, 134677, 1, '50.00'),
(34567900, 134677, 2, '50.00'),
(34567901, 134677, 3, '50.00'),
(34567902, 134678, 1, '70.00');
```



PriceID	VehicleTypeID	SeasonID	VehicleTypePrice
Unique identifier for the pricing record	Reference to the type of vehicle	Reference to the season during which the price is ...	Base price for renting a vehicle of a specific typ...
34567893	134675	1	30.00
34567894	134675	2	30.00
34567895	134675	3	30.00
34567896	134676	1	40.00
34567897	134676	2	40.00
34567898	134676	3	40.00
34567899	134677	1	50.00
34567900	134677	2	50.00
34567901	134677	3	50.00
34567902	134678	1	70.00

T4 Indexes

Location Table

Contains a primary key and a unique key

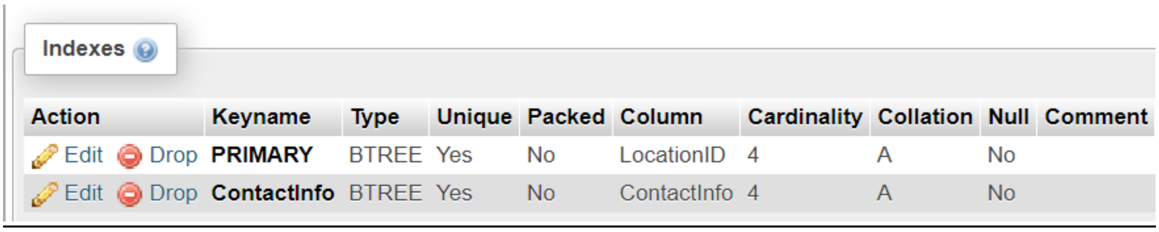
```
Indexes for table `Location`

ALTER TABLE `Location`
  ADD PRIMARY KEY (`LocationID`),
  ADD UNIQUE KEY `ContactInfo` (`ContactInfo`);
```

- “ADD PRIMARY KEY (`LocationID`);”

`LocationID` is an ID and a primary key, it must be a unique key

- “ADD UNIQUE KEY `ContactInfo` (`ContactInfo`);”

`ContactInfo` must be unique since each location will only have one specific contact information



Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	**PRIMARY**	BTREE	Yes	No	LocationID	4	A	No	
Edit Drop	**ContactInfo**	BTREE	Yes	No	ContactInfo	4	A	No	

<u>Driver Table</u>
Contains a primary key and 2 unique key

