



Daffodil
International
University

PROGRAM OF STUDY

BSc (Hons) in Computing and Information System (CIS)

COURSE CODE: CIS 499

Fall 2020

Project Title:

Bike and Scooter Rental System

Submitted by: Aliza

Sarker Mukta

ID: 191-16-427

Supervised by:

Md. Rafiqul Huq Rafi

Lecturer

Department of CIS

Daffodil International University Submission date: 13/03/2021

APPROVAL

This Project titled “Bike and Scooter Rental System”, Submitted by Aliza Sarker Mukta, ID No: 191-16-427 to the Department of Computing & Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systems and approved as to its style and contents.

The presentation has been held on-03-03-2021.

BOARD OF EXAMINERS

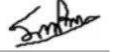


Md. Rafiqul Huq Rafi

Internal Examiner

Assistant Professor and Head

Department of Computing & Information
Systems Faculty of Science & Information
Technology Daffodil International University



**Ms. Nayeema Rahman Examiner
Sr. Lecturer**

Internal

Department of Computing & Information
Systems Faculty of Science & Information
Technology Daffodil International
University

Mr. Minhaj Hosen

Internal Examiner

Lecturer

Department of Computing & Information
Systems Faculty of Science & Information
Technology Daffodil International
University



Computing & Information
Systems Faculty of Science & Information
Technology Daffodil International University

Lecturer

Department of



Dr. Saifuddin Md. Tareeq External Examiner Professor

Department of Computer Science and
Engineering Dhaka University, Dhaka

DECLARATION

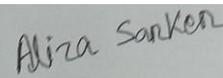
I hereby declare that this project has been done by me under the supervisor of

Ms. Nayeema Rahman, SR. Lecturer of the department of CIS of Daffodil International University. It is also declared that neither this project nor any part of there has been submitted anywhere else for the award of any degree, diploma, or other qualifications.



Md. Rafiqul Huq Rafi
Lecturer
Department of Computing &
Information Systems Faculty of Science
& Information Technology Daffodil
International University

Supervisor



Aliza Sarker Mukta
ID: 191-16-427
Department of Computing &
Information Systems Faculty of Science
& Information Technology Daffodil
International University

Student

Table of Contents

Acknowledgement:.....	vii
Executive summary:	viii
Chapter1	1
Introduction:.....	1
Chapter 2 – Initial Study	1
2.1.1 Overview of the project:.....	1
2.1.2 Defined goals/ objectives of the projects:	2
Goals of the project:.....	2
Objectives of the project:.....	2
2.2 Background of the project:.....	3
2.3 Problem Area:.....	3
2.4 Possible solution:.....	4
Chapter3 – Literature Review:	4
3.1Discussion on problem domain:.....	5
3.2 Discussion on problem solutions.....	5
3.3Comparison of three/four leading solutions-.....	6
3.4 Recommended approach	9
Chapter 4 – Methodology	10
4.1 What to use:	10
4.2 Why to use:.....	10
4.3 Sections of methodology.....	11
4.4 Implementation plans:	12
Chapter 5 – Planning	12
5.1- Project plan	12
5.1.1 Work Breakdown Structure (WBS)	12
5.1.2 Time Boxing.....	13
5.1.3 Gantt chart:.....	14
5.2 Test Plan	15

5.2.1 Testing against time boxes	16
In here given below the testing against time boxes:	16
5.2.2 Require testing	16
Chapter 6 – Feasibility	16
6.1 All possible type of feasibility	17
6.2 Cost Benefit Analysis	19
6.3 DSDM – good or not for this project	19
Chapter 7 – Foundation	20
7.1 Overall Requirement List	20
7.2 What Technology to be implemented.....	21
7.3 Recommendations and Justifications.....	21
8.1 Old Full System Use Case Diagram	23
8.2 Old Full System Activity Diagram	23
8.3 Prioritized Requirement List (PRL).....	24
8.4 Prototype of new system	25
Chapter 9- Engineering.....	27
9.1 New system modules:	27
9.2 Use Case Diagram:.....	29
9.3 Class Diagram:	31
9.4 ERD Diagram:.....	32
9.5 Sequence Diagram:.....	33
Figure: Sequence Diagram	33
9.6 System Interface Design / Prototype:	33
Chapter 10 – Deployment / Development	36
10.1 Core Module Coding Samples:	36
10.2 Possible problem break down	43
Chapter 11 – Testing.....	44
11.1 Test Case:.....	44
11.2 Unit testing:	44
11.3 Integration Testing:	47
Chapter 12- Implementation.....	51
12.1 Training.....	51

12.2 Big Bang/ Direct installation approach:.....	52
Chapter 13 – Critical Appraisal and Evaluation	53
13.1 Objective that could be met.....	53
Chapter 14 – Conclusion.....	54
14.1 Summary of the project.....	54
14.2 Goal of the project	54
14.3 My experience	54
Appendices	55
User guide:	55
System code:	65
Figure: Customer Signup form code	66
Figure: Bike & Scooter listing form code.....	69
Figure: Customer Bike & Scooter booking form code	70
Figure: Customer Bike & Scooter booking form code	71
Figure: Bike & Scooter admin login.....	72
References.....	72
Plagiarism Report:	Error! Bookmark not defined.

Acknowledgement:

At fast, of my writing I want to give thanks to my God because in this present corona pandemic situation I am fit for complete my project. I also want to give special thanks my project supervisor Mr.Rafiqul Huq Rafi sir who helped me so much and also encourage me to complete my project. In the last thanks giving to my family and friends who are strength for me and they also give too much support to complete my project.

Executive summary:

In here I given a report which is describe about the bike and scooters rental system web application. This website is mainly used for those people whose need rent bike or scooter for some days or weeks. They can rent bike or scooter via in this website. For this travel can be easy for them. This service only gave in Dhaka city. Many people cannot want to share their rides with unknown person for those people I think that will best solution. If any client wants to rent a bike they need to registered first and then they can search for bike scooter which they want to rent for some hour, days, weeks or months. When client do their registration step they need to give their NID details, driving license details. Without driving license nobody can rent any bike or scooter. They also signature the agreement that how much time they need to rent the bike or scooter. They also ensure that which area in Dhaka city they ride the bike. All of the bike control with the tracker by the admin and vendors. One person cannot rent bike or scooter more than 2 months. In the site there show the payment details. If the client like the bike or scooter than they can request for this bike or scooter and that request will be showing as pending. When admin accept the request then the client can communicate with the admin. If there are not available the requested bike or scooter then admin fixed that client could rent their chosen bike or scooter. Clients do their payment first and then they can get their rental bike or scooter.

Chapter1

Introduction:

In the modern time people want to lead an easy life in every sector. For digitalization people can save their time in every sector in their life. In the present time there have many ways to lead a better life. In, everyday people need to go outside for their works. For that reason, they need to travel many vehicles. Sometimes people have too much urgent works and they need to faster vehicles for their travel to reach their work. In the present moment virus in everywhere and people face problem to travel. For all of the perspective I decide to develop a project for all people who know the bike or scooters ride. They can rent bike and scooter for some days or some hours. They have to pay for this rent and price will be fixed. The system will be online based system. For making this project I have set some aims and objectives with the possible problem area and try to give the solution of these problems.

Chapter 2 – Initial Study

2.1.1 Overview of the project:

Now a day's human wants comfortable in every sector in their life. For digitalization human's life become for comfortable. People want to do their work very easily and they try to ensure their comfortable life. For this website people can make their ride easy and they can work efficiently. This system can save peoples time and rise their productivity in their work. If someone needs bike or scooter temporally they can rent the bike or scooter for their need able time. It's important to rent a right bike or scooter the clients. That's all the things are handle by admin. In this system their show all of the bikes and the name of the vendors and also price of renting and also time of the renting. Admin always handle those things that all the shown bike or scooter is available or not. If the bike or scooter

is not available that will be show in this website. If there need add the bike or scooter, then admin can add those. In their admin manage the whole system.

If the client wants to rent any bike or scooter they need to register first with the required fields. When clients are registered member in this website then they can show all the available bike or scooter. They also rent bike or scooter which is shown available in the website. Client can manage their profile; they can see that how much time they can use that renting bike or scooter. They also see their payment history in their profile. Client can cancel their renting request within the valid reason. Client can give their valuable review in this system that how they feel comfortable with this service.

2.1.2 Defined goals/ objectives of the projects:

Goals of the project:

In here I tell about my projects aim. Travel can be easy for people who think that travels are difficult for them. In here people can rent bike or scooter for some days or months. So, in here I try to make a platform those people who have not their own bike scooter with them and they need rent a bike or scooter for the travel. The aims of project are given below:

- ✚ A platform only bike or scooter rent for client.
- ✚ A platform where seller and client can connect with each other for business perspective.
- ✚ Platforms where vendors are post their bike or scooter sell.
- ✚ A platform where admin can manage all the part in the system.

Objectives of the project:

- ✚ Making a platform where users and sellers are can be connected.

- ✚ Making a platform where seller can post their bike or scooter.
- ✚ Making a platform where users can choice bike or scooter and then they can book them.
- ✚ Develop a common platform where seller and buyer can use properly for achieve their goal.
- ✚ For the system here also set a proper methodology.
- ✚ Documentation produces for the project.
- ✚ Try to make a secure and bug free system.
- ✚ For users and seller here create a live chat option.

2.2 Background of the project:

In the present moment people need to go out for their daily work. For this reason, they need to travel in every day. Some people think it is very difficult for them to travel in public transport. And when they are stay outside of their home and they had not any bike or scooter with them that time they rent bike or scooters for easy their travel. They can rent a bike or scooter for some hour or some days or months. Bike seller will put their bike or scooter on lease and other hand client can choose the bike or scooter according to the accessibility. In the next step they can book their choice bike and pay online. In here have three main two modules they are admin, user. All of them have different responsibility in this system. In here admin can login the system, add, update and delete user information. In here user can register on the bike of his/her choice and pay accordingly. In here admin can login, update and delete the bikes/scooters list and also can view bookings.

2.3 Problem Area:

Now a day's people need an easy life. For their work they need to go outside. In the present situation there is too much risk to travel in public transport. For this reason, I think develop a system where bike seller and user can connect with each other and they can deal for their business. If anyone needs bike or scooter rent for some days they can search for their needed bike or scooter in this system. To

continue work in this system there both users can face problem. Like user can face that they can find their chosen bike or scooter which they want to rent for some days or month. They can face the price of the rent money. Other hand seller can be afire to sell their bike or scooter in rent. They cannot feel easy to rent their asset which they didn't know in personally. There have risk to sell their bike in rent. So, I think develop a common platform to continue this business. In, online base system that will be easy to sell the bike rent and user can easily book their bike. All of the problems can be determined by me when I develop this propose system.

2.4 Possible solution:

In here, I found some vital problem in this system. I try to solve this problem by take some steps. For the user I take the solution that is I divided the categories of the bike and scooter. For this way they can find easily their needed bike or scooter when they search in the system. For the seller I take the step that is every user or seller need to verified register id to use this system. They need to register with their National ID card and also give the valid information which is given in the NID card. By using one NID card can only one-time id register. User must have their driving license to rent the bike or scooter. Admin can trace the bike or scooter any time. So, I think all of the way the system will be work perfectly. All of the problem will be solved when I take that step to develop the system. In further I also try to fix all type of the problem in the website.

Chapter3 – Literature Review:

- † Create, Update, Delete User Account
- † User Comment or feedback
- † User Order Online customer support
- † Add bike or scooters
- † View bike or scooters details
- † Remove bike or scooters
- † Add brands
- † View booking details

- † Delete user account by admin
- † View, add, update, delete bike or scooters by admin
- † View user's information by admin
- † Log out

3.1 Discussion on problem domain:

Now-a-days e-commerce sites becomes very in our country for growing up any business. There are very little online sites and start up business which provides bikes and scooters for rent to the customers. In our country, traffic jam is a very common affair in the big cities and town. Many passengers who went to their working places and other area, they had to go by buses, other public or private transport. People who have a bikes or scooter can easily go to their working places and other area. But there are many people who can't afford to buy a bikes or scooter, for those people our "Bike and Scooter Rental System" can solve their problem. By using this system, customer can make their ride easy and they can work efficiently. This system can save peoples time and rise their productivity in their work. If any customer needs bike or scooter temporarily, they can rent the bike or scooter for their needed time(entrepreneur, 2021).

Whenever the company wants to do business using this system through online, it may face some problems. I have given some problems in below:

- Payment system is not utilized.
- Some fraud user uses e-commerce site and booked bike or scooter in invalid address.
- Sometimes internet connection becomes fall down.
- Govt. rules and policy need to be maintained.
- Live chat options not implemented
- GPS tracking system is not implemented also in developing process

3.2 Discussion on problem solutions

Here I have discussed some solution about some possible problems in below:

Vehicle information: Before rent any bike or scooter, customer can know about the vehicle information and its current condition so that they can choose which vehicle matches their choice. System should include customer feedback and rating so that management can identify about the problem of the vehicle and solve it.

Trust: For gaining trust, the company needs to follow proper govt. policy and rules regulations. They also need to secure customer information and deliver their order on the right time.

Verify user identification: For identifying the verify users, customer has to be registered with valid NID number and should also implement two factor authentications.

Internet Connectivity:

Government should establish a limited price package over internet so that it can be affordable for us.

3.3 Comparison of three/four leading solutions-

In here I had given three companies whose gave these same services. Comparisons with my system Bike and scooter renter system are given below:

1. MOTORCYCLE VALLEY: (motorcyclevalley, 2021)



Figure: Interface of the MOTORCYCLE VALLEY

They give services only Cox's Bazaar in Bangladesh.

Best Feature of this system:

- † One place people get these services.
- † Lots of bikes are in this system
- † Payments amounts are available in the system.

Limitations of this system:

- † Navigation is not good.
- † Interface is not good looking.
- † User can face problem when they visit this system.
- † Less information about the renting system.

2. Tripadvisor:(tripadvisor, 2021)

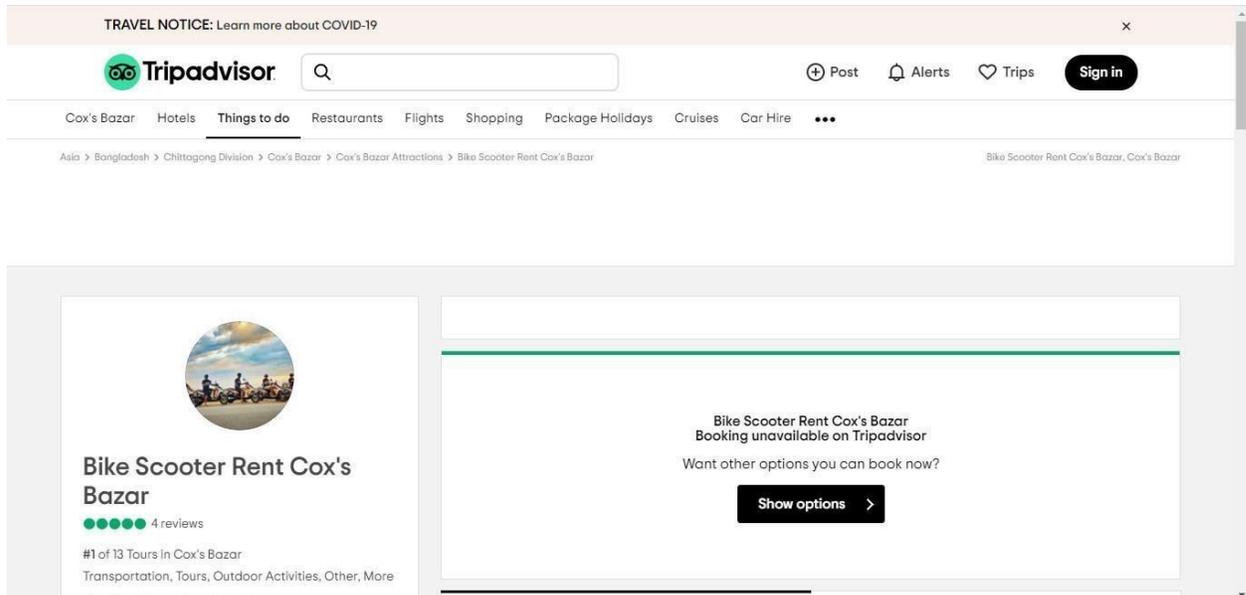


Figure: TripAdvisor interface.

