

Rental Service Portal <u>Submitted By</u> Golam Rasul Anik

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This Project report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

APPROVAL

This Project titled as "Rental Service", submitted by Golam Rasul Anik to the Department of Software Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Software Engineering and approved as to its style and contents.

BOARD OF EXAMINERS

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nal Examiner 1
nal Examiner 2
nal Examiner

DECLARATION

I, hereby state that, I have taken this project under the supervision of **Dr. Imran Mahmud**, **Associate Professor & Head In-Charge**, Department of Software Engineering, Daffodil International University

. I also state that I have submitted neither this project nor any part of it for award of any degree.

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ACKNOWLEDGEMENT

I'm so much grateful to my almighty Allah, he makes me possible to complete this project successfully.

I am especially indebted to **Dr. Imran Mahmud, Associate Professor & Head In-Charge,**,Department of Software Engineering, Daffodil International University, Dhaka, who have been supportive of my career goals and who work actively to make this happen. His patience, guidance, encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stages have made it possible to complete this project.

I would like to express my heartiest gratitude to other faculty members and the staffs of SWE department of Daffodil International University.

I would like to thank my entire course mates in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patience of my family. This work would not have been possible without their constant support.

EXECUTIVE SUMMARY

The "Rental Service" is a web-based project that will help the people by hiring a car. The development process of "Rental Service" is started from April, 2021. I had to think about a relevant problem regarding to problem that a person can't hire one more car at a time Then I have tried to develop my idea as detail as much. This documentation is the final result of that idea.

The main purpose of "Rental Service" is described in the chapter one. By going through it, one can understand the project Overview, Background, Goals and Benefits of the project. It also introduces the Stakeholders of the project. One can also get rough idea by going through the system model in this section.

The second chapter contains all the requirements of the stakeholders. These requirements were needed to be fulfilled by the system. These are mainly the functional requirements and non-functional requirements.

The third chapter contains the system analysis part. This part will describe the Use Case Diagram with description, Activity Diagram and Sequence Diagram. This part is based on analysis.

The fourth chapter contains the Development Tools and Technology. One can also find the Entity Relationship Diagram and Class Diagram.

The fifth chapter has system test case. Because developing is not the end of the project. It has to work perfectly before we can call it a functional project. For this, we have to make sure the quality of the product by undergoing various test cases.

The last chapter lists the conclusion part including, Project Summary, Limitations and Future Scope. I also included the list of all the resources as references that helped me to complete my project here.

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Chapter - 1 Introduction

1.1 Purpose

The aim and objective of this rental system are to prepare a portal where customer can hire the car. The website must be like vehicle owner can rent their vehicles.

Customer can hire more cars at a time. They can collect from a particular place.

1.2 Project Scope

This system is mainly focused where people can find all types of vehicles easily on the spot.

Where owner can rent their vehicles & can manage the vehicle booking

Admin will store all information and update information daily.

1.3 Goal

Make an easy access portal.

Where people can find their rental vehicles easily.

1.4 Overview

This system is designed to be a facility for maintaining donated medicine, patient's information and help needy people. The rest of the SRS examines the specifications of the Online Medicine Donation System Portal in detail

1.2 Stakeholders & Characteristics

2.1.1 Admin

Admin will play a significant role in this system.

Admin will store manage car owner info ,manage car info, manage customer info, manage vehicles booking , manage profile .

2.1.2 Vehicle Owner

Owner will sign up in system and will see their car information & customer information. System will save this information.

2.1.3 Customer

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Chapter – 2 System Analysis

2.1 Use Case Diagram

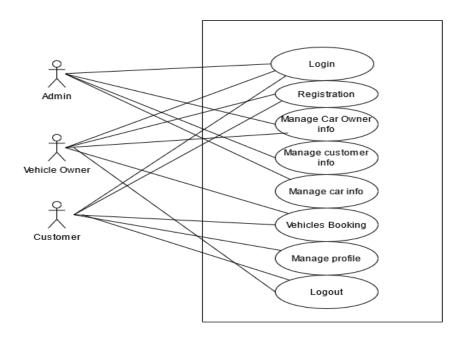


Fig 2.1: Use Case Diagram

2.2 Use Case Description

2.2.1 Registration

Use Case	Regis	Registration for car owner and customer		
Goal	Make	Make register new car owner and customer.		
Preconditions				
Success End Condition		A super admin can make car owner & customer registered by fill up their information.		
Failed End Condition	Typing mistake, system error.			
Primary Actors:	Admir	n		
Secondary Actors:				
Trigger	Click	Registration.		
Description / Main Success Scenario	Step	Action		
Guddeda Godfiario	1	Click on registration form.		
	1.1	Successfully fill up required field.		
	2	Click register button.		
	2.1	Done registration process.		

