

***ECS506U Software Engineering  
Group Project 2017***

**Group 1  
Harrishan Sureshkumar  
EC15191  
Module Name**

**Test and Contribution Report Template**

**Version 2.0**

**24 March 2017**

Prof. Martin Neil

## Module Design:

This module stores all vehicle records and allows the user to add, delete and edit vehicles. The interface consists of 3 tables; one which displays all vehicles and vehicle details, one which shows bookings for the chosen vehicle and one which shows the parts used in each vehicle. All these tables can be highlighted by clicking on the row or using the up and down arrows on the keyboard.

The interface is split into 4 sections. The top section consists of a back button, search bar, find button, add button, delete button, edit button and the vehicle records table.

- The search bar allows the user to search using registration number (or partial registration number), vehicle type and make of vehicle (or partial vehicle make).
- The back button resets the search bar. The find button searches the table and displays the related records in the vehicle records table.
- The add button opens a new page which displays a form to add a new vehicle.
- The edit button loads the details of the selected vehicle into a new page and allows the user to edit the details of the chosen vehicle.
- The delete button allows the user to delete the chosen vehicle after showing a confirmation message.

The bottom left section displays all customer details for the selected vehicle in the vehicle records table.

The bottom middle section consists of a table which shows the booking details of the selected vehicle and a table which shows the parts used in the selected vehicle. Three buttons allow the user to view past, future and all booking dates in the bookings table. The next booking date is displayed separately above the table.

The bottom right section displays warranty details for the selected vehicle.

## 2.2 UML Description: (UML diagram is on next page)

The areas highlighted in green boxes are classes and methods that I was responsible for.

When my module is run it starts up with the Vehicle.fxml page which then displays all vehicle records from the database and also displays customer details, past and future bookings dates, parts details and warranty details for the selected vehicle in the vehicles table. The AddVehicle.fxml and EditVehicle.fxml pages can be opened using buttons on the Vehicle.fxml page. The AddVehicle.fxml page accesses the addVehicle() method in the database where as the EditVehicle.fxml page accesses the editVehicle() method from the database to change data. The Vehicle Controller class accesses the bookings class to obtain the total cost of a booking and uses methods in the database to obtain booking dates, it also uses methods in the database to access parts used for each vehicle.

## 2.3 Ambiguities:

Requirement 6/9: “parts used” – Initially I was unsure whether I had to record every part included in every vehicle or whether every part ever installed by the garage for the chosen vehicle. I decided to go with my second interpretation after a discussion with my group it seemed more reasonable.