These services only give in Cox's Bazaar in Bangladesh.

Best Feature of this system:

- ✦ Sing up option for new users.
- ✦ Post option
- ✦ Some other facilities are given here. ✦ Alerts option is given here.

Limitations of this system:

- ✦ Interface is not good looking.
- ✦ Less information about the renting system.
- ✦ So mane user reviews are not given here.

3. bBike:(bbike, 2021)



Figure: Interface of bBike.

These services only give in Cox's Bazaar in Bangladesh.

Best Feature of this system:

- † Good navigation.
- † Chat boot in the system.
- † Mobile interface.

- † Lots of bike or scooters.

- † Prices are flexible.

- † Good interface.

Limitations of this system:

- † Less information about the renting system.
- † So mane user reviews are not given here.

3.4 Recommended approach

Some features need to add in this proposed system. In the following, I have described those things:

‡ Attractive Interface design needs to be included

- Attractive vehicle Image showcasing needs to be included
- Proper vehicle details should be included.
- Verify user can rent bike or scooter.
- Easy and various payment system needs to be implemented.
- Rating and product review needs to be well implemented.
- Register user can see vehicle confirmation status.
- Live chat option should include for users.
- Quality customer support must be provided.
- GPS tracking should be included.

Chapter 4 – Methodology

4.1 What to use:

There have so many methodologies used in software development. They are Rapid Application Development (RAD), Agile, Dynamic System Development Methodology (DSDM), SCRUM, Waterfall methodology and there have also others methodologies.

For my project I chose one methodology which is DSDM (Dynamic System Development Methodology). This methodology is very helpful to complete the project and this methodology is very adaptable, flexible and also adjustable for my project. For complete with limited time and very tighten budget I chose this methodology.

4.2 Why to use:

In here I gave the reason of using the Dynamic System Development Methodology in this system. The reasons are given below:

- ‡ In here DSDM follow for the achievement of the business goals. And it also used for the MoSCoW prioritization. It's very helpful for a project.
- ‡ In here used time boxing and it used for limited budget for deliver the system in right time.
- ‡ For fulfill the user requirements in here involving the client beginning to ending.
It's also following the client satisfaction. It works on team for take any decisions and in here involves stakeholders throughout the project.

- ‡ Most important part of the quality of the services. In this methodology here always clients get updated. By using this methodology it's easy to deliver best services to client.
- ‡ If in the project need any modification or change then here have option to changes by involving iterative planning, testing and also by integration of the project.

4.3 Sections of methodology

Pre-project:

In this phase here have some important part like requirements of the projects, initial project planning, and budget. In this phase is the first step and it also considered that project will be archive its goal or not.

Feasible study:

In this phase here have three types of feasible study like economically, technically and operationally feasible study. In this phase here measure all of the part. By doing this consideration there will be identified that in future proposed system will be run properly or not.(investopedia, 2020) **Foundations:**

In here this phase is important because of in this part here give clear understanding of the needs of the project. And also in here MoSCoW prioritization consider the project goals. In this phase is very important that in here can be confirmed that first iteration to the delivery date of the proposed system.

Evolutionary Development:

Time boxing is the part of in this phase. Iterations are following here. In here work going on each time boxed iteration uses in the MoSCoW prioritization and also considers that which item will work in the project.

Deployment:

This phase declare that the system is ready for release to use.

Post- Project:

This is the last phase in the DSDM methodology for the project. In here completed the project and also complete the documentation handover process to the client.

4.4 Implementation plans:

This part is important part in a project. This procedure will be follow for clearness in the project.

Testing:

This is the important part for the system. Tests are held when deployment of the project will be complete. In here this phase help to identify the failure easily. And also its easy to overcome the problems by doing testing.

Documentation:

Documentation is the most important part in the system. If further development need and any other development develop the system and then need to documentation of the project. All of the steps are declare in the documentation. For documentation it will be easy to find any failure of the project and also easy to resolve the problem.

Evaluation:

In this phase is important for the project. If here needs any evaluation of the project, then it held in here.

Chapter 5 - Planning

5.1- Project plan

Planning is the important part for any work. It will be more serious matter when it held in a project. For take best plan for any project it will be great to achieve the goal of the project. This is the first part in the project. It will be done before project design will be proposed and also development in the project. In here consider some chapter such as work break down structure, Gantt chart and also time boxing.

5.1.1 Work Breakdown Structure (WBS)

For the project Work Breakdown Structure(WBS) is very essential and important. It works in a project by divided the whole tasks in a limited time. Project goal can be achieving within limited time and also tight budget by following this structure. In here given the system work breakdown structure:

Serial no	Task Name	Duration	Start Date	End Date
1	Initial study of the project	7 days	17/10/2020	23/10/2020
2	Project Proposal	8 days	24/10/2020	31/10/2020
3	Analysis of the project	7 days	1/11/2020	7/11/2020
4	Design of the project	8 days	8/11/2020	15/11/2020
5	Implementation of the project	22 days	16/11/2020	7/12/2020
6	System testing	4 days	8/12/2020	11/12/2020
7	Project documentation	12 days	12/12/2020	23/12/2020
8	Final project	3 days	24/12/2020	26/12/2020
	Total Time	71 days		

5.1.2 Time Boxing

It's important to complete the project in right time. In here do some time boxing for easily work. Time boxing have tasks titles also here specified the resources name. Every time boxing are divided into 4 parts. In here I have given the time boxing for the project:

Time box	Task Title	Resource Name
Time box-1	Introduction	Analyst
	Initial Study	Analyst
	Literature Review	Analyst
	Methodology	Analyst
	Planning	Analyst, User
Time box-2	Feasibility Study	Analyst, Developer
	Foundation	Analyst, Developer

	Exploration	Analyst, Developer
Time box-3	Engineering	Analyst, Developer
	Deployment	Developer, Tester
	Testing	Developer, Tester, User
	Implementation	Analyst, Developer, User
Time box-4	Critical Appraisal and evolution	Analyst
	Conclusion	Analyst

5.1.3 Gantt chart:

In here I have given the Gantt chart of the project:

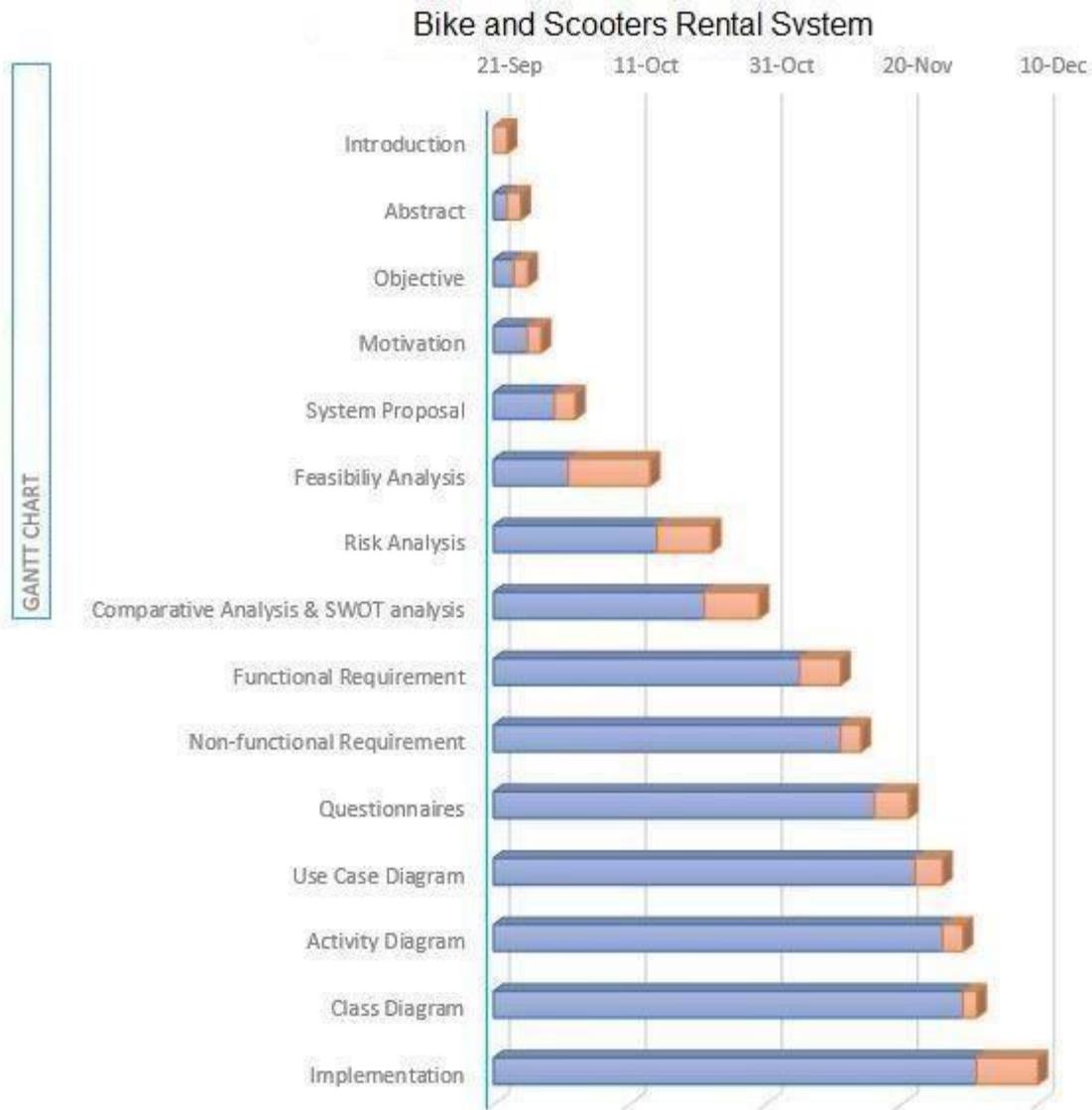


Figure: Gantt Chart

5.2 Test Plan

Testing is the important part of the project. When development will be complete then it is the must work that testing the system. In here consider that system is work properly or not by doing testing. By doing this it will be easy to find out that project goals are achieve or not. So, it's important those proper test plans are implementing for find out the problems of the system and also resolve all of the problems.

5.2.1 Testing against time boxes

In here given below the testing against time boxes:

5.2.2 Require testing

In the software developments have so many testing. All of the testing doing different purpose. In this part I want to give description of some testing. So, testing descriptions are given below:(guru99, 2020) **Functional Testing:**

Unit testing:

In unit testing define as an individual testing approach such as individual program, modules, and also unit of a code. It's very helpful to find out the error of the code because it tests in single life of code.

Integration testing:

In here tested program and unit code in a system. It tested mainly related modules.

System testing:

After held unit testing and integration testing in here test the whole system. This testing held mainly find out the whole system work properly or not. Also one thing considered here that all proposed requirements are work properly or not.

Acceptance testing:

This testing is mainly held that find out that user requirements are fulfill or not. In here test that whole system acceptability.

Security testing:

In here this testing are helpful to find out the system weakness, failure and also treat. By this testing, find out the problem and also easy to get the solution of the problem.

Performance testing:

Within this test their test that how much effective and also efficient this system to use. And also here measure that system response and easy to use.

Chapter 6 – Feasibility

In here feasibility study is very helpful for a project. In here three types of feasibility study such as economical, technical, operational feasibility study. Project success is also considered by it.(wrike, 2020)

6.1 All possible type of feasibility

In here I had given all the types of feasibility study:

Economic feasibility:

In economic feasibility have some consideration such as project budget, equipment cost, cost of workers, and also includes maintenance cost of the project. Budget is most essential part for a project. In this part it's consider very importantly. In this part I discuss about the budget of the project.

Total budget of the project:

Serial No	Component	Price in Taka
1	Required software	57,000 tk
2	Required hardware	55,000 tk
3	Web hosting cost	1500 tk
4	Others components	22,000 tk
Total Price		1,35,500 tk

Equipment budget:

Serial No	Component	Price in Taka
1	Wi-Fi router	1,800 tk
2	Laptop	50,000 tk
3	Others components	2,200 tk
Total Price		34,000 tk

Software budget:

Serial No	Component	Price in Taka
1	MS Office	10,000 tk

2	Browser	0 tk
3	OS (Windows)	27,000 tk
4	PHP Strom	5,500 tk
5	Xampp	0 tk
6	Adobe Creative Cloud	10,000 tk
Total Price		52,500 tk

Technical Feasibility:

In here I work on bike and scooter rental system and this online based system. In here I used some languages such as java Script, MySQL, HTML, CSS, PHP. By using these I develop my system. For proper work I had used some others hardware and software. All of those are given below:

Hardware	Laptop, GB RAM, 500 GB HDD
Software	MS Office 2007 XAMPP Adobe Creative Cloud Operating System (Window10) PHP Strom

Operational Feasibility:

Operational feasibility studies are a part of feasibility study and it defines that the systems how well solve the problem which is arise. It mainly considers when this system will be used. This will be considering when the system is developed or implemented.

My system will be achieving the goal and also it will be bringing benefits for the users. The benefits are accessibility, effective to use, fast registration, quick login, book the bike or scooters for renting, booking information, booking facility, on time delivery, estimation of the cost etc.

6.2 Cost Benefit Analysis

Cost benefit analysis is most important part for a project. By doing this here will be comparing between total cost of the project and also earning of the project. So, it will be easy to find out that by using this system benefited or not. In here I given some information of the cost of the project and also benefit of the project.

Cost of the project:

Basic for	Cost
Hardware	54,000 tk
Software	52,000 tk
Hosting	1,500 tk
Others	25,200 tk
Maintenance	12,000 tk
Implementation	18,000 tk
Total	162,700 tk

Benefits of the project:

Basic for	Benefit
Business improvement	100,000 tk
Booking of bike or scooter	35,000 tk
Profit of business	90,000 tk
Total	225,000 tk

6.3 DSDM – good or not for this project

DSDM methodology is very adjustable and flexible for any type of project. In here this methodology gave importance to product quality and also gave importance to team members. Team members can give their decisions if needed on the project. This DSDM mainly follow the iterative development process. In here users can look after daily basis of the project improvements. They are involving in the project first to last. When it works that way it will easy to changes needed and it will be easy to needed change. By following this methodology here project can be deliver in timely. Because, in here follows the time boxing and also limited budget for the project. In here also follow the MoSCoW prioritization to achieve the project goal. It's mostly gave important to user's satisfaction. I think this methodology will be

helpful for my project because here time boxing will be held and also here focus on limited budget for the project. So, I think that DSDM is very good for this project.

Chapter 7 – Foundation

7.1 Overall Requirement List

There have two types of requirements such as functional requirements and non-functional requirements. In here I had given functional and non-functional requirements of my project. All of these are given below:

Functional requirements of my system:

In here I give some core functionality of my project. All of the functionality is important for my project. These functionalities are:

- † Create, Update, Delete User Account
- † User Comment or feedback
- † User Order Online customer support
- † Add bike or scooters
- † View bike or scooters details
- † Remove bike or scooters
- † Add brands
- † View booking details
- † Delete user account by admin
- † View, add, update, delete bike or scooters by admin
- † View user's information by admin
- † Log out

Non-functional requirements of my system:

In here I had given some non-functionality of my system. This non-functionality is also important for my project. These non-functionaries are:

- † Maintainability.

- ✦ Reliability.
- ✦ Usability.
- ✦ Validation of the system.

7.2 What Technology to be implemented

In a project there need to used so many technologies. For this project I chose two type of technology which is client server application and also web server application. In here I discuss about those:

Client server application:

It is mainly work on remotely. In this application mainly run on the client's computer. To get client's information which is stored in client's computer here need to send requests to the remote server getting the accesses. In here I give some concepts of the client server application.

- ✦ Need to install in client's computer/devices.
- ✦ It's not possible to access so many users at a one time.
- ✦ If their server fail it would not be complete the request. For that reason, it will be expensive and robust to use.

Web server application:

This application run a browser with its unique domain. This is called web application. In here, client gave request with domain name of the website. This is independent platform for work. In here I gave some concepts of the web server application.

- ✦ Accesses is easy and also from all browser.
- ✦ In here no need any installation to use this application.
- ✦ This application uses multi-tier architecture.

7.3 Recommendations and Justifications

Recommendations:

Both applications are very useful for my project. But I prefer web server application because this application is more suitable for my project. This application is easy.

The reason given here that I chose this application for my project.

