



Car Maintenance App

PROJECT 1 REPORT

BACHELOR OF COMPUTER SOFTWARE

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ABSTRACT

Car maintenance app for dealerships. This app makes the process of maintaining a car from a dealership easier and faster by providing the information the customer needs, such as:

- Maintenance package price
- Making an appointment
- Online payment
- Branch locator
- Customer maintenance history

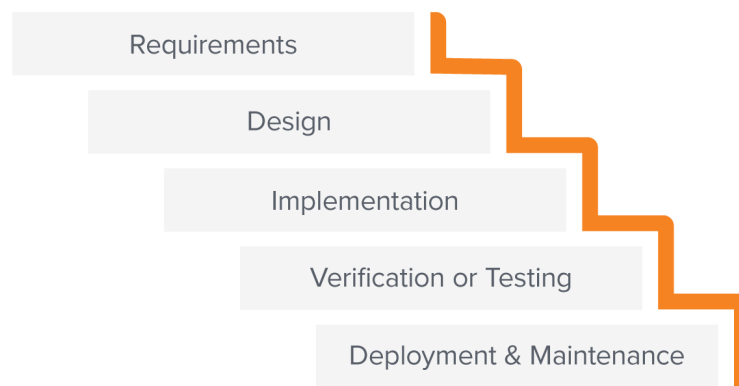
CHAPTER 1: INTRODUCTION

1.1. AIM & OBJECTIVE

Develop an application to handle car service appointment lifecycle to assist service consumers -car owners- and service provider -car dealership-.

1.2. MATERIALS AND METHODS

The Waterfall Method



CHAPTER 2: BACKGROUND

As most car owners face some delays when going for car service centers. Starting from making appointments using call centers or waiting in a queue at dealership service center. Therefore, we will develop an application to make this process faster and more convenient.