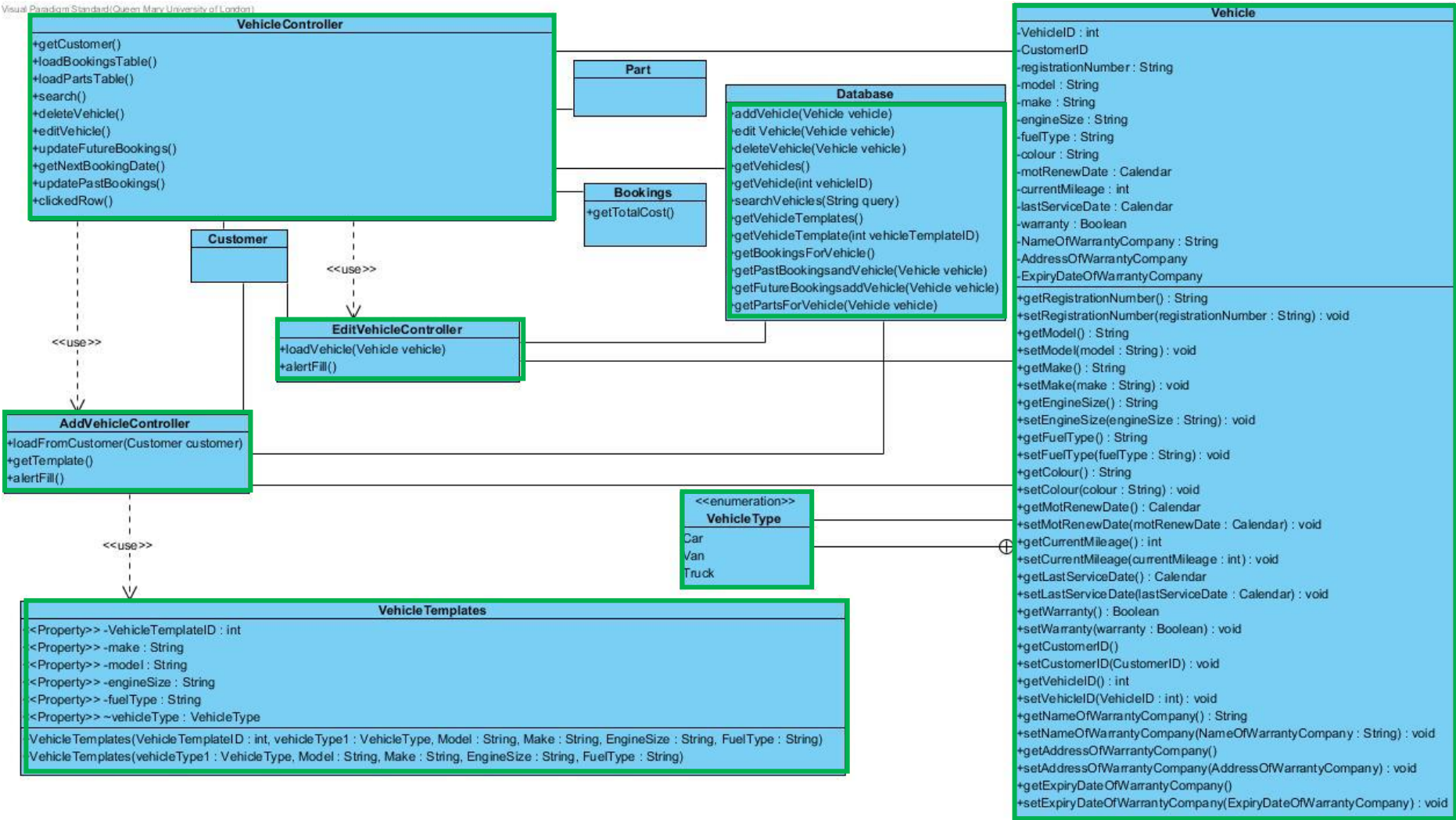
Requirement 8: “The user should be able to query the system to get a list of vehicles with customer details and next booking date. They should be able to add, edit and delete directly from this list” - At first I was unsure whether the user should be able to edit customer details and next booking date from the vehicle records page. However after discussion with my group members in charge of customer and booking we decided to not allow the user to edit customer details and next booking date as the requirement specifies “list” as just the “list of vehicles” to be editable, added or deleted.

## 3.1 Team Performance:

All team members worked together well and managed to help each other in time of need.