Justifications:

- ✦ Using this application here no need to installation. User can remotely use this application from anywhere.
- ✦ At a one time so many users can access this application and can work very efficiently.
- ✦ This web server application user friendly and easy to use. So, that many of people use this for their project.

8.1 Old Full System Use Case Diagram

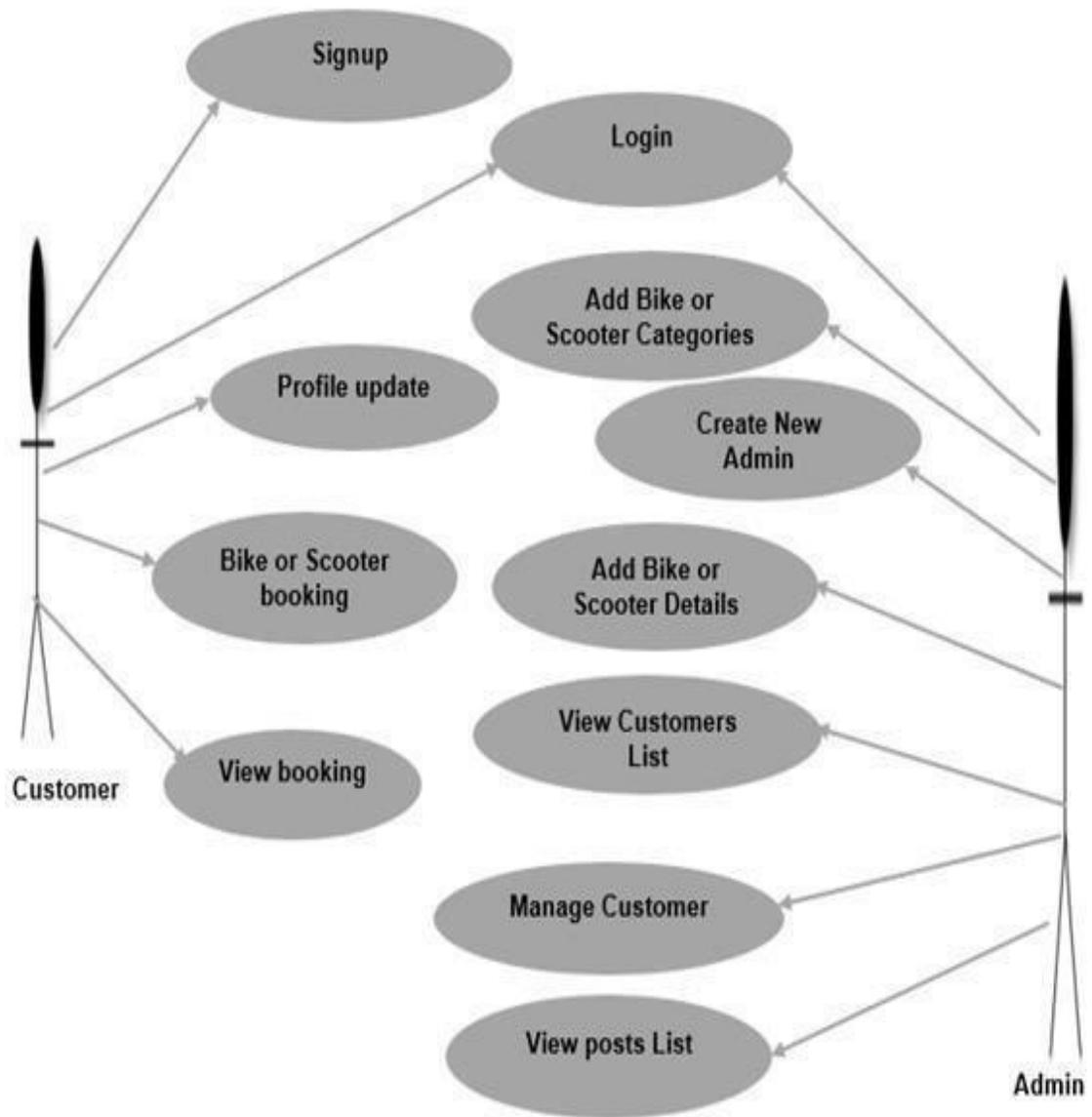


Figure: Old Full System Use Case Diagram to the bike and scooter Rent System

8.2 Old Full System Activity Diagram

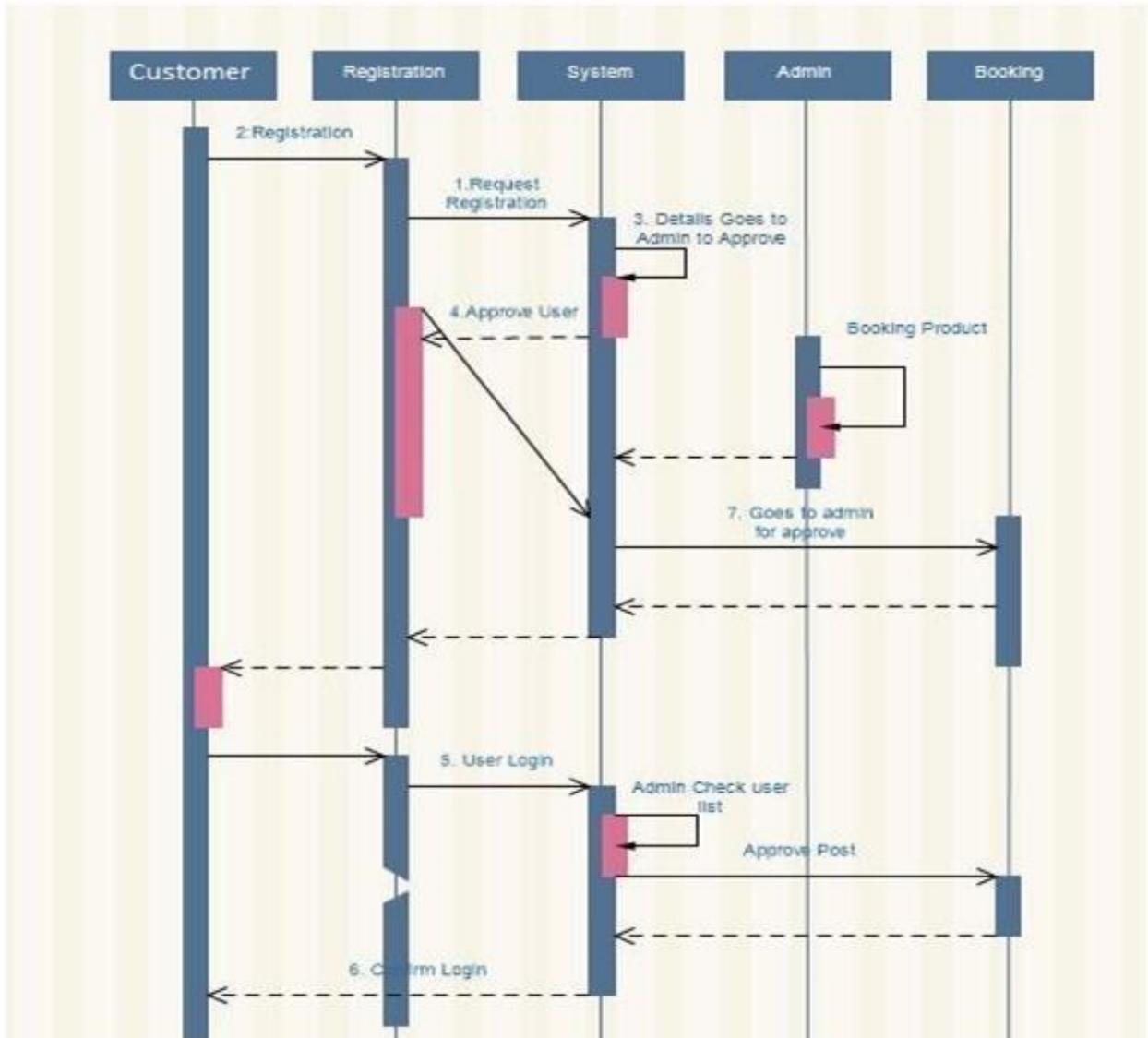


Figure: Old Full System Activity Diagram to the Bike and Scooter Rent System

8.3 Prioritized Requirement List (PRL)

Prioritized requirements list are given by using MoSCoW technique.

Requirements serial no	Function	Status
1	User registration	Must have
2	User login	Must have
3	Update user account	Must have

4	Bike or scooter view details	Must have
5	Booking bike or scooters	Must have
6	View, add, update, and delete bike or scooter by admin.	Must have
7	View user details by admin	Must have
8	Add brand of bike or scooter by admin	Must have
9	Booking confirm by admin	Must have
10	User logout	Must have
11	Admin logout	Must have

8.4 Prototype of new system

In here I had given my system prototype.

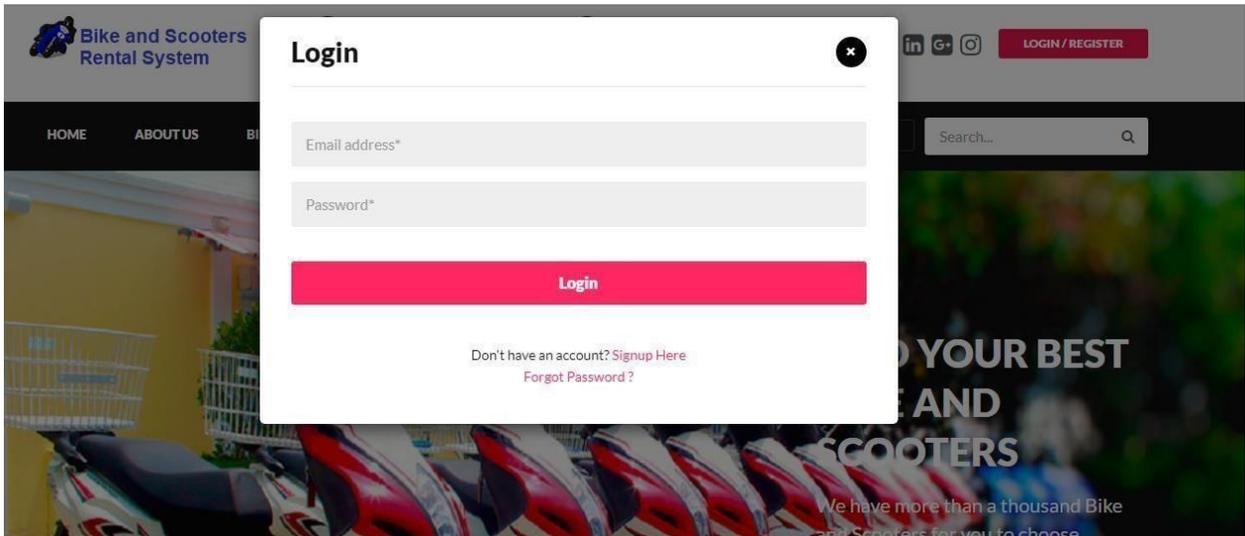


Figure: System login page prototype

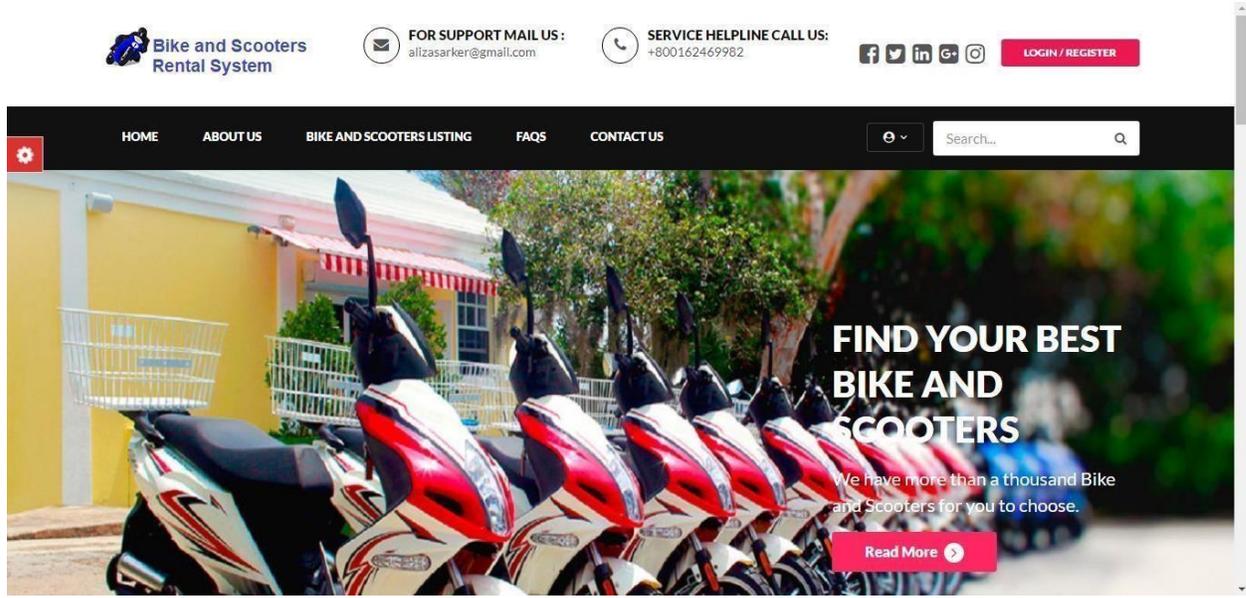


Figure: Home page prototype

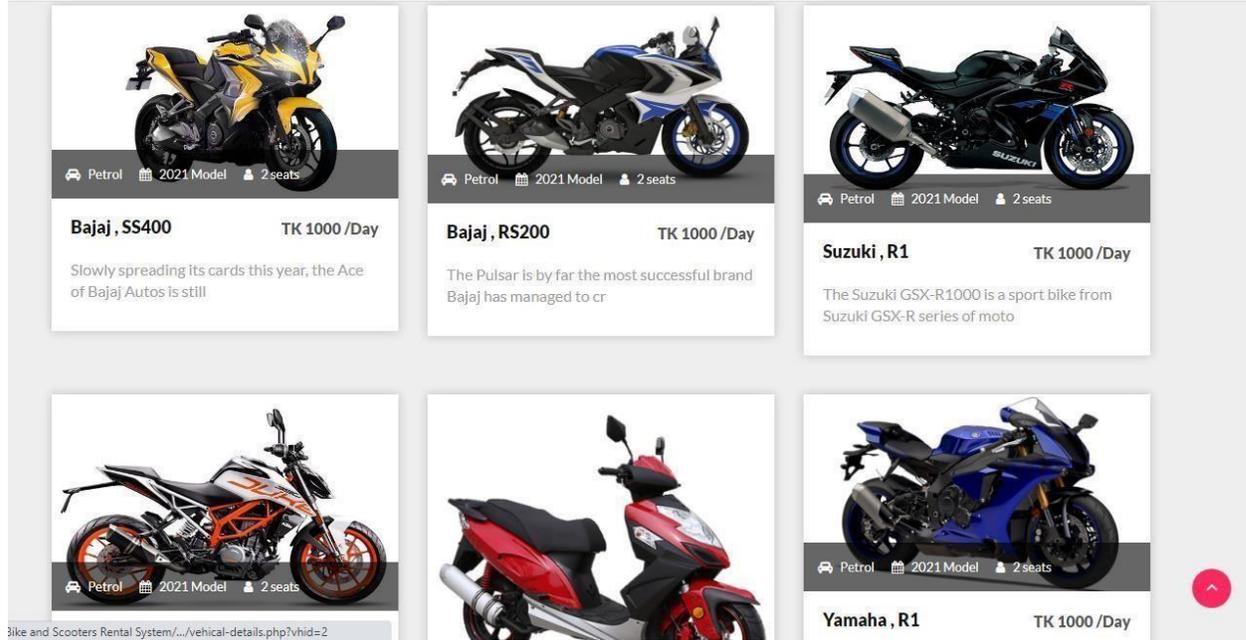


Figure: All bike page prototypes

Chapter 9- Engineering

9.1 New system modules:

It is difficult to use new system for users. New modules system is very useful for a user because it's give ideas to a user that how efficiently work this system. In here I had given some main modules of my bike and scooter rental system.

Login and registration module:

Serial no	User Action	System Action
1	Click on registration option	Registration from show after user click on register option.
2	Fill the from user details.	When fill the form then check that use details are valid or not.
3	Click on agreement option	After clicking agreement option then next step will be available.
4	Input valid email and password for login the system.	Systems check that email and password are valid or not.
5	Login button click	In here system check that user valid or not.