```
Indexes for table `Driver`

ALTER TABLE `Driver`
  ADD PRIMARY KEY (`DriverID`),
  ADD UNIQUE KEY `DrivingLicenseNo` (`DrivingLicenseNo`),
  ADD UNIQUE KEY `ReferralCustID` (`ReferralCustID`),
  ADD UNIQUE KEY `Email` (`Email`);
```

- “ADD PRIMARY KEY (`DriverID`),”

`DriverID` is an ID and a primary key, it must be a unique key

- “ADD UNIQUE KEY `DrivingLicenseNo` (`DrivingLicenseNo`);”

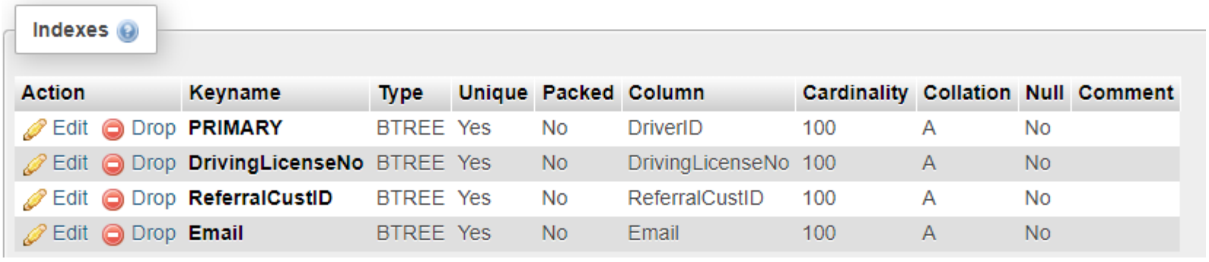
‘DrivingLicenseNo’ must be unique since the driver’s driving license is different from other drivers

- “ADD UNIQUE KEY `ReferralCustID` (`ReferralCustID`);”

`ReferralCustID` is an ID. Therefore, it must be a unique key.

- “ADD UNIQUE KEY `Email` (`Email`);”

`Email` addresses must be unique as each corresponds to a single user, ensuring that communication and account information are correctly associated with the right individual.



Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	**PRIMARY**	BTREE	Yes	No	DriverID	100	A	No	
Edit Drop	**DrivingLicenseNo**	BTREE	Yes	No	DrivingLicenseNo	100	A	No	
Edit Drop	**ReferralCustID**	BTREE	Yes	No	ReferralCustID	100	A	No	
Edit Drop	**Email**	BTREE	Yes	No	Email	100	A	No	

Vehicle Table

Contains a primary key and a unique key

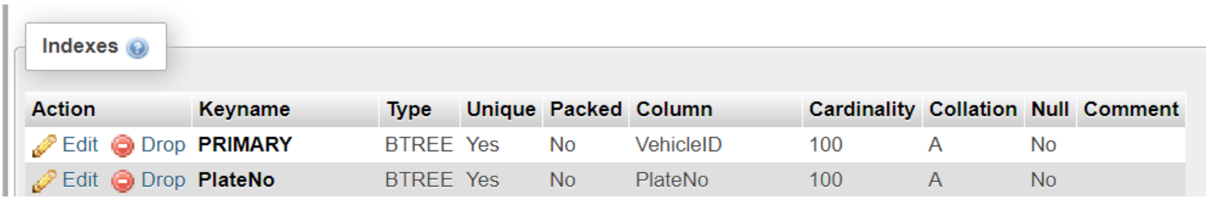
```
Indexes for table `Vehicle`

ALTER TABLE `Vehicle`
  ADD PRIMARY KEY (`VehicleID`),
  ADD UNIQUE KEY `PlateNo` (`PlateNo`),
  ADD KEY `HomeBaseID` (`HomeBaseID`),
  ADD KEY `VehicleTypeID` (`VehicleTypeID`),
  ADD KEY `ServiceID` (`ServiceID`),
  ADD KEY `PickupLocationID` (`PickupLocationID`),
  ADD KEY `ReturnLocationID` (`ReturnLocationID`);
```

- "ADD PRIMARY KEY (`VehicleID`),"

`VehicleID` is an ID and a primary key, it must be a unique key

- "ADD UNIQUE KEY `PlateNo` (`PlateNo`),"

`PlateNo` must be unique since each car will only have one specific number



Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	**PRIMARY**	BTREE	Yes	No	VehicleID	100	A	No	
Edit Drop	**PlateNo**	BTREE	Yes	No	PlateNo	100	A	No	

Contribution – F28DM Assignment 1 February 2024

Name	Contributions
Teammate 1 **Aunie Aqielah Ahmad Sazali**	Came up with the conceptual model (ERD) for Task 1, did data dictionary in Task 2, insert data generated into database for testing for Task 3
Teammate 2 **Nurul Sabrina Batrisyia Binti Mohd Shaifuddin**	Came up with the conceptual model (ERD) for Task 1, did data dictionary in Task 2, used Mockaroo for generating data for Task 3
Teammate 3 **Nur Adlin Fadhlina Binti Hedilisyam**	Came up with the implementation of the Schema in MariaDB for Task 3 and created Indexes for Task 4
Teammate 4 **Candra Sy Twee Jia Yee**	Came up with the implementation of the Schema in MariaDB for Task 3 and created Indexes for Task 4
Teammate 5 **Natasha Hannah Joseph**	Came up with the relational instances and relational schema for Task 2
Teammate 6 **Marium Noor Bhaduri**	Came up with the relational instances and relational schema for Task 2