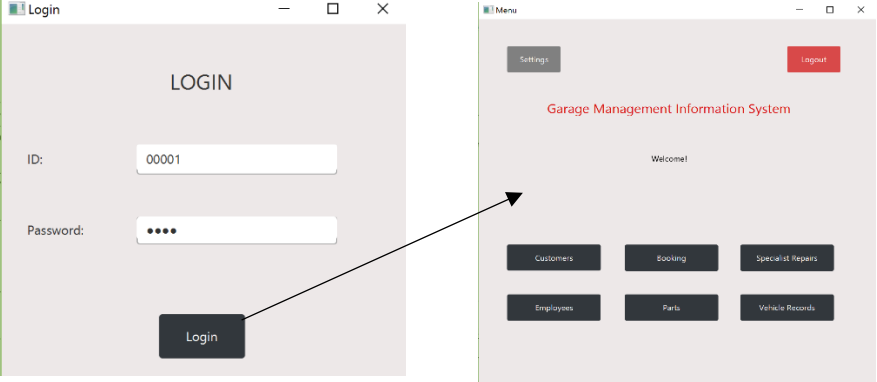
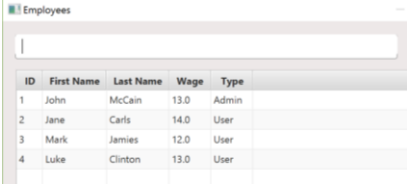
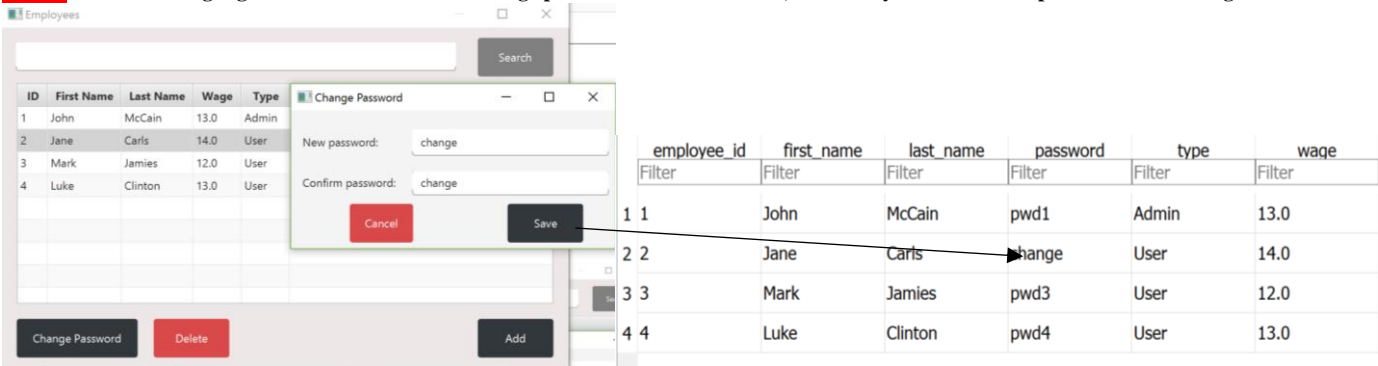
Matteo Cassia	E, Helped all group members when any questions when in doubt and made extra effort to get the system finished on time.
Yousf Khan	M
Pahel Gala	M
Yachen Hu	M

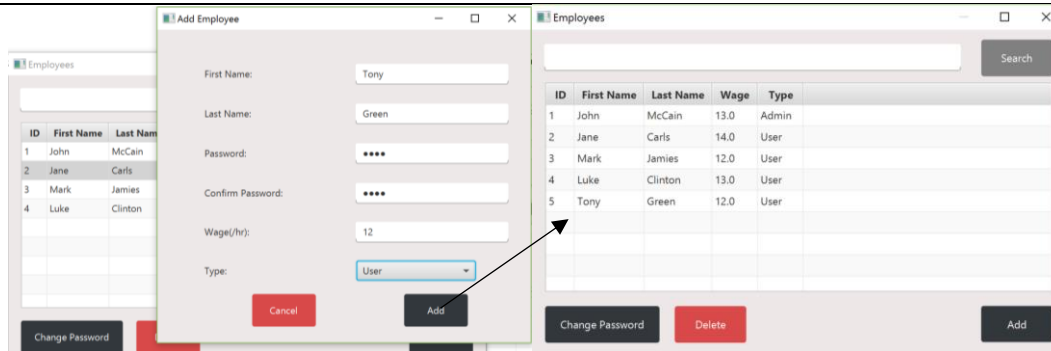
UML Diagram for Vehicle:



4 Testing:

Test Cases and documentation for Authentication

1. Logon as existing system administrator – provide id and password.	<p><b>PASS:</b> After entering the user name: 00001 and password: pwd1. The home page is opened (see right image).</p> 
2. View list of existing users (all users of both types).	<p><b>PASS</b> Shows all users after clicking on the Employees button on the homepage</p> 
3. Change password of existing day-to-day user.	<p><b>PASS:</b> The user is highlighted in the table and the change password button is clicked, then the system allows the password to be changed for a user called Jane.</p>  <p>Shows the password changed in the database (on the right) for user, Jane.</p>
4. Create a new day-to-day user.	<p><b>PASS</b> :Below the system allows the user to add a new user after the add button is clicked:</p>

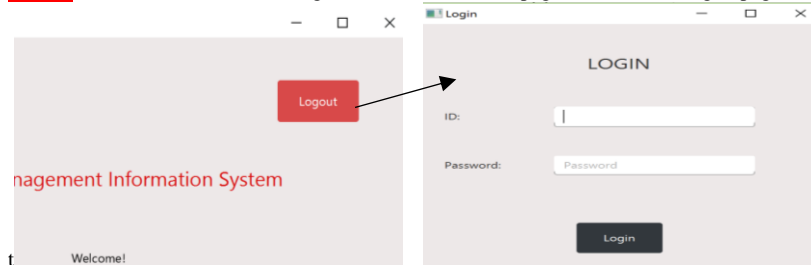


On the right we can see the new added user called Tony in the table:

5. Logout administrator.

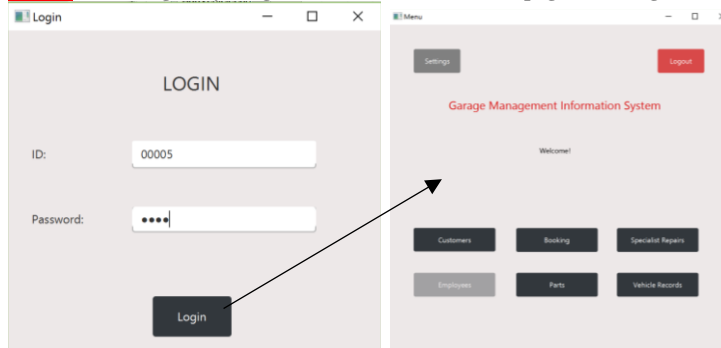
existing

**PASS**: As soon as we click the logout button on the homepage it leads to the log in page on the right



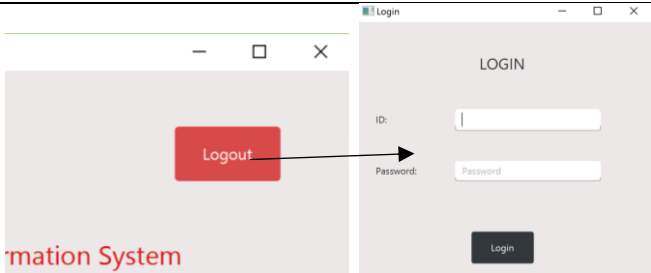
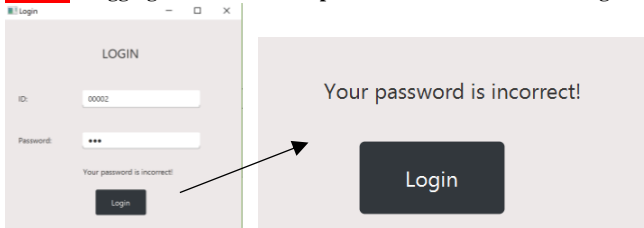
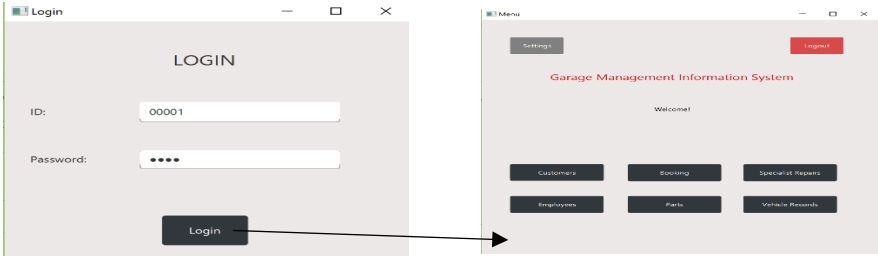
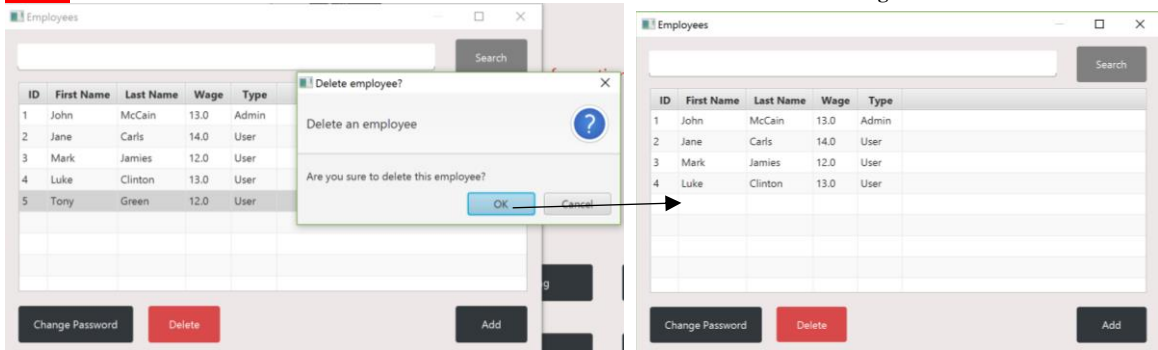
6. Login as the new day-to-day user.