Booking bike or scooter module:

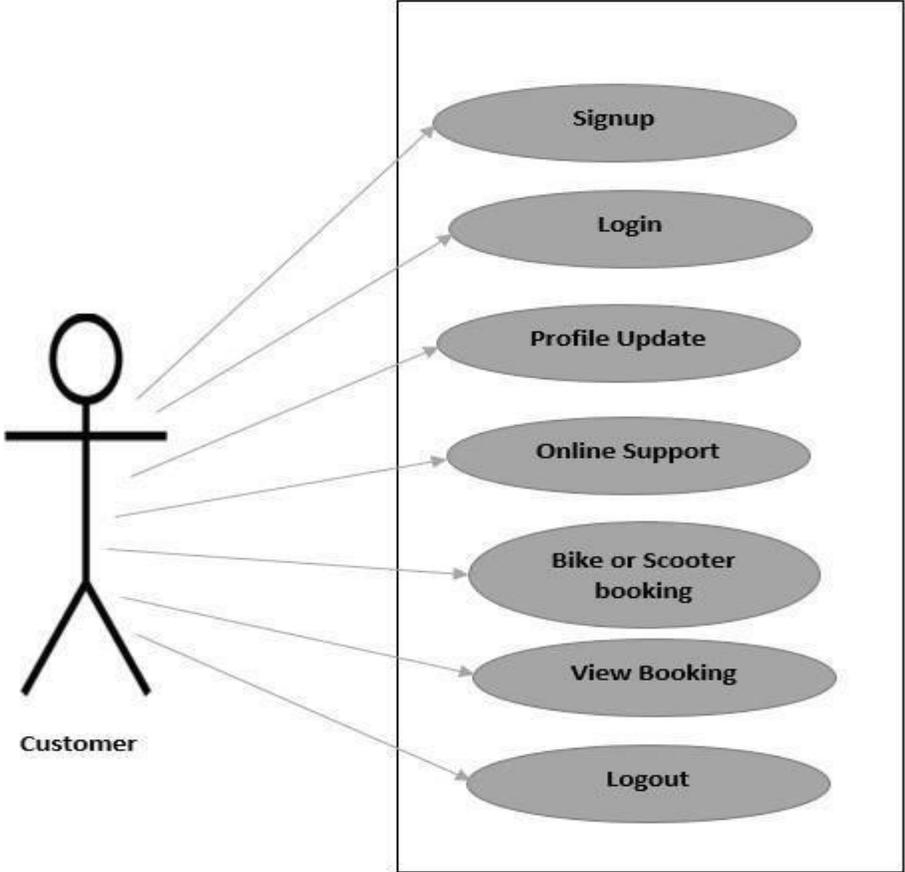
Serial no	User Action	System Action
1	View all the bike or scooters.	Show all the bike or scooters in the booking option.
2	Registered user can choose one bike or scooter.	View all details of the bike or scooters which are chosen by user.
3	User input start or ending date of the booking and the valid reason of the renting	Input option is shown here.

	bike or scooter.	
4	User click on booking option.	Booking option is shown here.

Add bike or scooters in the system:

Serial no	User Action	System Action
1	Admin add bike or scooter in the system.	In bike or scooter options are shown all of the bike and scooter.
2	Admin can add images of the bike or scooters. And also add others details.	All details are shown in the vehicles option.
3	When all information is given then admin can click on done option.	All bike and scooter information are shown in booking option.