2.2.2 Admin Login

Use Case	Login		
Goal	Admin can successfully login.		
Preconditions			
Success End Condition	Admin give user name and password and successfully login.		
Failed End Condition	Admin give user name only and failed to login.		
	Admin may do typing mistake and can't login successfully.		
Primary Actors:	Admin		
Secondary Actors:			
Trigger	Admin give user name and password and successfully login.		
	Step Action		

	1	Click user name and password field and also fill up it.
Description / Main Success Scenario	1.1	Successful user name and password
Success Scenario	2	Admin login successful.
	2.1	Now he has access to use the system.

2.2.3 Store Car Owner Info

Use Case	Store car owner info			
Goal		Admin can collect all car owner information and store it to the database.		
Preconditions				
Success End Condition	Admir	n take needed person's personal information and his		
	/her ca	/her car name and save it to his database.		
Failed End Condition	Admin can't collect needed persons full info .			
Primary Actors:	Admin			
Secondary Actors:				
Trigger	Admir	n take needed person's info and stored it.		
Description / Main Success Scenario	Step	Action		
Carrotto Gorianio	1	Click car owner's info field and also fill up it.		
	1.1	Successfully fill up		
	2	Admin click submit button.		
	2.1	Stored successful.		

2.2.4 Store Car Info

Use Case	Store	Car Info	
Goal	Admir	n collect car info from the car owner and store car info details	
Preconditions			
Success End Condition		n take car info from car owner and store car info ssfully.	
Failed End Condition	Admin take car info from car owner but failed to share the information to the owner		
Primary Actors:	Admir	n	
Secondary Actors:			
Trigger	Admir	n take car info and store car info into database.	
Description / Main Success Scenario	Step	Action	
ouccess ocenano	1	Click car info field and also fill up it.	
	1.1	Successfully fill up	
	2	Admin click submit	
	2.1	button Successfully	
		stored	

2.2.5 Store Customer Info

Use Case	Store Customer Information
Goal	Admin can collect all customer information and store it to the database
Preconditions	
Success End Condition	Admin take needed person's personal information and his /her car name and save it to his database.

Failed End Condition	Custo	mer can see car info not car owner details.
Primary Actors:	Admir	ו
Secondary Actors:		
Trigger	Admir	n take needed person's info and stored it.
Description / Main Success Scenario	Step	Action
3.33333 3 3.114 11	1	Click customer's info field and also fill up it
	1.1	Successfully fill up.

2.2.6 Vehicles Booking

Use Case	Vehic	eles Booking		
Goal	Admin can provide car to patient and ensure that car is available and also confirm distance.			
Preconditions	Have	Have to available the car .		
Success End Condition	Admin provide car by showing customer order.			
Failed End Condition	Admin provide car to the customer but can't provide unavailable car .			
Primary Actors: Secondary Actors:	Admir	1		
, , , , , , , , , , , , , , , , , , , ,				
Trigger	Admin provide car to the customer			
Description / Main Success	Step	Action		
Scenario	1	Check order and provide car		
	1.1	Check the vehicles are available or not		
	2	Check the destination		

2.1	Successfully provide the car

2.2.7 Manage Profile

Use Case	Custo	mer & owner Can manage their profile
Goal	They	can update their profile
	THOY .	san apaato then prome
Preconditions	Custo	mer or owner Registration.
Success End Condition	Owne	r & customer required original info.
Failed End Condition	Stored	d failed/system error.
Primary Actors:	Custo	mer
Secondary Actors:		
Trigger	Click	on manage profile
Description / Main Success Scenario	Step	Action
Cucces Comanic	1	Click manage profile info field and also fill up it.
	1.1	Successfully fill up
	2	owner click submit
	2.1	button Successfully
		stored