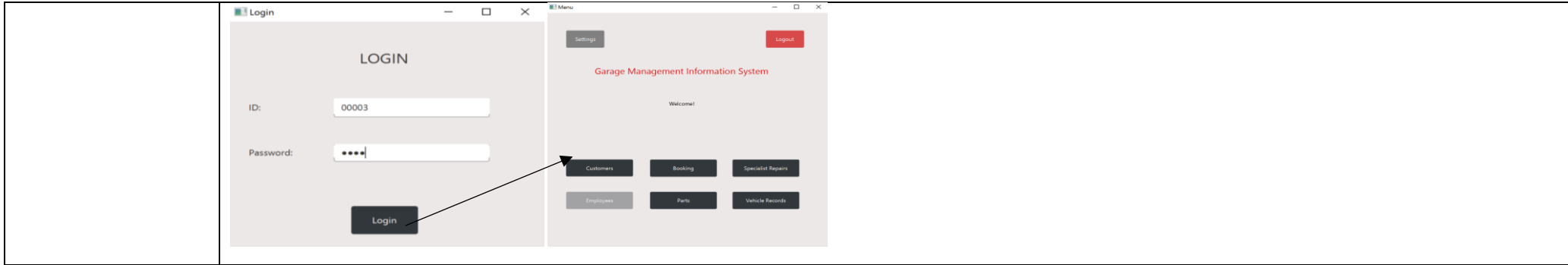
**PASS**: Entering Tony's login details leads to the home page on the right.



7. Logout as new day-today user.

**PASS**: Clicking the logout button leads to the log in page on the right

		
8. Attempt login as new day-to-day user with incorrect authentication.	<p><b>PASS:</b> Logging in with incorrect password show an error message as shown on below:</p> 	
9. Logon as existing system administrator.	<p><b>PASS:</b> Logging in as administrator is shown below.</p> 	
10. Delete newly created day-to-day user.	<p><b>PASS:</b> As shown below once the user is selected and the delete button is clicked an error message is shown and then the user is removed from the table.</p> 	
11.Login as existing day-to-day user	<p><b>PASS:</b> After logging on as user 3:</p>	



**Test Cases and Documentation for Vehicle:**

1. Search for vehicles by type (car, truck, van).	<p><b>PASS:</b> Once the vehicles type is entered it shows all vehicles of that vehicle type</p>
2. Select vehicle and show parts used, past and future booking dates, and the total cost per booking (warranty and non-warranty).	<p><b>PASS:</b> Once a Vehicle is selected and the past dates button is clicked (see left image). Once future dates is clicked (see right image).</p> <div></div>
3. Search for vehicles by manufacturer.	<p><b>PASS:</b> When the manufacturer name is entered all the cars of that make show up</p>

4. Select vehicle and show details.

**PASS:** Once a vehicle is selected on the table it is highlighted and all the relevant details of the vehicle are shown on the panes below

**Vehicle Records**

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalD...	CurrentMileage	LastServiceDate
1	4	Car	BM12TPU	325D	BMW	2.5	Diesel	Red	2017-03-12	919	2017-01-11
2	4	Truck	YR11OU	Fullback	Fiat	2	Petrol	White	2019-03-09	89976	2017-03-01
3	2	Truck	QW12ERT	Ranger	Ford	2.2	Diesel	Grey	2018-04-01	5971	2017-03-08
4	2	Car	OL11IMP	Proton	Toyota	2.3	Petrol	Blue	2017-09-01	1195	2017-02-26
5	1	Car	YT13NVZ	Fiesta	Ford	2.2	Petrol	White	2017-05-20	2190	2017-03-06
6	2	Van	LK17WPU	Transit	Ford	2.6	Diesel	Maroon	2017-09-01	907	2017-01-05
7	3	Car	KP13RUN	Panda	Fiat	2	Petrol	Red	2018-02-16	95384	2017-23-01
8	8	Car	JK06QWE	Polo	Volkswagen	2.2	Petrol	White	2018-04-13	6000	2017-02-27
9	10	Van	LM14QWE	Vito	Mercedes	2.5	Diesel	Black	2018-03-03	16783	2017-03-01
10	9	Truck	FI09UYT	Fullback	Fiat	2	Petrol	Blue	2019-04-01	921	2017-02-11
11	7	Car	VK13KAL	Golf	Volkswagen	2.6	Diesel	White	2017-09-03	1123	2017-01-04