9.2 Use Case Diagram:



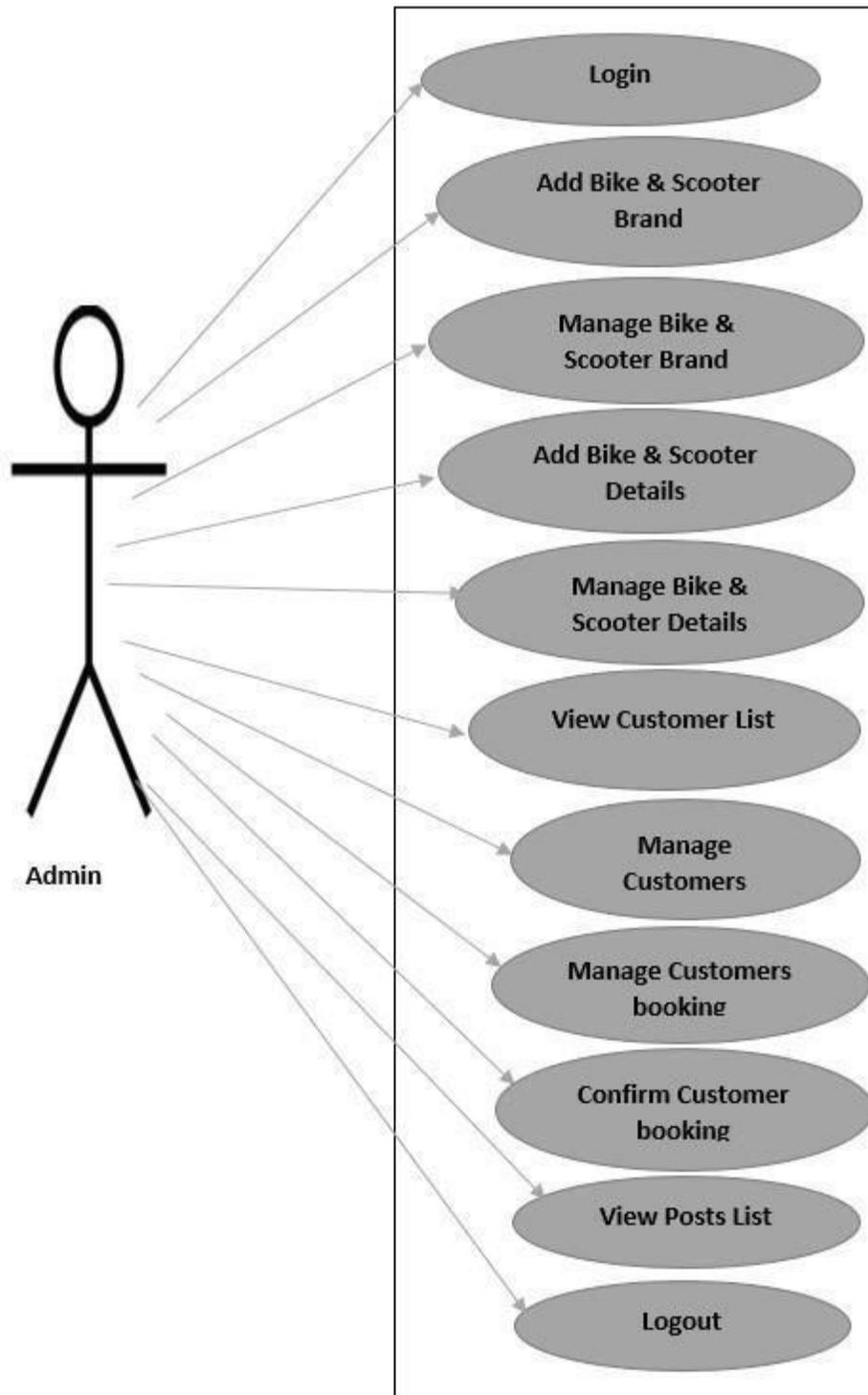


Figure: Use Case Diagram

9.3 Class Diagram:

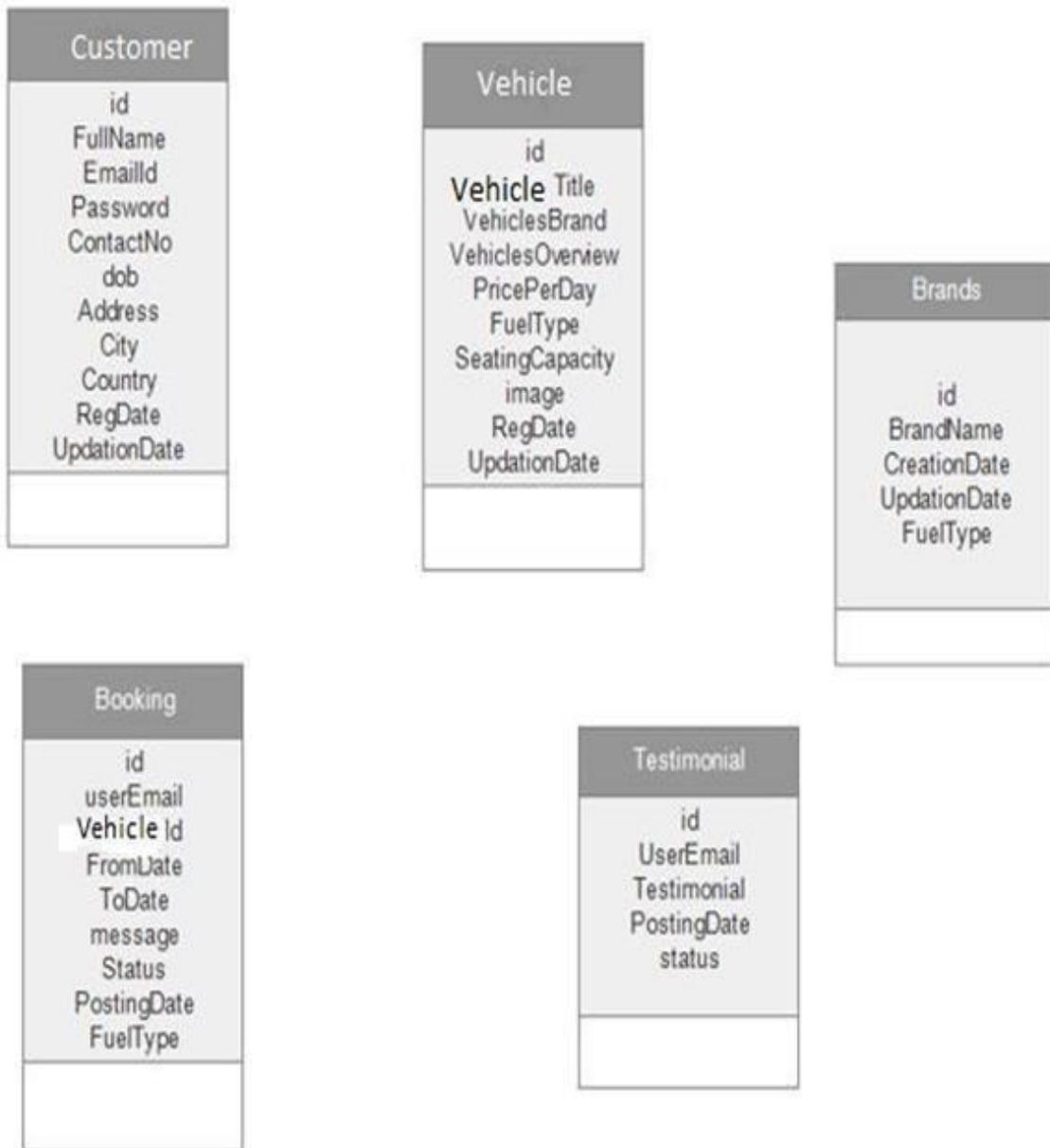


Figure: Class Diagram

9.4 ERD Diagram:

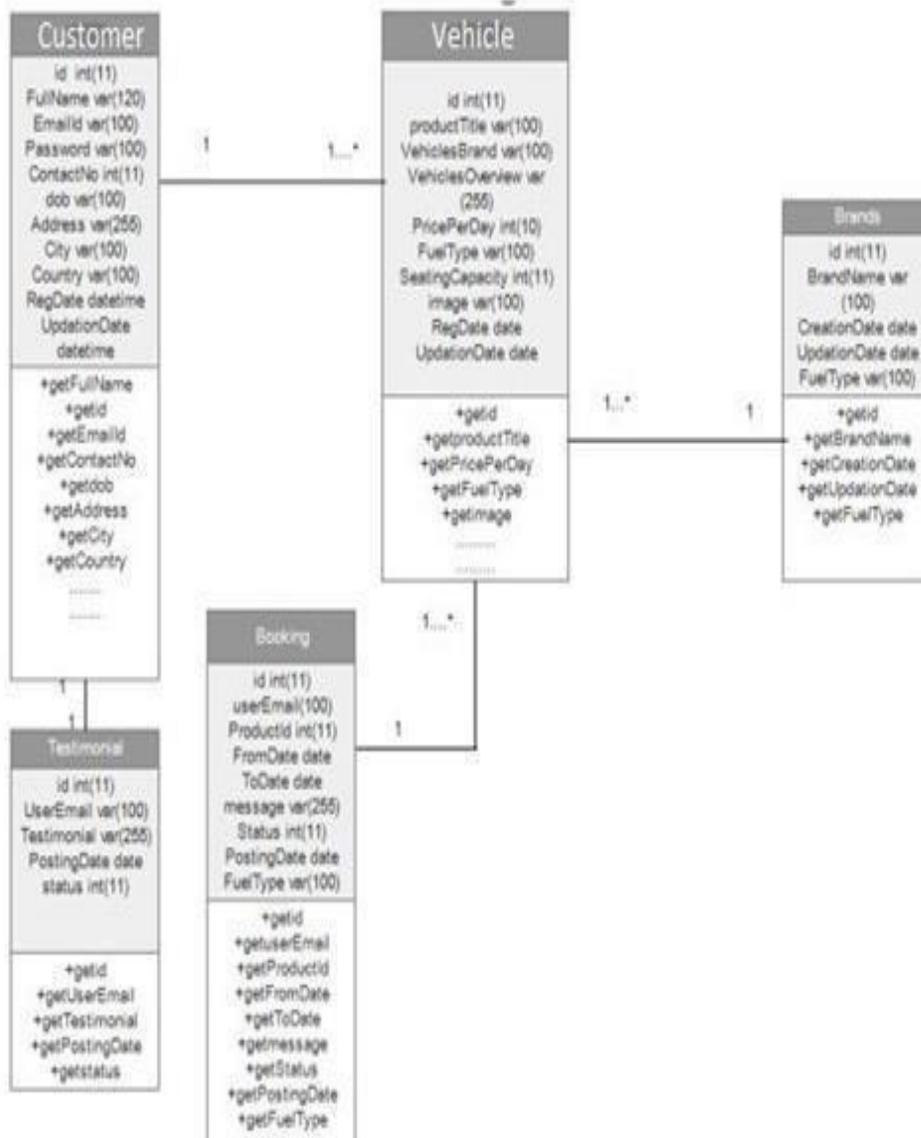


Figure: ERD Diagram

9.5 Sequence Diagram:

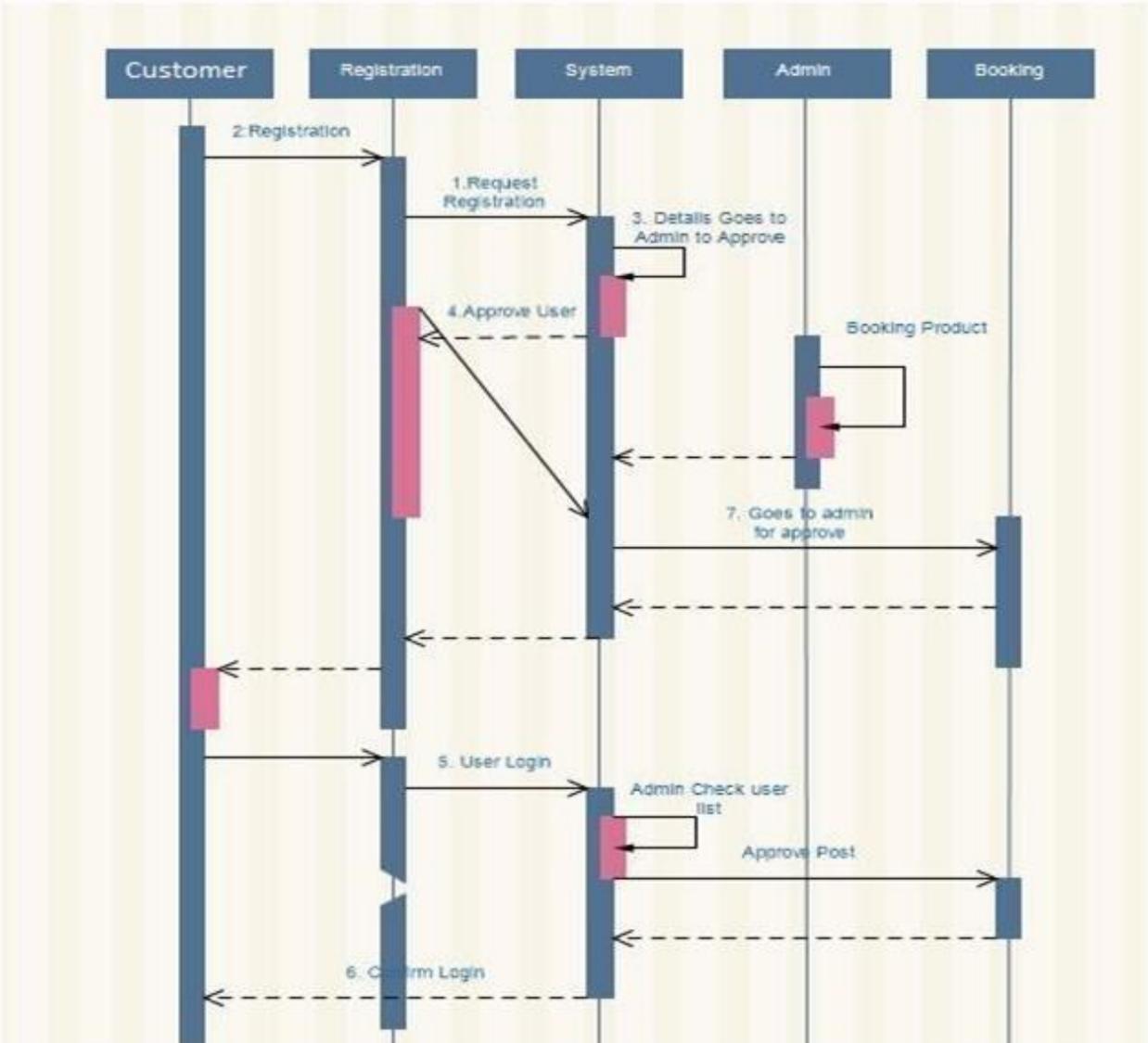


Figure: Sequence Diagram

9.6 System Interface Design / Prototype:

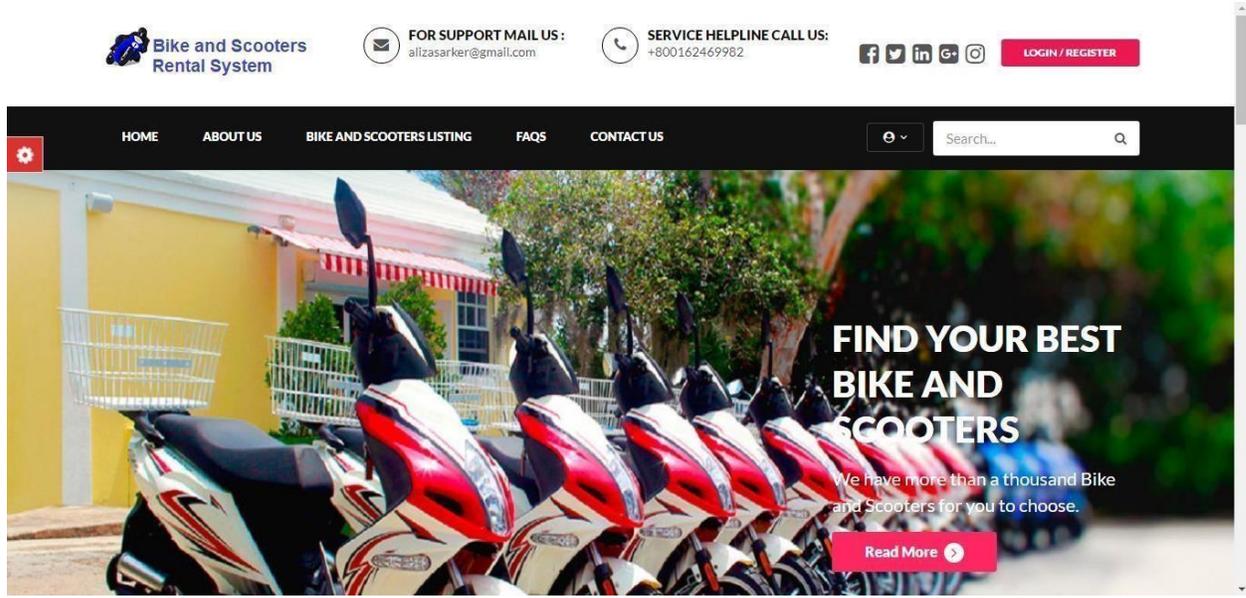


Figure: Home page prototype

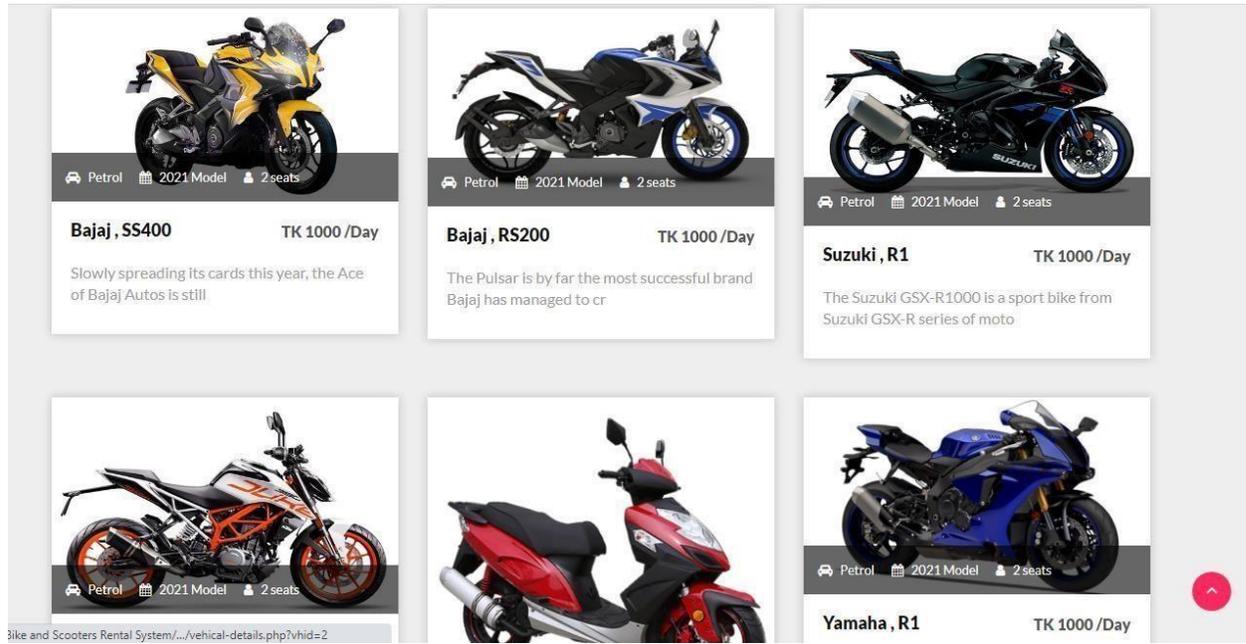


Figure: All bike page prototypes

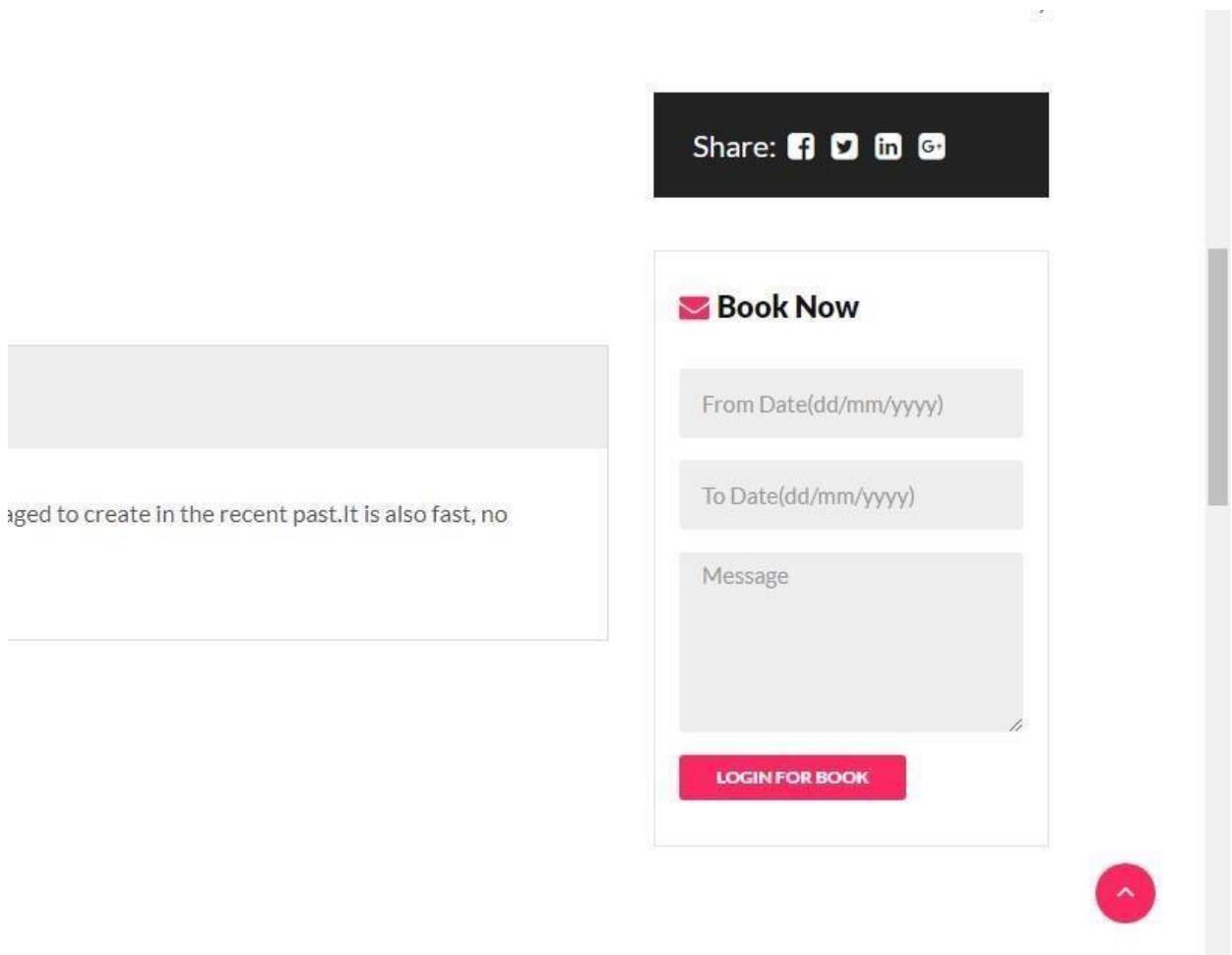


Figure: Booking process for rent bike or scooters.

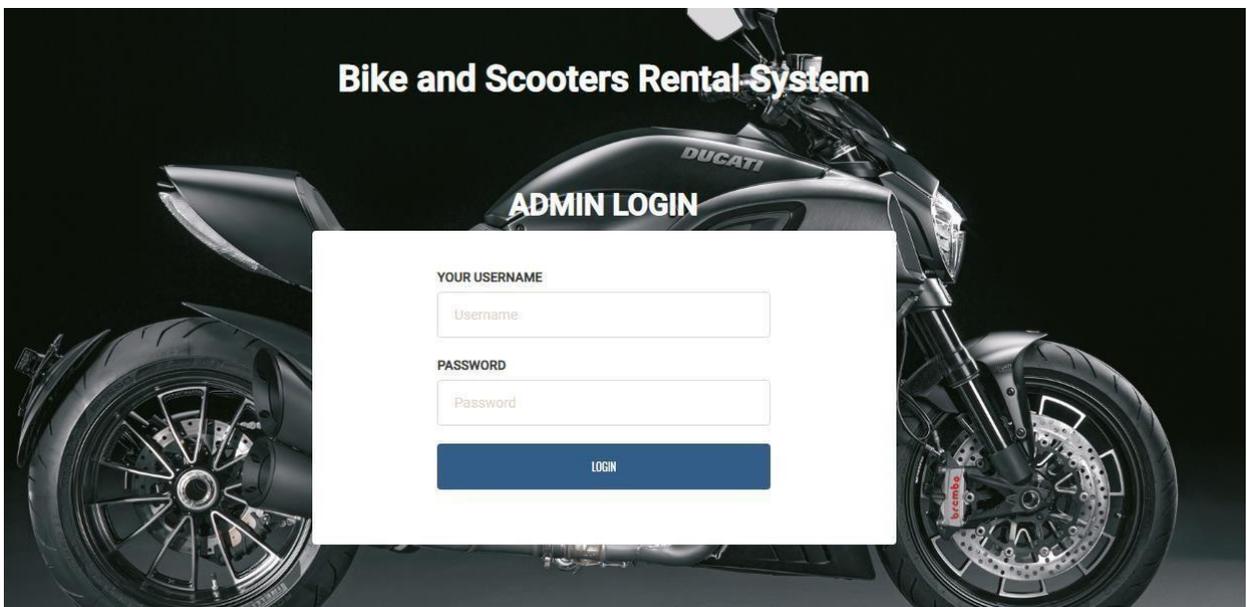


Figure: Admin login page prototype.

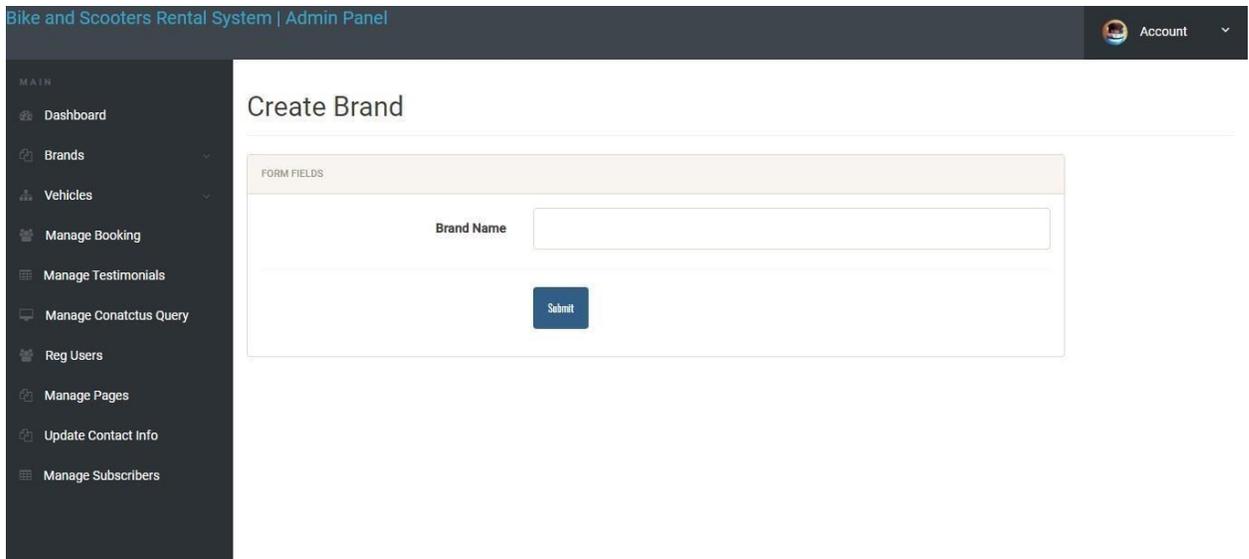


Figure: Add bike brand by admin

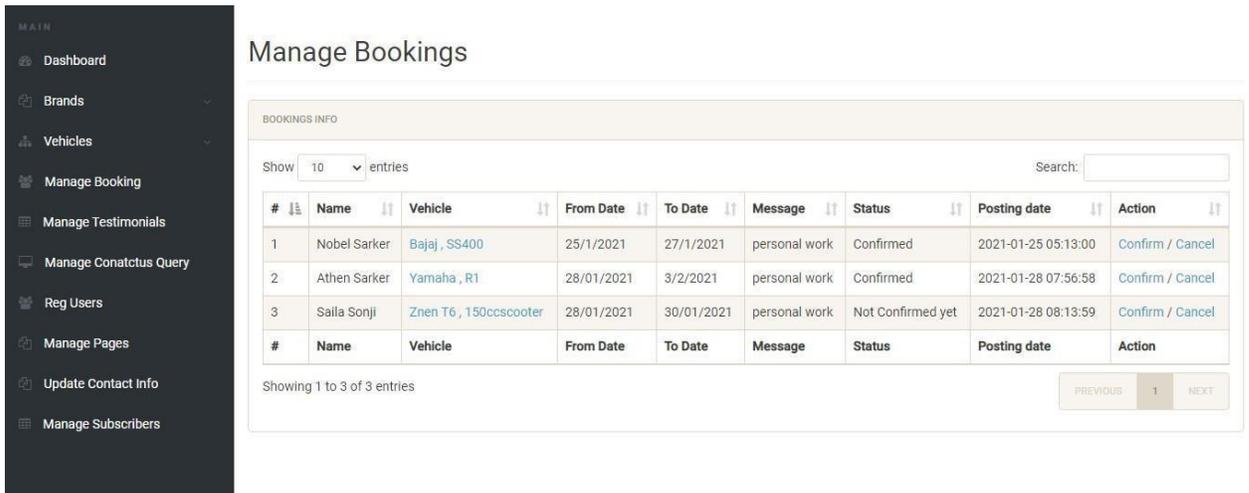


Figure: Manage booking page prototype

Chapter 10 – Deployment / Development

10.1 Core Module Coding Samples:

Customer Signup form code

```

1  <?php
2  //error_reporting(0);
3  if(isset($_POST['signup']))
4  {
5  $fname=$_POST['fullname'];
6  $email=$_POST['emailid'];
7  $mobile=$_POST['mobilen0'];
8  $password=md5($_POST['password']);
9  $sql="INSERT INTO tblusers(FullName,EmailId,ContactNo,Password) VALUES(:fname,:email,:mobile,:password)";
10 $query = $dbh->prepare($sql);
11 $query->bindParam(':fname',$fname,PDO::PARAM_STR);
12 $query->bindParam(':email',$email,PDO::PARAM_STR);
13 $query->bindParam(':mobile',$mobile,PDO::PARAM_STR);
14 $query->bindParam(':password',$password,PDO::PARAM_STR);
15 $query->execute();
16 $lastInsertId = $dbh->lastInsertId();
17 if($lastInsertId)
18 {
19 echo "<script>alert('Registration successfull. Now you can login');</script>";
20 }
21 else
22 {
23 echo "<script>alert('Something went wrong. Please try again');</script>";
24 }
25 }
26
27 >
28
29