2.3 Activity Diagram

2.3.1 Activity Diagram for Registration

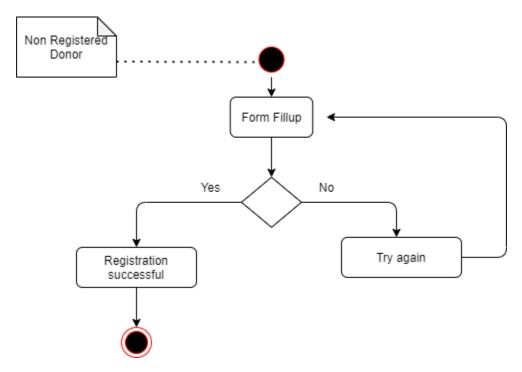


Fig 2.2: Activity diagram for Registration

2.3.2 Activity Diagram for Login

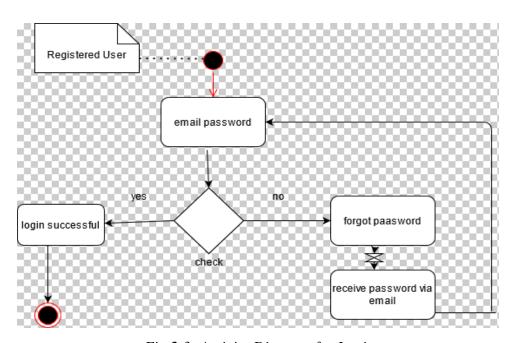


Fig 2.3: Activity Diagram for Login

2.3.3 Activity Diagram for Admin

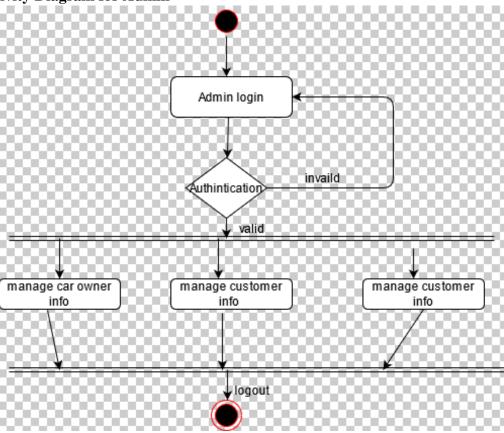


Fig 2.4: Activity Diagram for Admin

2.3.4 Activity Diagram for Owner

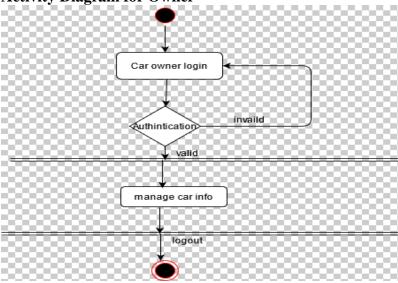


Fig 2.5: Activity Diagram for Owner

2.3.5 Activity Diagram for Customer

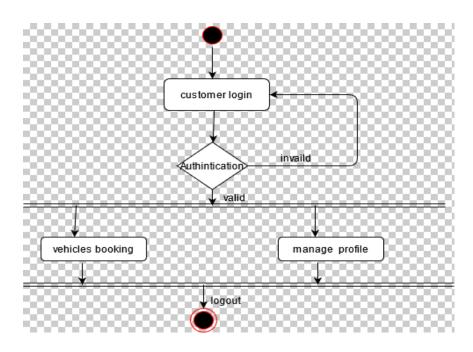


Fig 2.6: Activity Diagram for Cutomer

2.4 Sequence Diagram

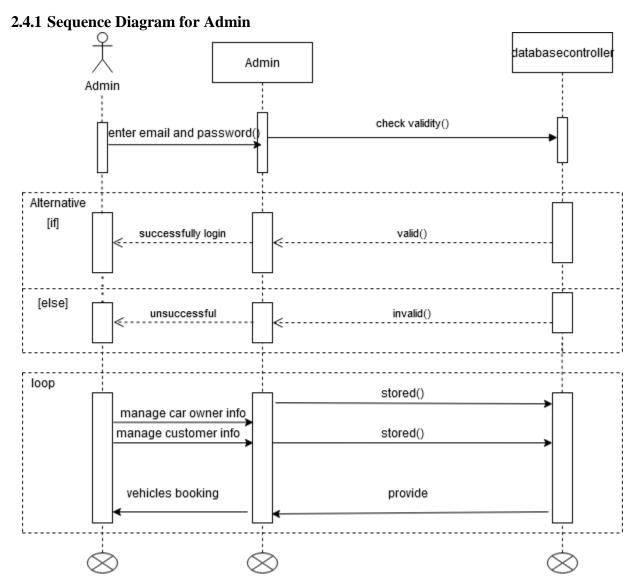


Fig 2.7: Sequence Diagram for Admin

2.4.2 Sequence Diagram for Owner

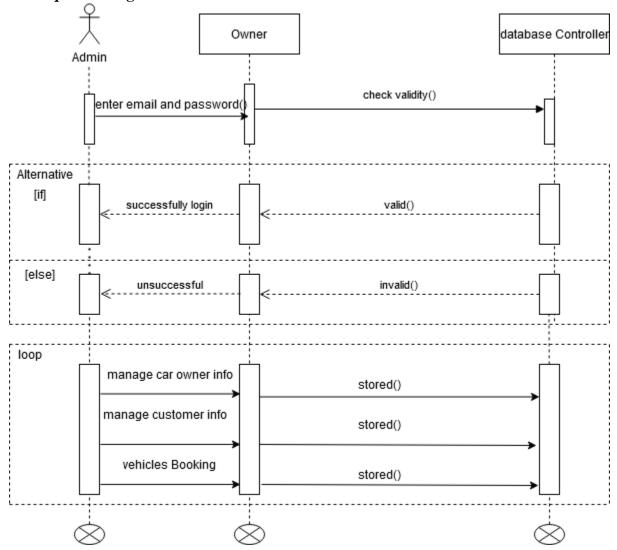


Fig 2.8: Sequence Diagram for Owner

2.4.3 Sequence Diagram for Customer

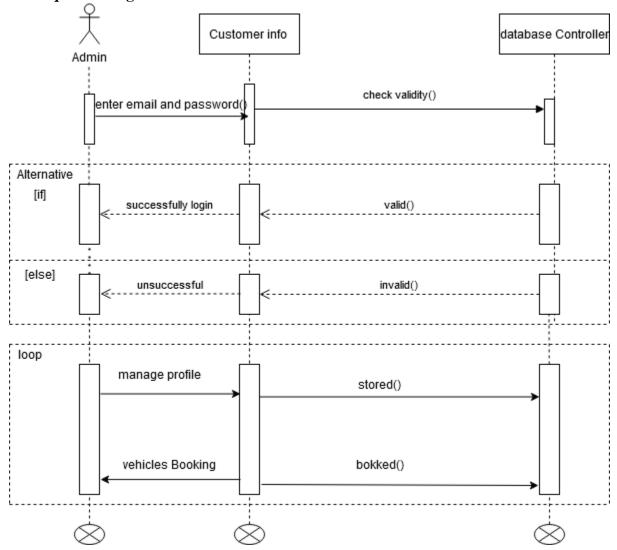


Fig 2.9: Sequence Diagram for Customer

Chapter – 3 Software Requirements Specification (SRS)

3.1 Functional Requirements

3.1.1 Admin Log In

FR-01	When log in match the username and password.
Description	Module helps admin to log in the system
Stakeholders	Admin

3.1.2 Store Car Owner Information

FR-02	Add car owner information as id, name, age, gender, address, phone number, car number.
Description	This module helps admin to store car owner information.
Stakeholders	Admin