CHAPTER 3: PRESENT WORK

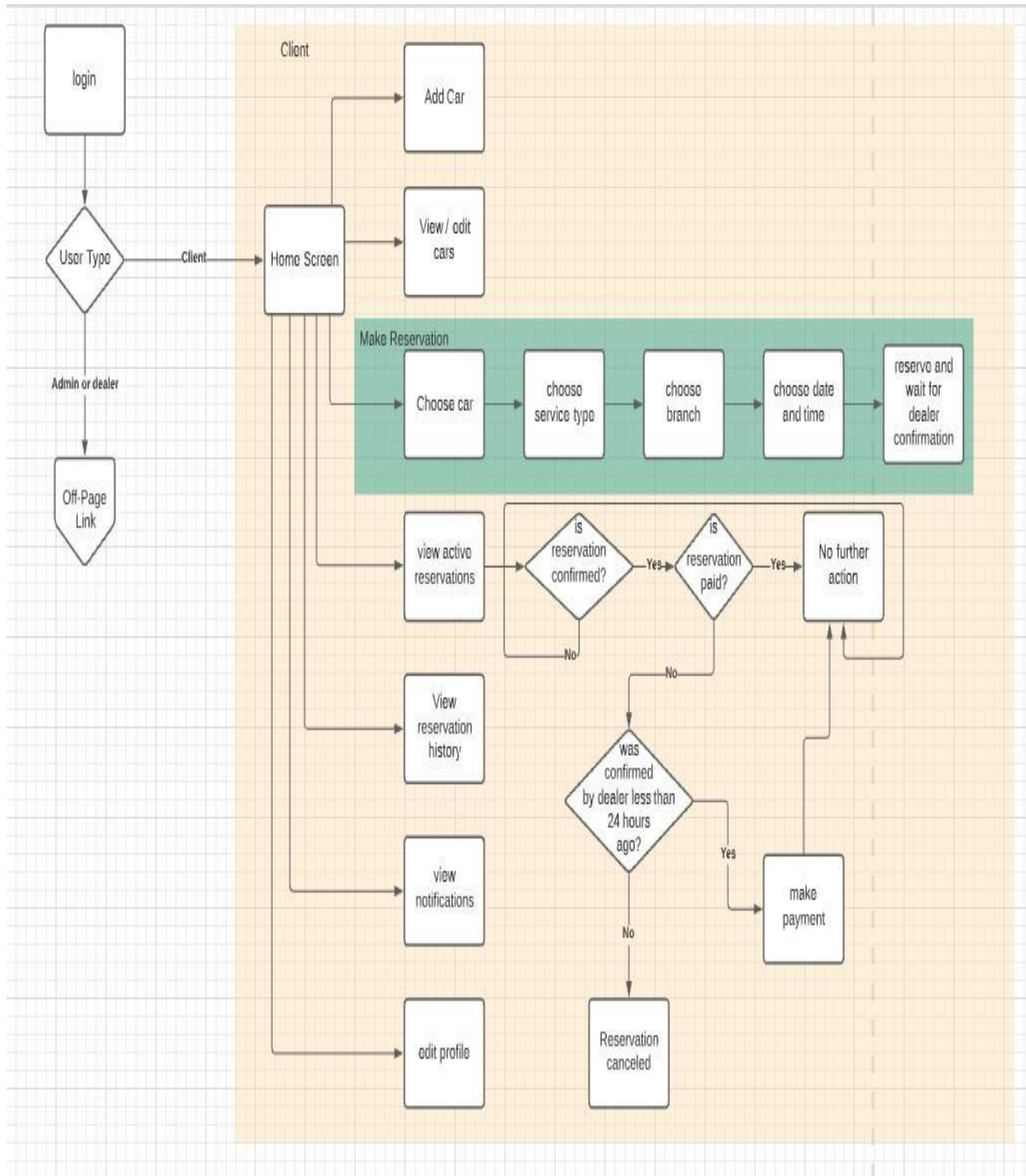
3.1. TECHNIQUES USED

Use cases:

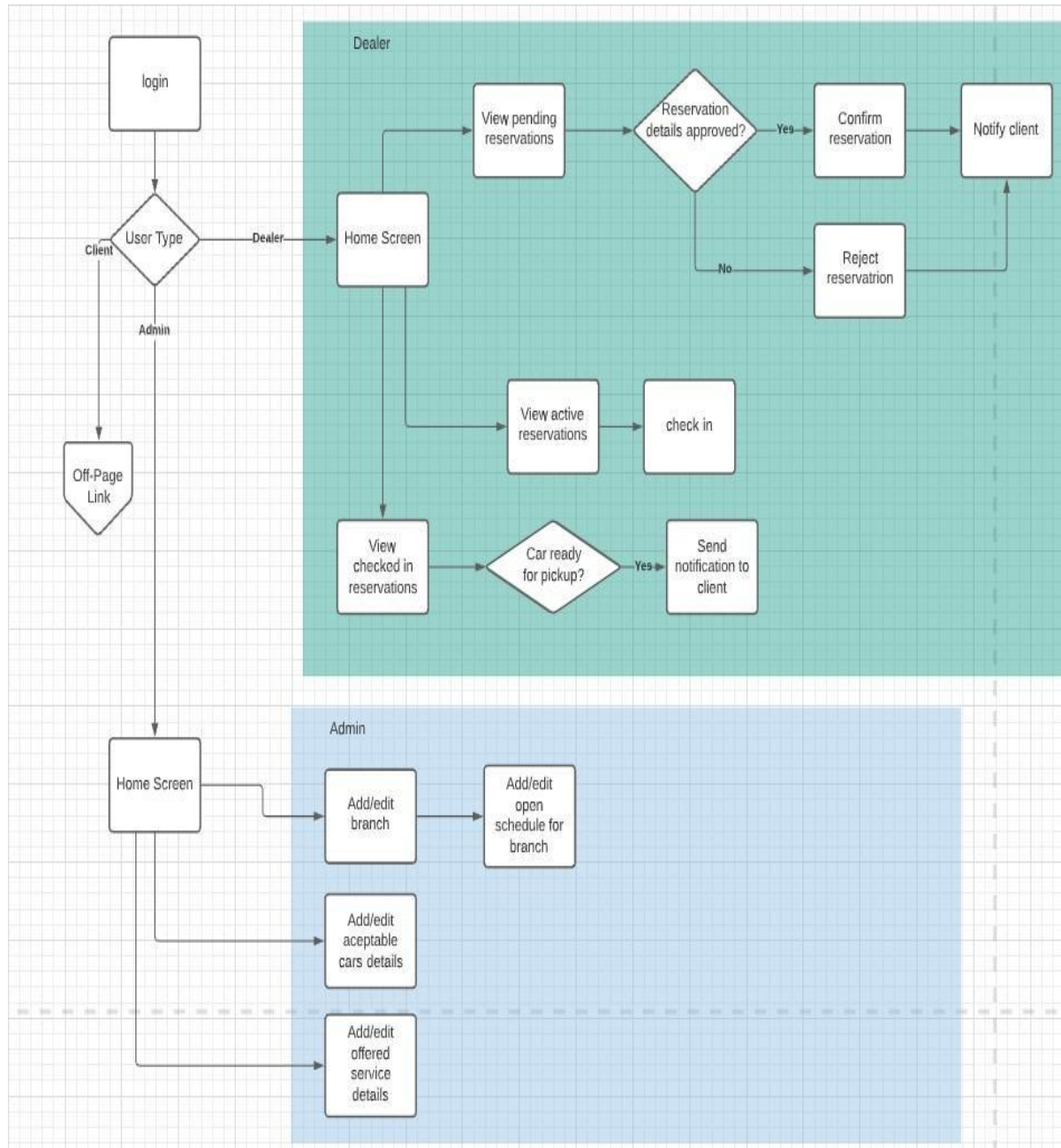
- **Customer use cases**
 - 1- Customer creates an account
 - 2- Customer logs in
 - 3- In Main screen, customer register his car
 - 4- In car registration screen, customer enters car details then clicks add. Then, customer is redirected to home screen.
 - 5- In home screen, customer can make an appointment for maintenance by clicking on “Reserve” at the bottom of the screen.
 - 6- In reservation screen, Customer first chooses which of his cars he wants to make a reservation for. Then, which maintenance he wants to do (5000km, 10000km..etc) in this field service info and price are displayed. Then, select branch. Then. Select date and time for appointment.
 - 7- Now, in home screen customer can view his reservation with “Pending” status and disabled “Pay” button. From here, customer can cancel appointment. After dealership accepts appointment, “pay” button is enabled and customer can pay.
 - 8- After payment is completed, a notification is sent to dealership.
 - 9- When customers deliver car to dealership on appointment time, a notification is sent to customer. When car is ready, a notification is sent to customer. History of these transactions is saved and can be viewed by customer.
 - 10- Customer can see has profile
- **Dealership use cases:**
 - 1- Screen to view pending appointments. Can accept or reject.
 - 2- Screen to inquiries about all customer reservations.
 - 3- Screen to set available dates and times.
- **Admin use cases:**
 - 1- Screen to fill data in DB.
 - 2- Screen to set location.