```

Figure: In here given user signup form code.

```

30 <script>
31 function checkAvailability() {
32 $("#loaderIcon").show();
33 jQuery.ajax({
34 url: "check_availability.php",
35 data: 'emailid='+$("#emailid").val(),
36 type: "POST",
37 success:function(data){
38 $("#user-availability-status").html(data);
39 $("#loaderIcon").hide();
40 },
41 error:function (){}
42 });
43 }
44 </script>
45 <script type="text/javascript">
46 function valid()
47 {
48 if(document.signup.password.value!= document.signup.confirmpassword.value)
49 {
50 alert("Password and Confirm Password Field do not match !!");
51 document.signup.confirmpassword.focus();
52 return false;
53 }
54 return true;
55 }
56 </script>
59 <div class="modal-content">
60 <div class="modal-header">
61 <button type="button" class="close" data-dismiss="modal" aria-label="Close"><span aria-hidden="true">&ti
62 <h3 class="modal-title">Sign Up</h3>
63 </div>
64 <div class="modal-body">
65 <div class="row">
66 <div class="signup_wrap">
67 <div class="col-md-12 col-sm-6">
68 <form method="post" name="signup" onSubmit="return valid();">
69 <div class="form-group">
70 <input type="text" class="form-control" name="fullname" placeholder="Full Name" required="req
71 </div>
72 <div class="form-group">
73 <input type="text" class="form-control" name="mobilen0" placeholder="Mobile Number" maxlength=
74 </div>
75 <div class="form-group">
76 <input type="email" class="form-control" name="emailid" id="emailid" onBlur="checkAvailability
77 <span id="user-availability-status" style="font-size:12px;"></span>
78 </div>
79 <div class="form-group">
80 <input type="password" class="form-control" name="password" placeholder="Password" required="r
81 </div>
82 <div class="form-group">
83 <input type="password" class="form-control" name="confirmpassword" placeholder="Confirm Passw
84 </div>
85 <div class="form-group checkbox">
86 <input type="checkbox" id="terms_agree" required="required" checked="">
87 <label for="terms_agree">I Agree with <a href="#">Terms and Conditions</a></label>
88 </div>
89 <div class="form-group">
90 <input type="submit" value="Sign Up" name="signup" id="submit" class="btn btn-block">

```

Figure: In here given user signup form code.

Customer login form code

```

1  <?php
2  if(isset($_POST['login']))
3  {
4  $email=$_POST['email'];
5  $password=md5($_POST['password']);
6  $sql ="SELECT EmailId,Password,FullName FROM tblusers WHERE EmailId=:email and Password=:password";
7  $query= $dbh -> prepare($sql);
8  $query-> bindParam(':email', $email, PDO::PARAM_STR);
9  $query-> bindParam(':password', $password, PDO::PARAM_STR);
10 $query-> execute();
11 $results=$query->fetchAll(PDO::FETCH_OBJ);
12 if($query->rowCount() > 0)
13 {
14 $_SESSION['login']=$_POST['email'];
15 $_SESSION['fname']=$results->FullName;
16 $currentpage=$_SERVER['REQUEST_URI'];
17 echo "<script type='text/javascript'> document.location = '$currentpage'; </script>";
18 } else{
19
20     echo "<script>alert('Invalid Details');</script>";
21 }
22 }
23 }
24 }
25 }
26 ?>
27

```

Figure: In here given user login form code

```

28 <div class="modal fade" id="loginform">
29 <div class="modal-dialog" role="document">
30 <div class="modal-content">
31 <div class="modal-header">
32 <button type="button" class="close" data-dismiss="modal" aria-label="Close"><span aria-hidden="true">&ti
33 <h3 class="modal-title">Login</h3>
34 </div>
35 <div class="modal-body">
36 <div class="row">
37 <div class="login_wrap">
38 <div class="col-md-12 col-sm-6">
39 <form method="post">
40 <div class="form-group">
41 <input type="email" class="form-control" name="email" placeholder="Email address*">
42 </div>
43 <div class="form-group">
44 <input type="password" class="form-control" name="password" placeholder="Password*">
45 </div>
46 <div class="form-group checkbox">
47 <input type="checkbox" id="remember">
48 </div>
49 <div class="form-group">
50 <input type="submit" name="login" value="Login" class="btn btn-block">
51 </div>
52 </form>
53 </div>
54 </div>
55 </div>
56 </div>

```

Figure: In here given user login form code

Bike & Scooter listing form code

```

Bike and Scooters Rental System > 📄 bike-listing.php
58 <section class="page-header listing_page">
59   <div class="container">
60     <div class="page-header_wrap">
61       <div class="page-heading">
62         <h1>Bike and Scooters Listing</h1>
63       </div>
64       <ul class="coustom-breadcrumb">
65         <li><a href="#">Home</a></li>
66         <li>Bike and Scooters Listing</li>
67       </ul>
68     </div>
69   </div>
70   <!-- Dark Overlay-->
71   <div class="dark-overlay"></div>
72 </section>
73 <!-- /Page Header-->
74
75 <!--Listing-->
76 <section class="listing-page">
77   <div class="container">
78     <div class="row">
79       <div class="col-md-9 col-md-push-3">
80         <div class="result-sorting-wrapper">
81           <div class="sorting-count">
82 <?php
83 //Query for Listing count
84 $sql = "SELECT id from tblvehicles";
85 $query = $dbh -> prepare($sql);
86 $query->bindParam(':vhid',$vhid, PDO::PARAM_STR);
87 $query->execute();
88 $results=$query->fetchAll(PDO::FETCH_OBJ);
89 $cnt=$query->rowCount();
90 ?>

```

Figure: In here given Bike & Scooter listing form code.

```

95 <?php $sql = "SELECT tblvehicles.*,tblbrands.BrandName,tblbrands.id as bid from tblvehicles join tblbrands on t
96 $query = $dbh -> prepare($sql);
97 $query->execute();
98 $results=$query->fetchAll(PDO::FETCH_OBJ);
99 $cnt=1;
100 if($query->rowCount() > 0)
101 {
102 foreach($results as $result)
103 { ?>
104 <div class="product-listing-m gray-bg">
105 <div class="product-listing-img">
108 <h5><a href="vehical-details.php?vhid=<?php echo htmlentities($result->id);?>"><?php echo htmlenti
109 <p class="list-price">TK <?php echo htmlentities($result->PricePerDay);?> Per Day</p>
110 <ul>
111 <li><i class="fa fa-user" aria-hidden="true"></i><?php echo htmlentities($result->SeatingCapacity)
112 <li><i class="fa fa-calendar" aria-hidden="true"></i><?php echo htmlentities($result->ModelYear);?
113 <li><i class="fa fa-motorcycle" aria-hidden="true"></i><?php echo htmlentities($result->FuelType);
114 </ul>
115 <a href="vehical-details.php?vhid=<?php echo htmlentities($result->id);?>" class="btn">View Details
116 </div>
117 </div>
118 <?php }} ?>
119 </div>
120
121 <!--Side-Bar-->
122 <aside class="col-md-3 col-md-pull-9">
123 <div class="sidebar_widget">
124 <div class="widget_heading">
125 <h5><i class="fa fa-filter" aria-hidden="true"></i> Find Your Bike and Scooters </h5>
126 </div>
127 <div class="sidebar_filter">

```

Figure: In here given Bike & Scooter listing form code.

Customer Bike & Scooter booking form code

```

86 <?php
87 $useremail=$_SESSION['login'];
88 $sql = "SELECT * from tblusers where EmailId=:useremail";
89 $query = $dbh -> prepare($sql);
90 $query -> bindParam(':useremail',$useremail, PDO::PARAM_STR);
91 $query->execute();
92 $results=$query->fetchAll(PDO::FETCH_OBJ);
93 $cnt=1;
94 if($query->rowCount() > 0)
95 {
96 foreach($results as $result)
97 { ?>
98 <section class="user_profile inner_pages">
99 <div class="container">
100 <div class="user_profile_info gray-bg padding_4x4_40">
101 <div class="upload_user_logo"> 
102 </div>
103
104 <div class="dealer_info">
105 <h5><?php echo htmlentities($result->FullName);?></h5>
106 <p><?php echo htmlentities($result->Address);?><br>
107 <?php echo htmlentities($result->City);?>&nbsp;&nbsp;<?php echo htmlentities($result->Country); }?></p>
108 </div>
109 </div>
110 <div class="row">
111 <div class="col-md-3 col-sm-3">
112 <?php include('includes/sidebar.php');?>
113
114 <div class="col-md-6 col-sm-8">
115 <div class="profile_wrap">
116 <h5 class="uppercase underline">My Bookings </h5>
117 <div class="my_vehicles_list">
118 <ul class="vehicle_listing">

```

Figure: In here given Customer Bike & Scooter booking form code.

```
114     <div class="col-md-6 col-sm-8">
115         <div class="profile_wrap">
116             <h5 class="uppercase underline">My Bookings </h5>
117             <div class="my_vehicles_list">
118                 <ul class="vehicle_listing">
119                     <?php
120                     $useremail=$_SESSION['login'];
121                     $sql = "SELECT tblvehicles.Vimage1 as Vimage1,tblvehicles.VehiclesTitle,tblvehicles.id as vid,tblbrands.BrandName as BrandName from tblvehicles,tblbrands where tblvehicles.BrandName=tblbrands.BrandName and tblvehicles.UserID=?";
122                     $query = $dbh -> prepare($sql);
123                     $query->bindParam(':useremail', $useremail, PDO::PARAM_STR);
124                     $query->execute();
125                     $results=$query->fetchAll(PDO::FETCH_OBJ);
126                     $cnt=1;
127                     if($query->rowCount() > 0)
128                     {
129                         foreach($results as $result)
130                         { ?>
131
132                         <li>
133                             <div class="vehicle_img"> <a href="vehical-details.php?vhid=?php echo htmlentities($result->vid)">
134                             <div class="vehicle_title">
135                                 <h6><a href="vehical-details.php?vhid=?php echo htmlentities($result->vid);?"> <?php echo htmlentities($result->VehiclesTitle);?>
136                                 <p><b>From Date:</b> <?php echo htmlentities($result->FromDate);?><br /> <b>To Date:</b> <?php echo htmlentities($result->ToDate);?>
137                             </div>
138                             <?php if($result->Status==1)
139                             { ?>
140                                 <div class="vehicle_status"> <a href="#" class="btn outline btn-xs active-btn">Confirmed</a>
141                                 <div class="clearfix"></div>
142                             </div>
143
144                             <?php } else if($result->Status==2) { ?>
145                                 <div class="vehicle_status"> <a href="#" class="btn outline btn-xs">Cancelled</a>
146                                 <div class="clearfix"></div>
```

Figure: In here given Customer Bike & Scooter booking form code.

Bike & Scooter admin login:

```
Bike and Scooters Rental System > admin > index.php
46 </head>
47
48 <body>
49
50 <div class="login-page bk-img" style="background-image: url(img/adminlogin0.jpg);">
51 <div class="form-content">
52 <div class="container">
53 <div class="row">
54 <div class="col-md-6 col-md-offset-3">
55 <h1 class="text-center text-bold text-light mt-4x">Bike and Scooters Rental System</h1>
56
57 <h2 class="text-center text-bold text-light mt-4x">ADMIN LOGIN</h2>
58 <div class="well row pt-2x pb-3x bk-light">
59 <div class="col-md-8 col-md-offset-2">
60 <form method="post">
61
62 <label for="" class="text-uppercase text-sm">Your Username </label>
63 <input type="text" placeholder="Username" name="username" class="form-control">
64
65 <label for="" class="text-uppercase text-sm">Password</label>
66 <input type="password" placeholder="Password" name="password" class="form-control">
67
68
69
70 <button class="btn btn-primary btn-block" name="login" type="submit">LOGIN</button>
71
72 </form>
73 </div>
74 </div>
75 </div>
76 </div>
77 </div>
78 </div>
```

Figure: In here given Bike & Scooter admin login code.

10.2 Possible problem break down

For better development of a project important to needs to tasks divided into small parts. This possible problem breakdown make a project easier to develop. In here I describe the possible break down process in the system.

† Create a good interface design:

A good interface is very important for a system. When I create good interface of my bike and scooter renting system here I used HTML, CSS, java script.

† Create a database for system:

It's important to create a database for a system. For that need to find out the attributes and also need to find out the relationship between of these attributes with foreign key. By doing, SQL query I implement the database for my system.

† Verification and validation:

It's important part to check validation check for any system deployment. Its important because by doing this here can find out that system meet all requirements of the business or not.

† **System deployment:**

Follow the methodologies and technologies using in the system when develop the system.

Chapter 11 – Testing

By testing in my project I can understand that this project fulfills my project requirements or not.

11.1 Test Case:

Test case define that summary of the actions, execution and also outcomes a particular test to verify compliance against any requirement in the system (wikipedia, 2020).