**Customer Details**

Name: Microsoft  
Address: 1 Microsoft Way  
Postcode: MC 456  
Phone: 07890243964578  
Email: us@microsoft.com  
Customer Type: Business

**Booking and Parts Details**

Next Booking Date: 2017-05-25

Past Dates		All Dates	Future Dates	
Booking Date	Return Date	Booking Time	Total Cost (£)	
2017-02-24	2017-02-25	09:20	64.9	
2016-11-04	2016-11-05	16:00	280.8	
2017-01-07	2017-01-09	11:00	204.9	

**Warranty Details**

Info: This vehicle has a warranty.

Name: Greenland Ltd  
Address: 1, Crescent Avenue, Uxbridge, UXS 6UP  
Expiry Date: 2018-08-11

5. Edit an existing vehicle record.

**PASS:** Once a vehicle is selected and the edit button is clicked, the vehicle will load its details into the edit vehicle page. When the colour of vehicle is changed and the edit button is clicked in the edit vehicle page, it is updated on the table.

**Edit Vehicle:**

Vehicle ID: 11  
Vehicle Templates:   
Customer ID: 7  
Vehicle Type: Car  
Registration Number: VK13KAL  
Make: Volkswagen  
Model: Golf  
Engine Size: 2.6  
Fuel Type: Diesel  
Colour: Pink  
MOT Renewal Date: 2017-09-03  
Current Mileage: 1123  
Last Service Date: 2017-01-04  
Warranty: ☒  
Name Of Warranty Company: Greenland Ltd  
Address Of Warranty Company: 1, Crescent Avenue, Uxbridge, UXS 6UP  
Expiry Date Of Warranty Company: 2018-08-11  
Edit Cancel



# Vehicle Records

< V Find Add Delete Edit

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalD...	CurrentMileage	LastServiceDate
5	1	Car	YT13NVZ	Fiesta	Ford	2.2	Petrol	White	2017-05-20	2190	2017-03-06
6	2	Van	LK17WPU	Transit	Ford	2.6	Diesel	Maroon	2017-09-01	907	2017-01-05
8	8	Car	JK06QWE	Polo	Volkswagen	2.2	Petrol	White	2018-04-13	6000	2017-02-27
9	10	Van	LM14QWE	Vito	Mercedes	2.5	Diesel	Black	2018-03-03	16783	2017-03-01
11	7	Car	VK13KAL	Golf	Volkswagen	2.6	Diesel	Pink	2017-09-03	1123	2017-01-04
12	6	Car	BK05LOZ	Polo	Volkswagen	2.2	Petrol	Pink	2018-02-02	19812	2017-02-21

6. Edit the warranty details of a vehicle under warranty.

**PASS:** When the following vehicle is selected and the warranty details are edited it changes on the database as well.  
Selecting the vehicle:

# Vehicle Records

< Search... Find Add Delete Edit

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalD...	CurrentMileage	LastServiceDate
1	4	Car	BM12TPU	325D	BMW	2.5	Diesel	Red	2017-03-12	919	2017-01-11

Editing the warranty details:

### Edit Vehicle:

Vehicle ID: 1

Vehicle Templates:

Customer ID: 4

Vehicle Type: Car

Registration Number: BM12TPU

Make: BMW

Model: 325D

Engine Size: 2.5

Fuel Type: Diesel

Colour: Red

MOT Renewal Date: 2017-03-12

Current Mileage: 919

Last Service Date: 2017-01-11

☒ Warranty

Name Of Warrenty Company: Greenland Ltd

Address Of Warrenty Company: 1, Crescent Avenue, Uxbridge, Ux5 6UP

Expiry Date Of Warrenty Company: 2018-08-11

Edit Cancel

4

Car

BM12TPU

BMW

325D

2.5

Diesel

Red

Last Service Date: 2017-01-11

☒ Warranty

Name Of Warrenty Company: Redland Ltd

Address Of Warrenty Company: 13, River Avenue, Richmond, R4 3TD

Expiry Date Of Warrenty Company: 2018-09-01

Edit Cancel

After edit:

Vehicle Records

Find

Add

Delete

Edit

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalID...	CurrentMileage	LastServiceDate
1	4	Car	BM12ZPU	320D	BMW	2.3	Diesel	Red	2017-03-12	319	2017-01-11
2	4	Truck	YR11GUJ	Fullback	Fiat	2	Petrol	White	2019-03-09	89976	2017-03-01
3	2	Truck	QW12ERT	Ranger	Ford	2.2	Diesel	Grey	2018-04-01	5971	2017-03-08
4	2	Car	QL19MP	Tacoma	Toyota	2.3	Petrol	Blue	2017-09-01	1195	2017-02-26
5	1	Car	YT13NVZ	Fiesta	Ford	2.2	Petrol	White	2017-05-20	2190	2017-03-06
6	2	Van	LK17WPU	Transit	Ford	2.6	Diesel	Maroon	2017-09-01	907	2017-01-05
7	3	Car	KP13RUN	Panda	Fiat	2	Petrol	Red	2018-02-16	95384	2017-23-01
8	8	Car	JK06QWE	Polo	Volkswagen	2.2	Petrol	White	2018-04-13	6000	2017-02-27
9	10	Van	LM14QWE	Vito	Mercedes	2.5	Diesel	Black	2018-03-03	16783	2017-03-01
10	9	Truck	FI09UYT	Fullback	Fiat	2	Petrol	Blue	2019-04-01	921	2017-02-11
11	7	Car	VK13KAL	Golf	Volkswagen	2.6	Diesel	Pink	2017-09-03	1123	2017-01-04

Customer Details

Name

Microsoft

Address

1 Microsoft Way

Postcode

MC 456

Phone

07980243984578

Email

us@bmicrosoft.com

Customer Type

Business

Booking and Parts Details

Next Booking Date:

2017-05-25

Past Dates

All Dates

Future Dates

Booking Date

Return Date

Booking Time

Total Cost (£)

2017-02-24

2017-02-25

09:20

64.9

2016-11-04

2016-11-05

16:00

280.8

2017-01-07

2017-01-09

11:00

204.9

Part Name

Part Description

Cost

Specialist Cost (£)

Air Filter

Shape:Tetragonal

Length (mm):319

Width (mm):183

Height (mm):39

8.9

8.9

Warranty Details

Info

This vehicle has a warranty

Name

Redland Ltd

Address

13,River Avenue, Richmond, R4 3TD

Expiry Date

2018-09-01

7. Delete a vehicle record.

**PASS:** When a vehicle is selected and the delete button is clicked an alert message is shown (see below).The vehicle with registration number: BM16FJZ is selected as shown below.

7

3

Car

KP13RUN

8

8

Car

JK06QWE

9

10

Van

LM14QWE

10

9

Truck

FI09UYT

11

7

Car

VK13KAL

12

6

Car

BK05LOZ

13

5

Van

TR14NCO

14

5

Car

FX12XPU

15

4

Car

BM16FJZ

2018-02-16

95384

2017-23-01

2018-04-13

6000

2017-02-27

2018-03-03

16783

2017-03-01

2019-04-01

921

2017-02-11

2017-09-03

1123

2017-01-04

2018-02-02

19812

2017-02-21

2018-11-03

790

2017-02-01

2017-08-02

1189

2017-02-21

2018-03-12

893

2017-01-11

After “OK” is clicked on the alert message. The vehicle is deleted from the database and can no longer be found in the table.

Vehicle Records

BM16FJZ

Find

Add

Delete

Edit

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalID...	CurrentMileage	LastServiceDate
No content in table											

8. Create a new vehicle record.

**PASS:** Currently there are 15 records in the table as shown below. Once the add button is clicked, the add vehicle page is opened.