3.1.3 Store Customer Information

FR-03	Add customer information as id, name, age, gender, address, phone number, car number.
Description	This module helps admin to store customer info.
Stakeholders	Admin

3.1.4 Manage car info

FR-04	Admin can view available car.
Description	This module helps admin to manage car info & available car.
Stakeholders	Admin

3.1.5 Car Owner Registration

FR-05	Admin will store the car owner registration
Description	This module helps car owner to update information
Stakeholders	Car Owner

3.1.6 Vehicles Booking

FR-06	A customer can booking their vehicles with the area where he will go
Description	This module helps customer for rent the car.
Stakeholders	Customer

3.1.7 Manage Profile

FR-07	Customer can update & manage their profile which approved by admin
Description	This module helps admin to see seeker information.
Stakeholders	Admin

3.2 Performance Requirements

3.2.1 Speed & Latency Requirements

PR-1	Form and result should be visible in less than a second.
Description	If any admin or car owner want to fill up form and want to see the info after must be shown in less than a second.
Stakeholders	Admin ,Car owner, Customer

3.2.2 Capacity Requirements

PR-2	System should be capable of hold minimum 1000 users at once.
Description	Ensure that system must be able to maintain 1000 users at a time without any lagging.
Stakeholders	Customer, Admin, Owner.