11.2 Unit testing:

Test-Unit test	Test 1			
Data sources user approval	User handle by admin, user cannot join without authorize by admin.			Tester: Aliza Sarker Mukta
Test Case	Statement	Tasks	Expected Result	Actual Result

	Its need to approve by admin when one user registers in the system.	In here check the user access in the system.	In here user cannot any access to the system if the admin approves the user frequently.	Show the confirm message.
--	---	--	---	---------------------------

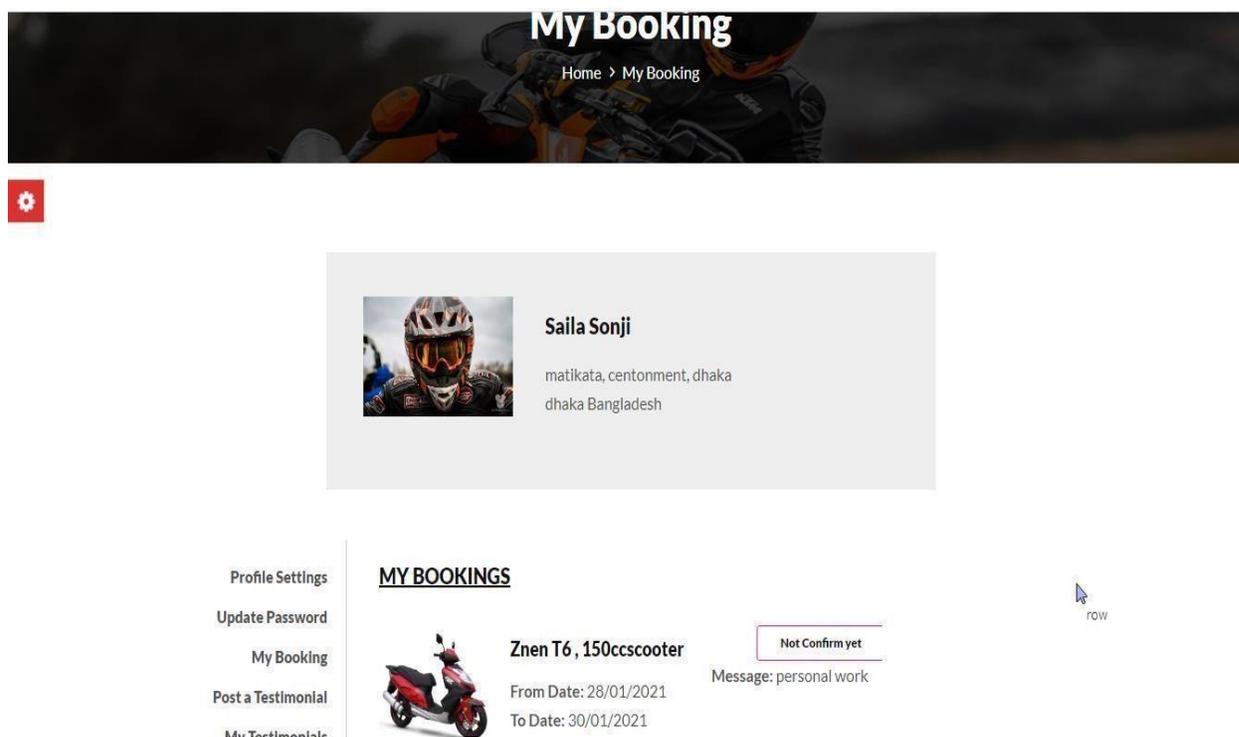


Figure: Yet Admin Not approved booking still pending.

Unit test 2		class: login		
Data source:		Objective: Admin login	Tester: Aliza Sarker Mukta	
Test case	Description for login	Tasks : login to the system	Expected result	Actual result
1.3	This is the basic functionality of	Sign in details: User name: admin Password: Test@12345	Check the password validation	If the password invalid here

	the system.		in the system.	show the error message.
--	-------------	--	----------------	-------------------------

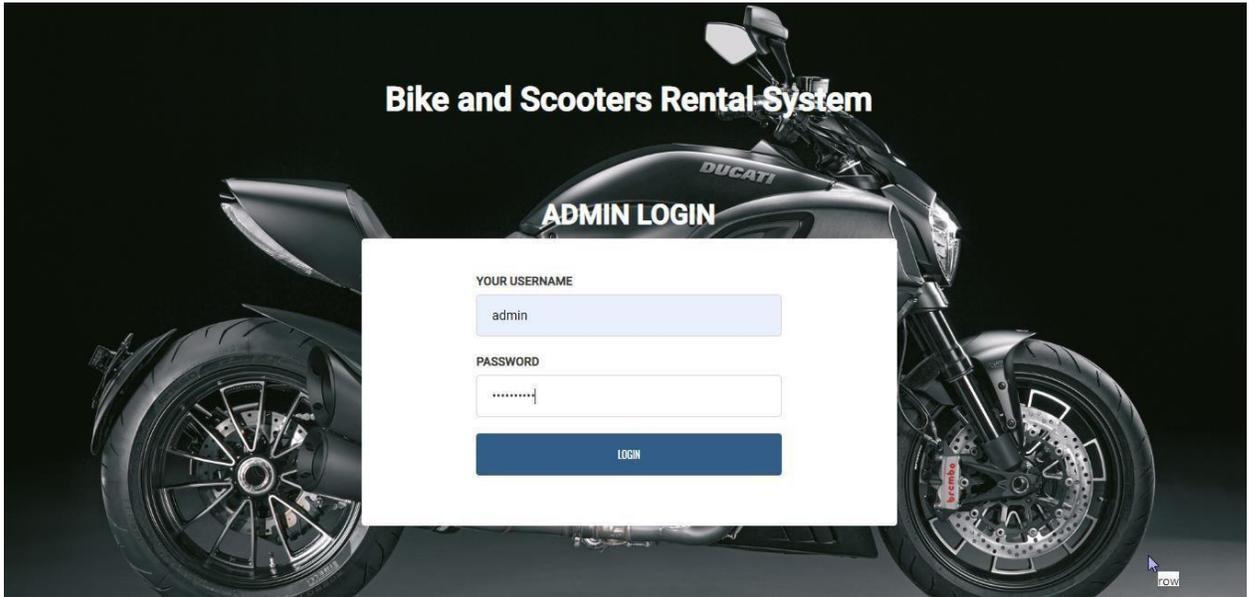


Figure: Admin Validation Checking.

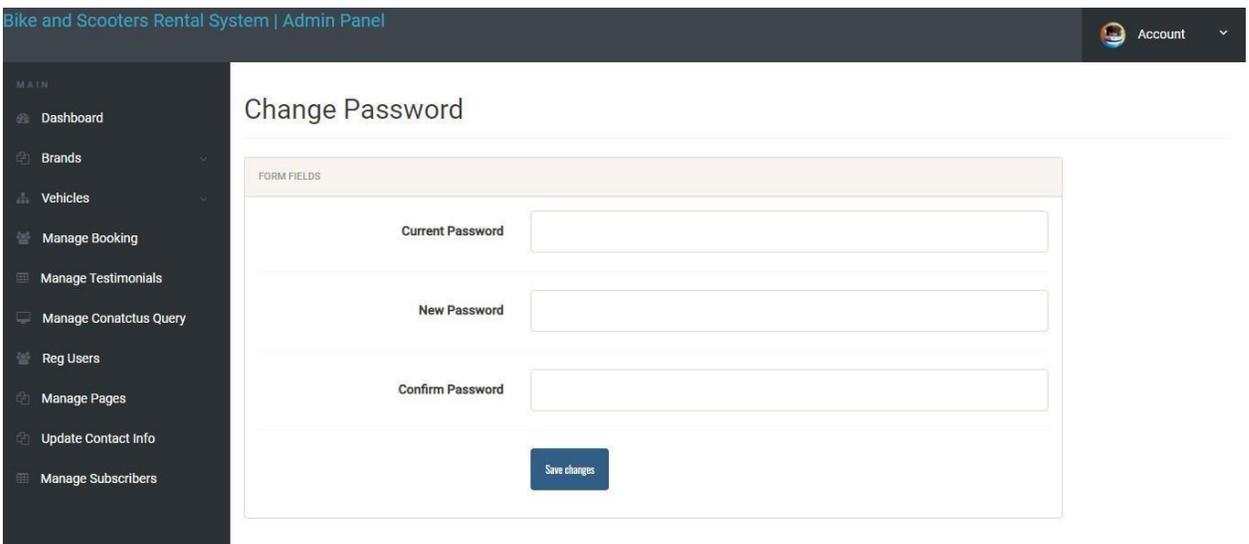


Figure: Admin login successful and here admin dashboard.

Unit test 3	class: login
--------------------	---------------------

Data source:		Objective: User login	Tester: Aliza Sarker Mukta	
Test case	Description for login	Tasks : login to the system	Expected result	Actual result
1.3	This is the basic functionality of the system.	Sign in details: User name: alitsarker@gmail.com Password :123456	Check the password validation in the system.	If the password invalid here show the error message.

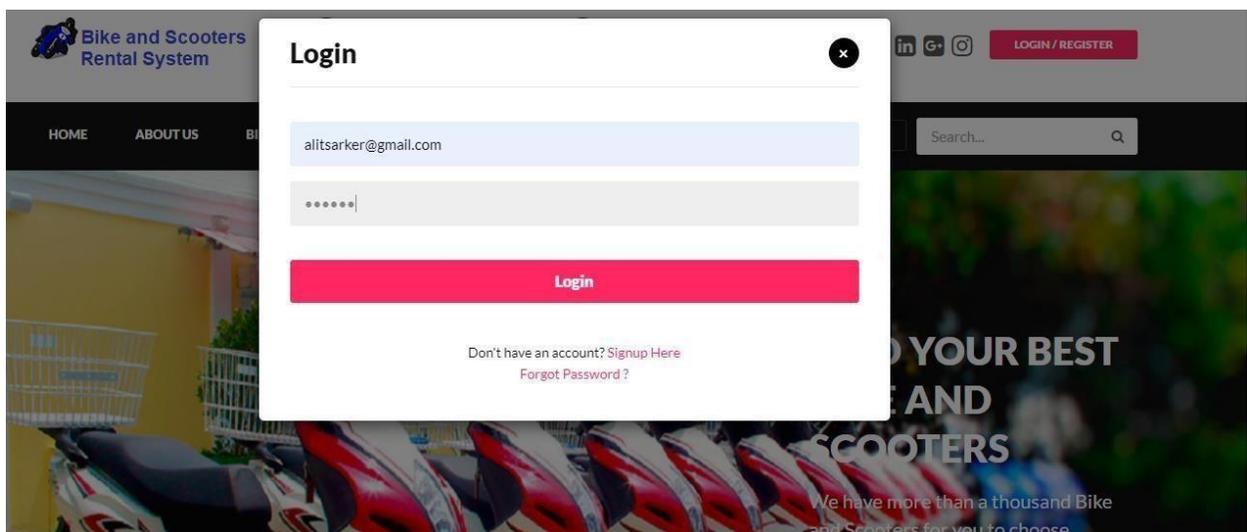


Figure: User login

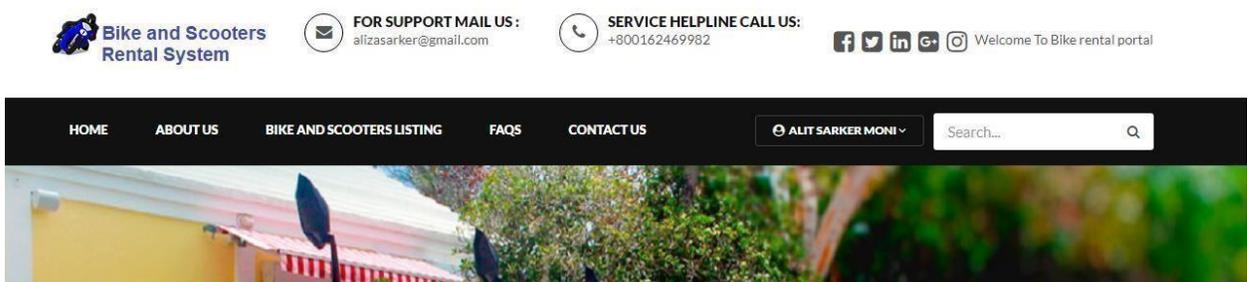


Figure: User login successfully in the system.

11.3 Integration Testing:

Test-Integration test	Tests: 1	Class: User		
Information sources: user sign in	Purpose: Admin approve the users account.			Tester: Aliza sarker Mukta
	Statement	Tasks	Expected Result	Actual Result
	User cannot access the system without approving the by admin.	User sign in	Shows approving message.	Show message: error message show there.

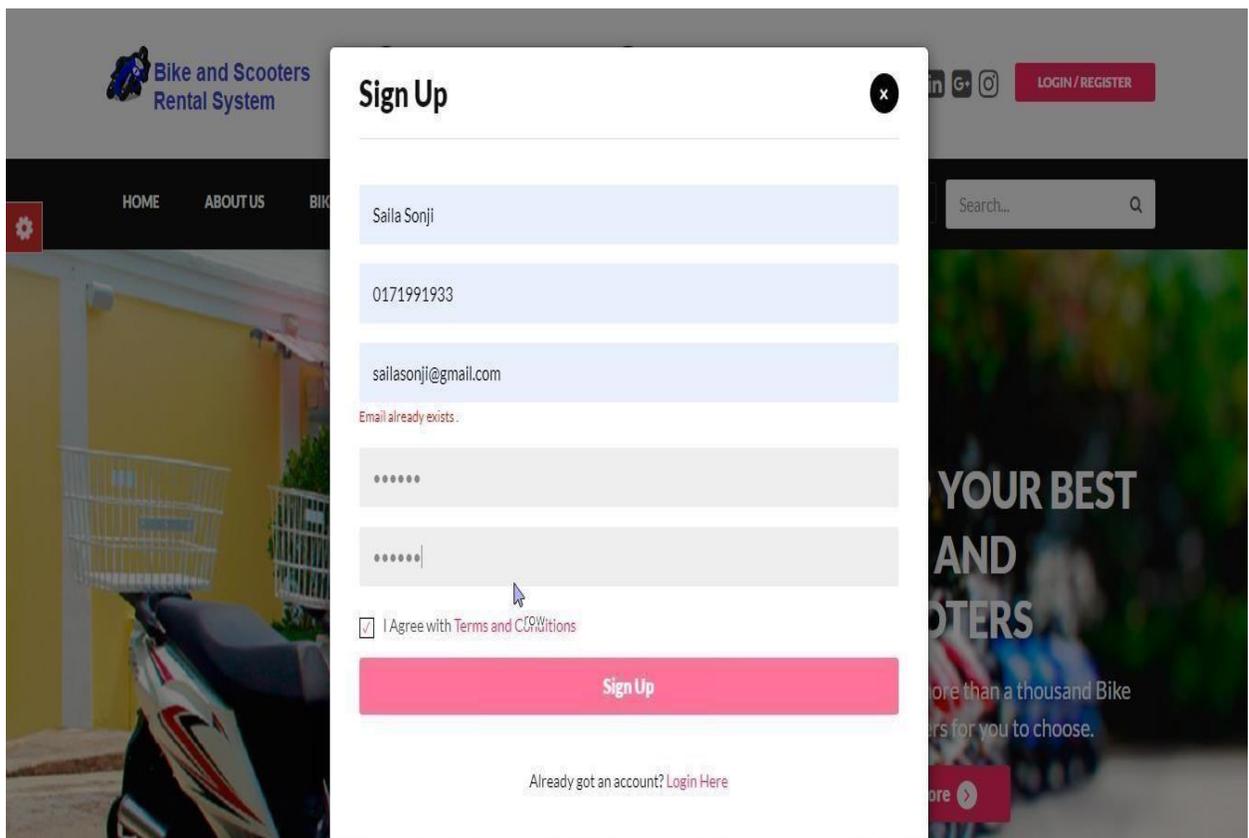


Figure: Customer account already created in this email

Test-Integration test	Tests: 2	Class: Admin		
Information sources: user sign in	Purpose: Admin add vehicles			Tester: Aliza sarker Mukta
	Statement	Tasks	Expected Result	Actual Result
	Admin add new vehicles for rent in the system	Add vehicles in the system	Shows added vehicles in the home page	Show all new added vehicles in the system.

Bike and Scooters Rental System | Admin Panel

Account

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Conatctus Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

Post A Vehicle

BASIC INFO

Vehicle Title* Bike Select Brand* Honda

Vehical Overview* fast ride

Price Per Day(In BD)* 800 Select Fuel Type* Petrol

Model Year* 2018 Seating Capacity* 2

Upload Images

Image 1 * Choose File images.jpg Image 2* Choose File No file chosen Image 3* Choose File No file chosen

Figure: Add vehicles details in the system

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking

Post A Vehicle

BASIC INFO

SUCCESS: Vehicle posted successfully

Figure: Posting vehicles successfully.

6	RT	Yamaha	1000	Petrol	2021	
7	Bike	Honda	800	Petrol	2018	
#	Vehicle Title	Brand	Price Per day	Fuel Type	Model Year	Action

Showing 1 to 7 of 7 entries

PREVIOUS 1 NEXT

Figure: Added successfully in the system.

Test-Integration test	Tests: 3		Class: Admin		
Information sources: user sign in	Purpose: Admin add brands			Tester: Aliza sarker Mukta	
	Statement	Tasks	Expected Result	Actual Result	
	Admin add new brand in the system	Add brands in the system	Shows added brands in the home page	Show all new added brands in the system.	