Flowchart:

- **Customer flowchart:**



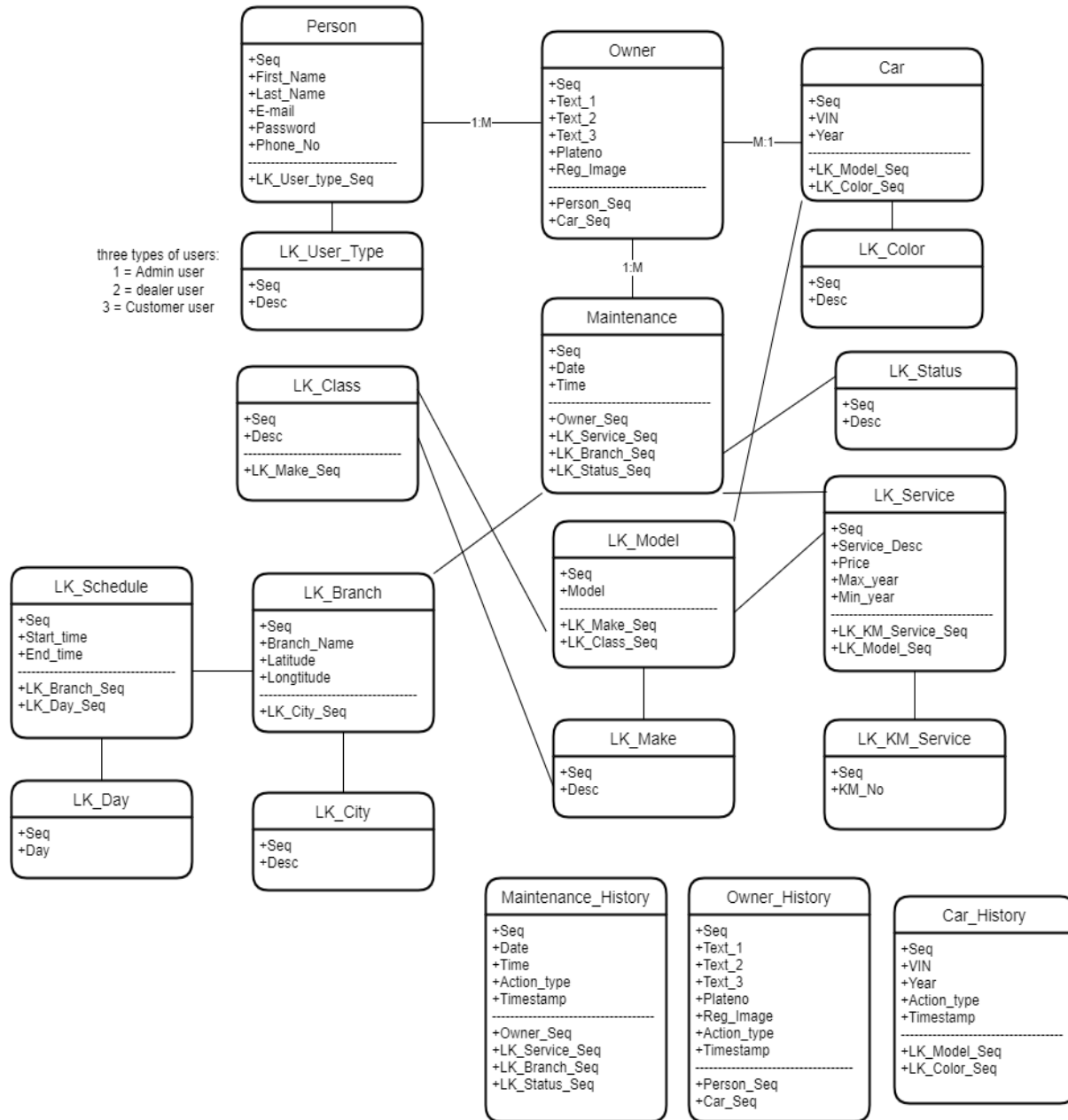
- **Admin and Dealer flowchart:**



- **Database structure:**

UserID = E-mail in Person table

LK = lookup tables which means read only to be populated with database creation



CHAPTER 4: RESULTS AND DISCUSSION

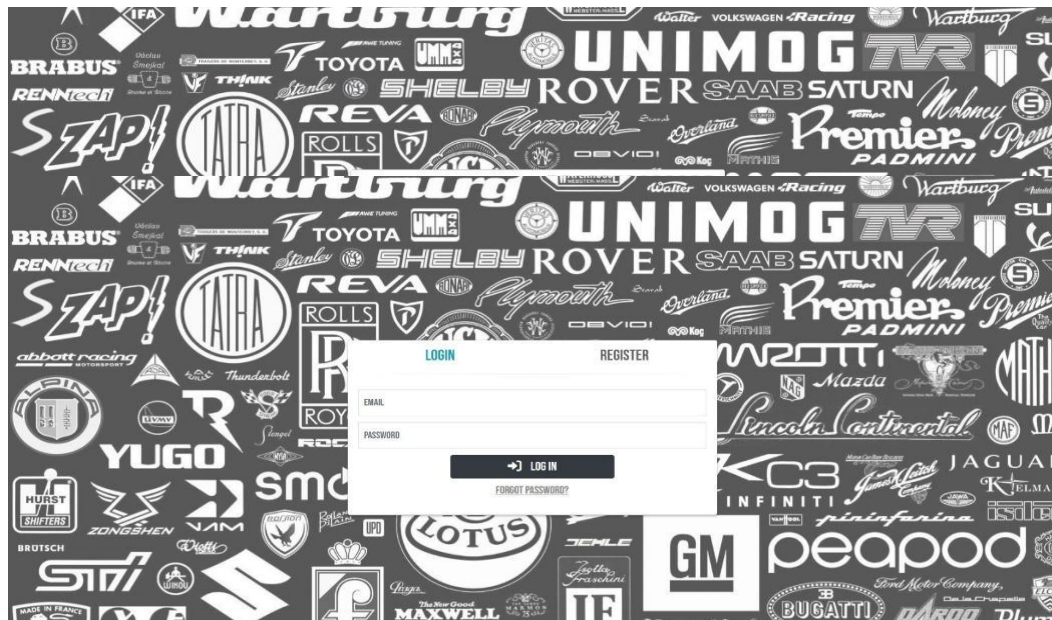
Car owner can make an appointment, pay for service and get notification when car is ready for pickup. Also, view service package pricing and get a history of past appointments and services done for his car.

Dealership admin can approve or decline appointments, get customer maintenance history, branch appointment history. Provide service package pricing.