3.3 Dependability Requirements

3.3.1 Reliability Requirements

DR-1	System should be provide reliable information
Description	All the information shown at the system should be reliable
Stakeholders	Owner ,Customer , Admin.

3.3.2 Maintainability Requirements

DR-2	System should be easy maintainable.		
Description	System should provide maintenance issue.		
Stakeholders	Owner, Customer, Admin.		

3.3.3 Availability Requirements

DR-3	System must be available when required.
Description	System must be available 24/7.
Stakeholders	Customer, Owner, Admin.

3.4 Security System Requirements

3.4.1 Usability Requirements

SR-1	System must be usable y all users.
Description	System must be easy to use.
Stakeholders	Customer, Owner, Admin

Chapter – 4 System Design Specification

4.1 Design & Implementation Constraints

4.1.1 Operating Environment

The RENTAL SERVICE will be web based system. Thus anyone having a browser can hit the precise link and may get access theret. Thus it'll ensure its best usage and can ease the means of getting access to the system. Moreover it'll remove the complexities of running the system in multiple platforms because it are going to be deployed during a web server

4.1.2 Software Language Used

The application will be developed using Django Framework. The used language will be Python and besides Bootstrap, HTML, CSS also be used.

4.1.3 Development Tools:

For the development purpose Pycharm: Python IDE for community edition will be used.

4.2 Entity Relationship Diagram

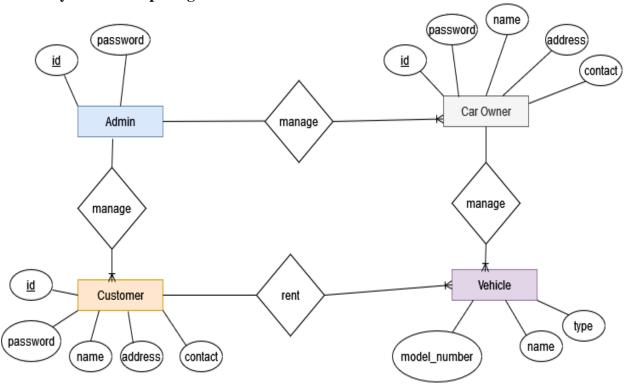


Fig 4.1: Entity Relationship Diagram

4.3 Class Diagram

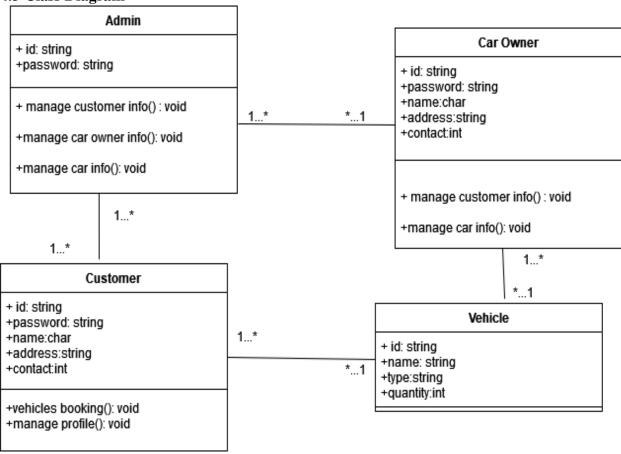


Fig 4.2: Class Diagram

Chapter – 5 System Test

5.1 Testing Features

5.1.1	Guest Features
-------	-----------------------

Features	Priority	Description		
View System Homepage	2	Guest user can see the system		
		homepage and other info		
View Available Information	2	Guest user can see available		
FAQ	3	information for non-registered user. It is mandatory for the users to ask		
		any question to the system.		

5.1.2 Admin Features

Features	Priority	Description		
Login	3	Authentic user should be logged in.		
Store Car Owner Info	3	Admin can store car owner info.		
Store Customer Info	3	Admin can store Customer info.		
Manage Car Info	3	Admin can manage car info.		

5.1.3 Owner Features

Features Priority Description

Registration	3	System must validate the user
Login	3	Authentic user should be logged in
Manage info	3	Owner can upload their info.
Vehicle Booking	3	Can rent their vehocle

5.1.4 Customer Features

Features	Priority	Description		
Registration	3	System must validate the user		
Login	3	Authentic user should be logged in		
Vehicles Booking	3	Customer can hire their vehicles .		
Manage Profile	3	Can manage their profile .		