## Vehicle Records

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalD...	CurrentMileage	LastServiceDate
5	1	Car	YT13NVZ	Fiesta	Ford	2.2	Petrol	White	2017-05-20	2190	2017-03-06
6	2	Van	LK17WPU	Transit	Ford	2.6	Diesel	Maroon	2017-09-01	907	2017-01-05
7	3	Car	KP13RUN	Panda	Fiat	2	Petrol	Red	2018-02-16	95384	2017-23-01
8	8	Car	JK06QWE	Polo	Volkswagen	2.2	Petrol	White	2018-04-13	6000	2017-02-27
9	10	Van	LM14QWE	Vito	Mercedes	2.5	Diesel	Black	2018-03-03	16783	2017-03-03
10	9	Truck	F09UYT	Fullback	Fiat	2	Petrol	Blue	2019-04-01	921	2017-02-11
11	7	Car	VK13KAL	Golf	Volkswagen	2.6	Diesel	Pink	2017-09-03	1123	2017-01-04
12	6	Car	BK05LOZ	Polo	Volkswagen	2.2	Petrol	Pink	2018-02-02	19812	2017-02-21
13	5	Van	TR14NCO	Vito	Mercedes	2.5	Diesel	Grey	2018-11-03	790	2017-02-01
14	5	Car	FX12XPU	Auris	Toyota	2.3	Petrol	White	2017-08-02	1189	2017-02-21
15	4	Car	BM16FJZ	320D	BMW	2.3	Diesel	Green	2018-03-12	893	2017-01-11

## Add New Vehicle:

Vehicle Templates

Customer ID

1

Vehicle Type:

Car

Registration Number:

BM18HPS

Make:

BMW

Model:

I8

Engine Size:

2

Fuel Type:

Electric

Colour:

Red

MOT Renewal Date:

01/03/2018

Current Mileage:

1913

Last Service Date:

19/03/2017

Warranty

☐

18 BMW 2 Electric

1

Car

BM18HPS

BMW

I8

2

Electric

Red

Add New

Cancel

Once the add button is clicked, the vehicle is added to the table and now there are 16 vehicles:

Vehicle Records											
VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalD...	CurrentMileage	LastServiceDate
16	1	Car	BM18HPS	I8	BMW	2	Electric	Red	2018-03-01	1913	2017-03-19

9. Logout, close application and log back in. Show created record is persistently stored.

**PASS** When logged out, closed application, logged back in and after opening Vehicle Records, the record remains in the table

Logout

LOGIN

LOGIN

ID:

00001

Password:

\*\*\*\*

Login

Garage Management Information System

Welcome!

Customers

Booking

Specialist Repairs

Employees

Parts

Vehicle Records

Vehicle Records

VehicleID	CustomerID	VehicleType	RegistrationNum...	Model	Make	EngineSize	FuelType	Colour	MotRenewalD...	CurrentMileage	LastServiceDate
6	2	Van	LK17WPU	Transit	Ford	2.6	Diesel	Maroon	2017-09-01	907	2017-01-05
7	3	Car	KP13RUN	Panda	Fiat	2	Petrol	Red	2018-02-16	95384	2017-23-01
8	8	Car	JK06QWE	Polo	Volkswagen	2.2	Petrol	White	2018-04-13	6000	2017-02-27
9	10	Van	LM14QWE	Vito	Mercedes	2.5	Diesel	Black	2018-03-03	16783	2017-03-03
10	9	Truck	F09UYT	Fullback	Fiat	2	Petrol	Blue	2019-04-01	921	2017-02-11
11	7	Car	VK13KAL	Golf	Volkswagen	2.6	Diesel	Pink	2017-09-03	1123	2017-01-04
12	6	Car	BK05LOZ	Polo	Volkswagen	2.2	Petrol	Pink	2018-02-02	19812	2017-02-21
13	5	Van	TR14NCO	Vito	Mercedes	2.5	Diesel	Grey	2018-11-03	790	2017-02-01
14	5	Car	FX12XPU	Auris	Toyota	2.3	Petrol	White	2017-08-02	1189	2017-02-21
15	4	Car	BM16FJZ	320D	BMW	2.3	Diesel	Green	2018-03-12	893	2017-01-11
16	1	Car	BM18HPS	I8	BMW	2	Electric	Red	2018-03-01	1913	2017-03-19

Customer Details

Booking and Parts Details

Warranty Details

Note: At least 15 vehicle records must be created and integrated with data from other modules.

**PASS**