DEVELOPMENT

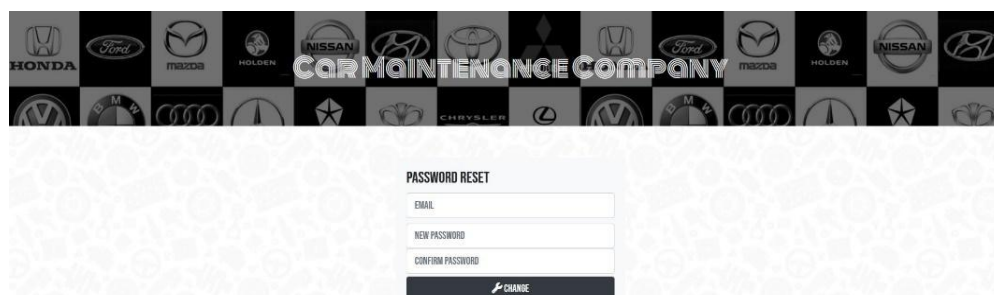
- **Login and Register screens:**

1- Register screen:



2- Login screen:

3- Forget password screen:



- **Admen screen:**

On the admin page, he is responsible for entering each of the following fields:
(Manufacturers, Classes, Models, Service items (Maximum year, Minimum yea, KM, Description, Price), Colors, City and branch details)

Which will appear to the customer when adding new car or booking an appointment for maintenance,

MANUFACTURERS :

MANUFACTURER: [CREATE](#)

CLASS :

MANUFACTURER: [CREATE](#)

CLASS: [CREATE](#)

MODELS :

MANUFACTURER: [CREATE](#)

CLASS: [CREATE](#)

MODEL: [CREATE](#)

SERVICE ITEMS :

MANUFACTURER: [CREATE](#)

CLASS: [CREATE](#)

MODEL: [CREATE](#)

YEAR: [CREATE](#)

KM: [CREATE](#)

DESCRIPTION: [CREATE](#)

PRICE: [CREATE](#)

COLORS :

COLOR: [CREATE](#)

CITY :

CITY: [CREATE](#)

BRANCH :

- **Dealer screens:**

- 1- Set time for branch screen, which the dealer determines the available working hours for each branch

CAR MAINTENANCE PENDING REQUEST **BRANCH MANAGEMENT** ALL REQUESTS SIGNOUT

MANAGE BRANCH SCHEDULE :

BRANCH: SELECT OPTION

DAY: SELECT OPTION

TIME:

UPDATE

- 2- Requests screen: where the dealer manages customer reservations

CAR MAINTENANCE PENDING REQUEST **BRANCH MANAGEMENT** ALL REQUESTS SIGNOUT

FILTER

CITY: NO SELECTION BRANCH: NO SELECTION

SEARCH

PENDING RESERVATIONS :

RESERVATION NUMBER: 3

MANUFACTURER: LEXUS

CLASS: ES

MODEL: ES 250

YEAR: 2018

PLATE: A A A 1

SERVICE TYPE: 5000

DATE/TIME: 2021/DEC/12 08:00:00 AM

CITY: JEDDAH

BRANCH: NO: 3

STATUS: PENDING

CONFIRM

3- Query screen: the dealer inquiries about all customer reservations

The screenshot shows a web interface for 'CAR MAINTENANCE COMPANY'. At the top, there's a navigation bar with links: 'CAR MAINTENANCE', 'PENDING REQUEST', 'BRANCH MANAGEMENT', 'ALL REQUESTS', and a 'SIGNOUT' button. Below the navigation bar is a header featuring a grid of car manufacturer logos (Hyundai, Toyota, Mitsubishi, Honda, Ford, Mazda, Nissan, etc.). The main content area is titled 'FILTER' and contains three dropdown menus for 'CITY:', 'BRANCH:', and 'STATUS:', each with a 'NO SELECTION' option. Below these is a 'SEARCH' button. The section is titled 'PENDING RESERVATIONS:' and displays a list of reservation details in a table-like format. The details shown are: RESERVATION NUMBER: 3, MANUFACTURER: LEXUS, CLASS: ES, MODEL: ES 250, YEAR: 2018, PLATE: A A A 1, SERVICE TYPE: 5000, DATE/TIME: 2021/DEC/12 08:00:00 AM, CITY: JEDDAH, BRANCH: NO: 3, and STATUS: PENDING. Navigation arrows are visible on the left and right sides of the reservation details.