5.2 Black Box Testing

5.2.1 Registration

Test Case: 5.2.1	Test Case Name: Registration
System: Rental Service	Subsystem:
Designed by: Golam Rasul Anik	Design Date:
Executed by:	Execution Date:
,	

Description: Unregistered users can register for the system access.

Pre-condition:

- Email address must be unique
- Password must be 8 characters

Step	Emai	Passwor	Response	Pass/Fa	Commen
1	Mdanik33553@gmail.co m	1234567 8	Registration Successful	II Pass	t
2	anik@#gmail.com	1234567 8	Invalid email	Fail	
3	anik@gmail.com	1234	Password must contain 6 characters	Fail	

Post-condition: User has been registered successfully.

5.2.2 Login

Test Case Name: Login
Subsystem:
Design Date:

Executed by: Execution Date:

Description: Registered users can Login to the system.

Pre-condition:

• Registration Successful.

Step	Emai I	Passwor d	Response	Pass/Fa il	Commen
1	Mdanik33553@gmail.c om		Registration Successful	Pass	
2	anik@@gmail.com	1234567 8	Invalid email	Fail	
3	anik@gmail.com	1234	Password must contain 6 characters	Fail	
Post-condi	tion: Login successful.		•		

Post-condition: Login successiui.

5.2.3 Store Owner Information

Test Case: 5.2.3	Test Case Name: Store ownerInfo.
System: Rental Service	Subsystem:
Designed by: Golam Rasul Anik	Design Date:
Executed by:	Execution Date:
Description: Admin/Agent can st	ore medicine info

Description: Admin/Agent can store medicine info

Pre-condition:

Login to System

Step	Form Fill-up	Response	Pass/Fail	Comment

1	Fill-up required field	Information	Pass	
		Stored		
2	Fill-up the required form	All field must	Fail	
	except one/more field.	be filled.		

Post-condition: Information stored successfully.

5.2.4 Update Info

Test Case: 5.2.4	Test Case Name: Update Info.
System: Rental Service	Subsystem:
Designed by: Golam Rasul Anik	Design Date:
Executed by:	Execution Date:
·	

Description: Admin can update profile info.

Pre-condition:

- Login to System.
- Medicine information must be stored.

Step	Action	Response	Pass/Fail	Comment
1	Update info	Updated	Pass	
		Successfully		
2	Nothing Updated	Nothing	Fail	
		Updated		

Post-condition: Information should be update successfully.

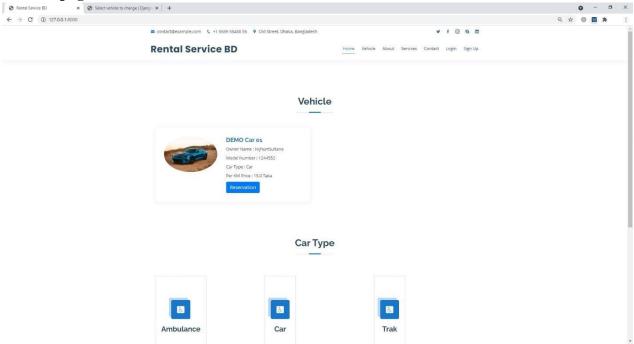
5.2.5 Logout

Test Case: 5.2.5	Test Case Name: Logout
System: Rental Service	Subsystem:

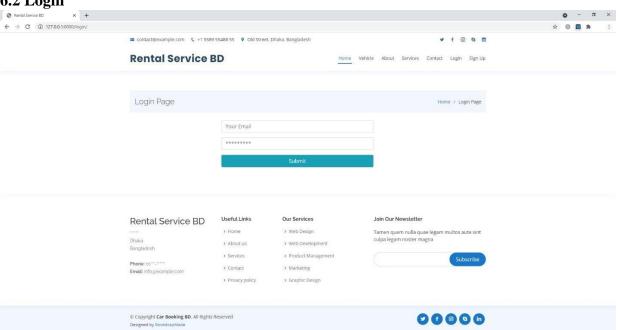
Designed by: Golam Rasul Anik		Design Date:			
Executed by:		Execution Date:			
Description: A	dmin can update info.	-			
Pre-condition:					
• Login to Sy	/stem.				
Step	Action	Response	Pass/Fail	Comment	
1	User Clicks on	Logged Out	Pass		
	'Logout' Button	and take back			
		to the login			
		page.			
Post-condition	: Logged out from syster	n.			

Chapter – 6 UI Design

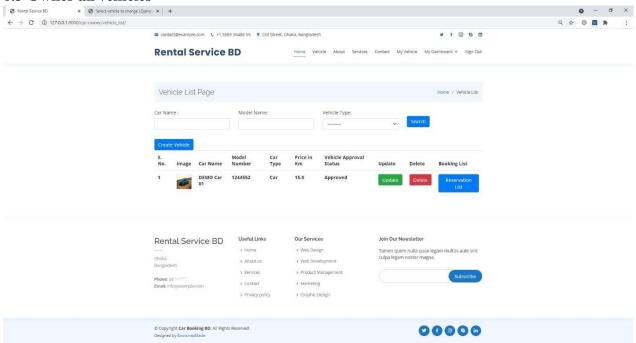
6.1 Hompage



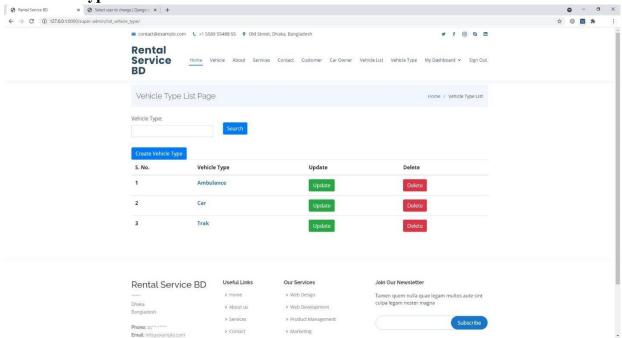
6.2 Login



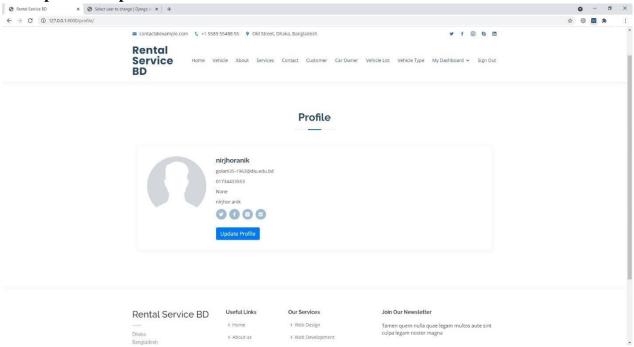
6.3 Owner all vehicles



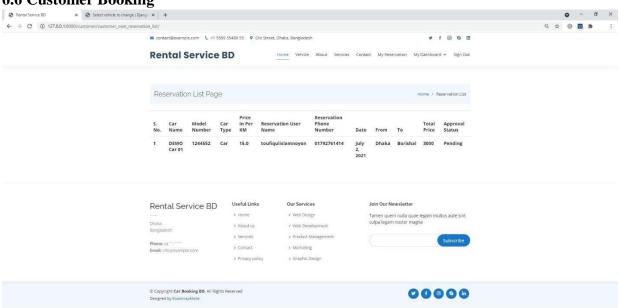
6.4 Vehicle type



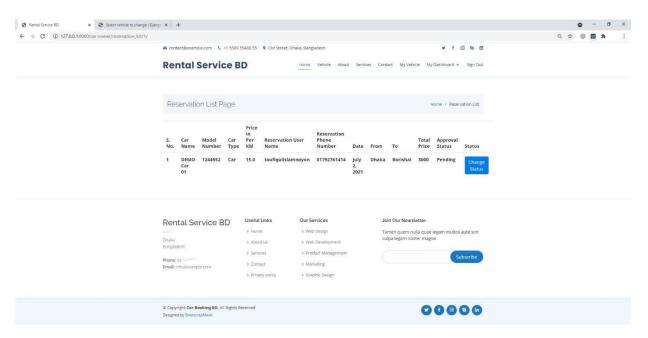
6.5 Super admin profile



6.6 Customer Booking



6.7 Owner view Booking



Chapter – 7 Conclusion

7.2 Limitation

Tried my best to make this project perfect but there are some limitations like UI Design.

7.3 Future Scope

• Add home rent system

Github link: https://github.com/NirjhorANIK/Rental-services.git

References

https://docs.djangoproject.com/en/3.2/w3schools.com

stackoverflow.com

Plagiarism Report