CAR MAINTENANCE PENDING REQUEST BRANCH MANAGEMENT ALL REQUESTS SIGNOUT

CAR MAINTENANCE COMPANY

FILTER

CITY : NO SELECTION

BRANCH : NO SELECTION

STATUS : NO SELECTION

SEARCH

PENDING RESERVATIONS :

RESERVATION NUMBER :	3
MANUFACTURER:	LEXUS
CLASS:	ES
MODEL :	ES 250
YEAR :	2018
PLATE :	A A A 1
SERVICE TYPE :	5000
DATE/TIME :	2021/DEC/12 08:00:00 AM
CITY :	JEDDAH
BRANCH :	NO: 3
STATUS :	PENDING

- **Customer screens:**

- 1- Customer profile screen: which the customer displays his personal data and he's able to update it

The screenshot shows a web interface for 'CAR MAINTENANCE COMPANY'. At the top, there's a navigation bar with links: 'CAR MAINTENANCE', 'HOME', 'CREATE VEHICLE', 'BOOK AN APPOINTMENT', and a 'SIGNOUT' button. Below the navigation bar is a header featuring a grid of car manufacturer logos (Hyundai, Toyota, Mitsubishi, Honda, Ford, Mazda, Nissan, etc.). The main content area is titled 'GENERAL INFORMATION :' and contains a form for personal data. The details shown are: FIRST NAME: ALI, LAST NAME: A, E-MAIL: ALI@GMAIL.COM, and PHONE NUMBER: 505555555. Below this is a section titled 'CHANGE PASSWORD :' with three input fields for 'OLD PASSWORD:', 'NEW PASSWORD:', and 'CONFIRM NEW PASSWORD:'. At the bottom is an 'UPDATE' button.

CAR MAINTENANCE HOME CREATE VEHICLE BOOK AN APPOINTMENT SIGNOUT

CAR MAINTENANCE COMPANY

GENERAL INFORMATION :

FIRST NAME:	ALI
LAST NAME :	A
E-MAIL :	ALI@GMAIL.COM
PHONE NUMBER :	505555555

CHANGE PASSWORD :

OLD PASSWORD:	
NEW PASSWORD :	
CONFIRM NEW PASSWORD :	

UPDATE

2- New car screen: the customer adds his vehicles to be serviced

CAR MAINTENANCE HOME CREATE VEHICLE BOOK AN APPOINTMENT SIGNOUT

CAR INFORMATION :

MANUFACTURER: SELECT OPTION

CLASS :

MODEL:

YEAR: SELECT OPTION

COLOR : SELECT OPTION

PLATE:

VIN:

ATTACH VEHICLE REGISTRATION : CHOOSE FILE BROWSE

CREATE NEW CAR

3- Reserve screen: after adding a vehicle, the customer can book a new appointment for maintenance from this screen

CAR MAINTENANCE HOME CREATE VEHICLE BOOK AN APPOINTMENT SIGNOUT

CAR INFORMATION :

VEHICLE: SELECT OPTION

MODEL :

PLATE:

SERVICE INFORMATION :

SERVICE TYPE:

SERVICE DETAILS :

PRICE :

BRANCH DETAILS :

CITY: SELECT OPTION

BRANCH :

LOCATION :

DATE: MM / DD / YYYY

TIME:

BOOK NEW APPOINTMENT

- 4- Home screen: the customer displays all his vehicles with his reservations with a view of the status of each reservation

CAR MAINTENANCE

HOME

CREATE VEHICLE

BOOK AN APPOINTMENT

SIGNOUT

NISSAN

HYUNDAI

TOYOTA

MAZDA

FORD

NISSAN

HYUNDAI

CHRYSLER

LEXUS

VW

BMW

AUDI

MINI

NISSAN

HYUNDAI

MY CARS

MANUFACTURER:

LEXUS

MODEL :

ES 250

YEAR :

2018

COLOR :

BLUE

PLATE :

A A A 1

MY RESERVATION

RESERVATION NUMBER :

3

SERVICE TYPE :

5000

DATE/TIME :

2021/DEC/12 08:00:00 AM

CITY :

JEDDAH

BRANCH :

NO: 3

STATUS :

PENDING

VIEW

EDIT

CANCEL

CHAPTER 5: CONCLUSION AND FUTURE WORK

CONCLUSION

Car maintenance app for dealerships. This app makes the process of maintaining a car from a dealership easier and faster by providing the information the customer needs.

FUTURE WORK

- Inquiry a vehicle registration image to the dealer screen
- Inquiry about deleted car information to customer and dealer.
- Add the payment process to the site.
- Allow the administrator to delete the car information and maintenance information entered by him.

REFERENCES

1. Adobe XD for design.
2. google diagrams for flow charts.
3. Php