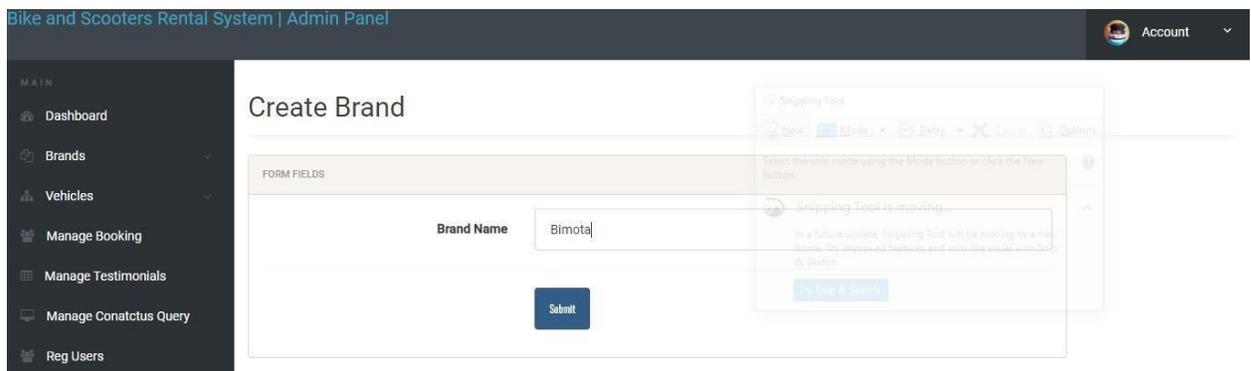


Figure: Add brand in the system

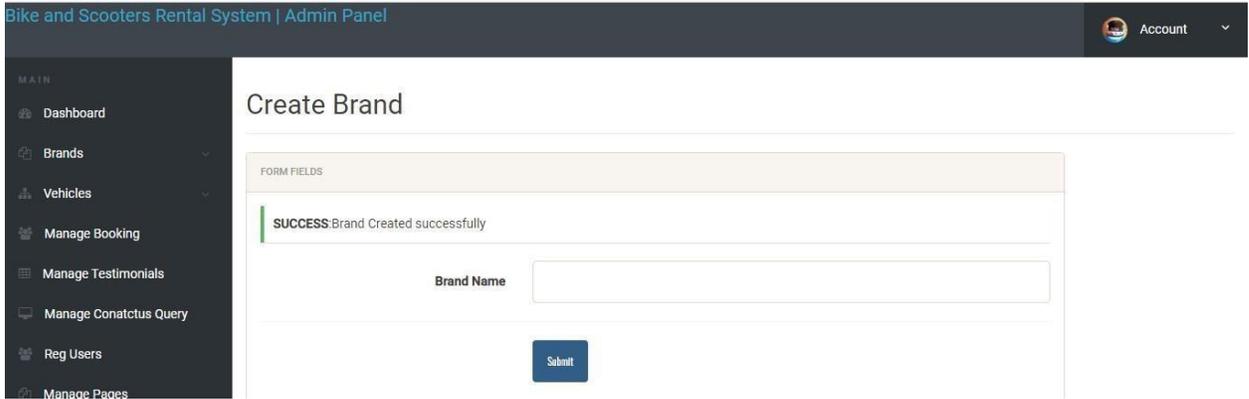


Figure: Successfully added brand in the system.

10	hero honda	2021-01-25 05:09:11		✎ ✕
11	Bimota	2021-03-08 20:46:11		✎ ✕
#	Brand Name	Creation Date	Updation date	Action

Showing 1 to 11 of 11 entries

Figure: Successfully added brand in the system.

Chapter 12- Implementation

12.1 Training

Use this system easily and efficiently here need to training. In here, given some training area for this system users.

Serial no	User name	Training part	Time	Details
1	Customer	Register customer can book the bike or scooters as renting.	1.30 minutes	Registered user only can book the bike or scooter from the system.
		In here train user about how to give there	30 minutes	In here customer first login their id

		valuable feedback.		and give the feedback in feedback option.
Serial no	User name	Training part	Time	Details
2	Admin	In here train admin how to add brands in the system	1 hour	In here first admin login his admin id. Then he can add new brands of the bike in the system.
		In here train admin that how to manage booking part.	1.30 minutes	In here admin learn how to manage booking in the booking option.

12.2 Big Bang/ Direct installation approach:

In here I discuss about big bang/ direct installation approach in my system. In here old system is replace by new system. If the existing has any issues that it will be unavailable to use this system. This is the faster way to use the new system.

Because of old system is not available. Many where, this system is very popular to launch new system. In here data transferring is secure.

Chapter 13 – Critical Appraisal and Evaluation

13.1 Objective that could be met

Objective that could be met:

- ✦ For this project there could be used perfect software development methodology.
- ✦ Validation and verification could be properly implemented.

Objective 1:

For this project there could be used perfect software development methodology:

Success rate:

In here I followed DSDM methodology for this system. By using this all requirements are fulfilling in this system. So, in here objective is successful.

How much could have been done:

In here for get best success need more research.

Objective 2:

Validation and verification could be properly implemented:

Success rate:

For this system this is the successful objective. For best result I do some test in this system. These tests are unit test and integration test.

How much could have been done:

For testing I involve so many users, customers. In here If I also need more user and customers to test the system performance than it will be better for validation and verification check.

Chapter 14 – Conclusion

14.1 Summary of the project

My system name is “Bike and Scooter Renter System”. This system is online based system for bike and scooter renting. For this system users can lead their journey very easily. In here user can rent bike or scooter for some hours, some days, some weeks or less than 2 months. In here user need to register first to get this services. When user is registered then they can login their user account with valid email address and also valid password. Then they can book a bike or scooter and give their starting date and ending date. Then admin can confirm the booking. User can also update their account. Admin can manage all of the system. This system is helpful for both users.

14.2 Goal of the project

In here I had given some goal of my project:

- † Easy travel life of users.
- † Ensure good services provide to users.
- † Make good relationship with clients and company.
- † Find verities of bike or scooters for rent.

14.3 My experience

This system is very helpful for my career building. When I develop this system I gained so many things. I learn how to complete tasks within time. By doing this now I am able to find out error of the system. Now I can handle many others project. By doing this I learn how to test the system and also identify the system are fulfilling all requirement or not. I can handle the project within tight budget. So, I can feel that this project helps me so much in my real life. It will helpful in my professional life.

Appendices

User guide:

Figure: User first sign up first with valid information.

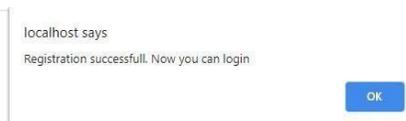


Figure: User registration successfully.

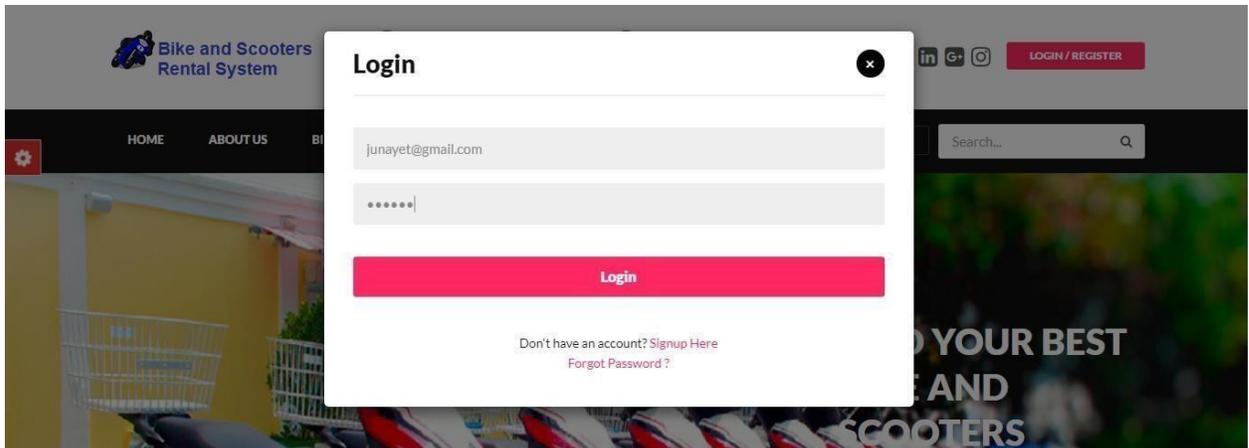


Figure: User login with valid email address and valid password.



Figure: User login successfully and also update their account.

- Profile Settings
- Update Password
- My Booking
- Post a Testimonial
- My Testimonials
- Sign Out

GENERAL SETTINGS

SUCCESS: Profile Updated Successfully

Reg Date - 2021-03-10 05:34:01

Last Update at - 2021-03-10 05:39:51

Full Name

Junayet

Email Address

junayet@gmail.com

Phone Number

0171991933

Date of Birth (dd/mm/yyyy)

06/05/1994

Your Address



Figure: User updates their profile successfully.

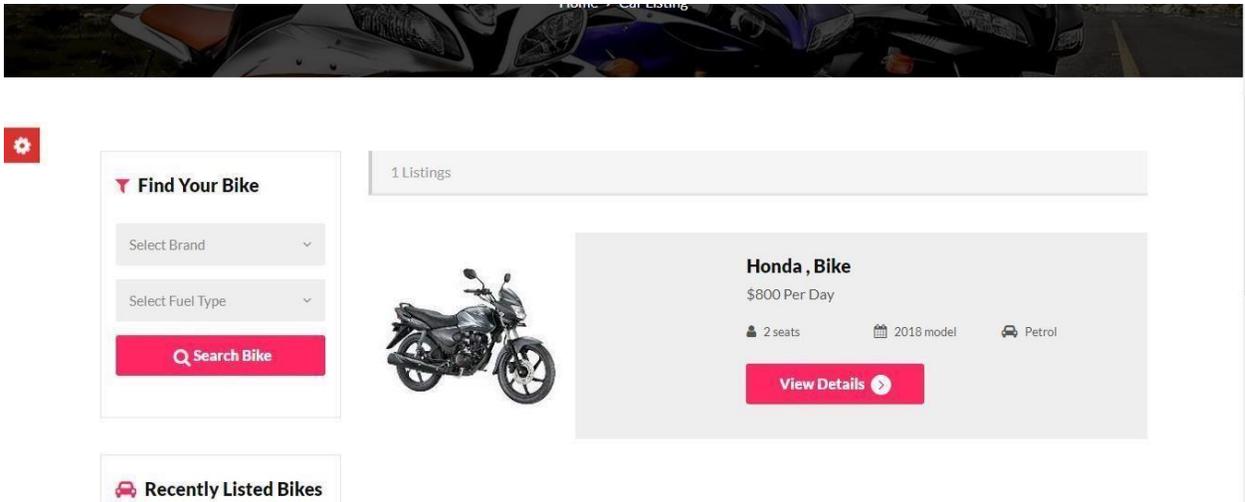


Figure: User can find their needed bike from the system.



Junayet
Dhaka, Uttara
Dhaka Bangladesh

- Profile Settings
- Update Password
- My Booking
- Post a Testimonial
- My Testimonials
- Sign Out

MY BOOKINGS



Honda, Bike

From Date: 9/3/2021

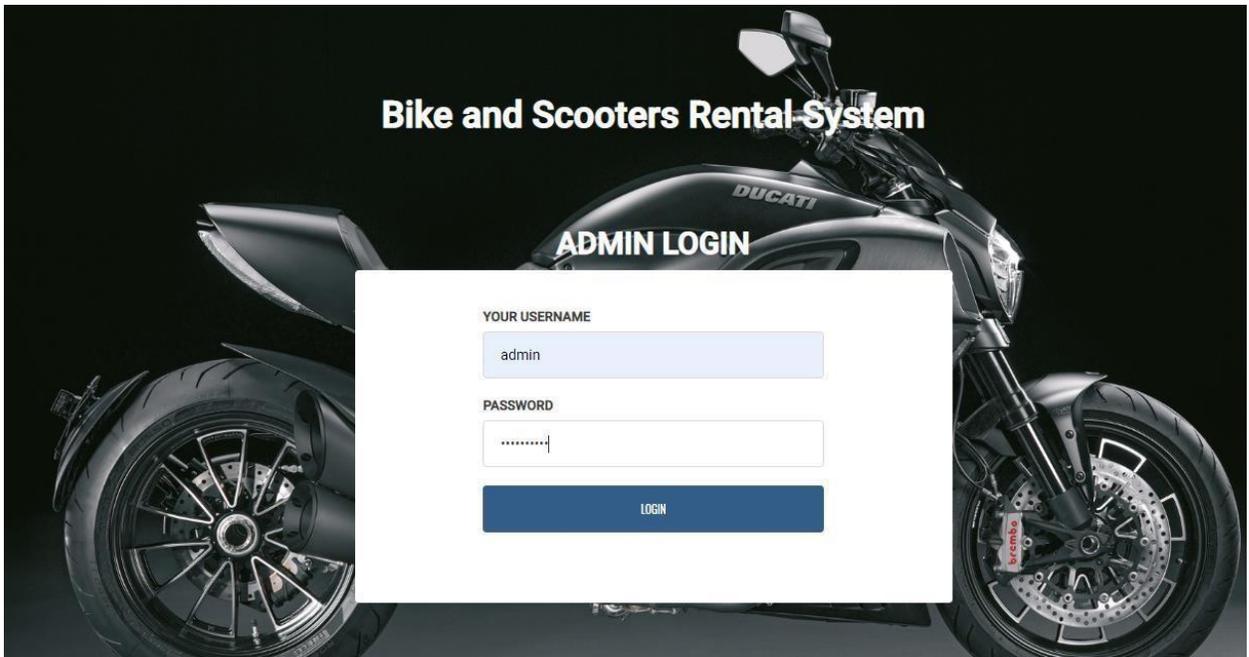
To Date: 13/3/2021

Not Confirm yet

Message: Personal work

Figure: user booking bike and booking will be pending until admin confirm this booking.

For Admin:



Bike and Scooters Rental System

ADMIN LOGIN

YOUR USERNAME
admin

PASSWORD
.....

LOGIN

Figure: Admin login with valid username and also valid password.

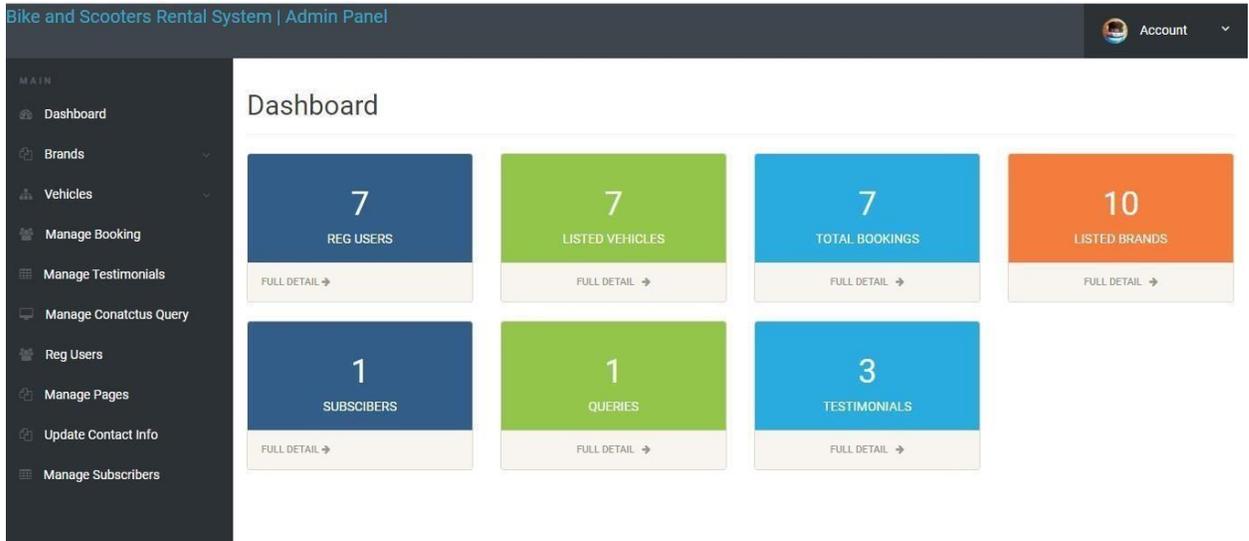


Figure: Dashboard

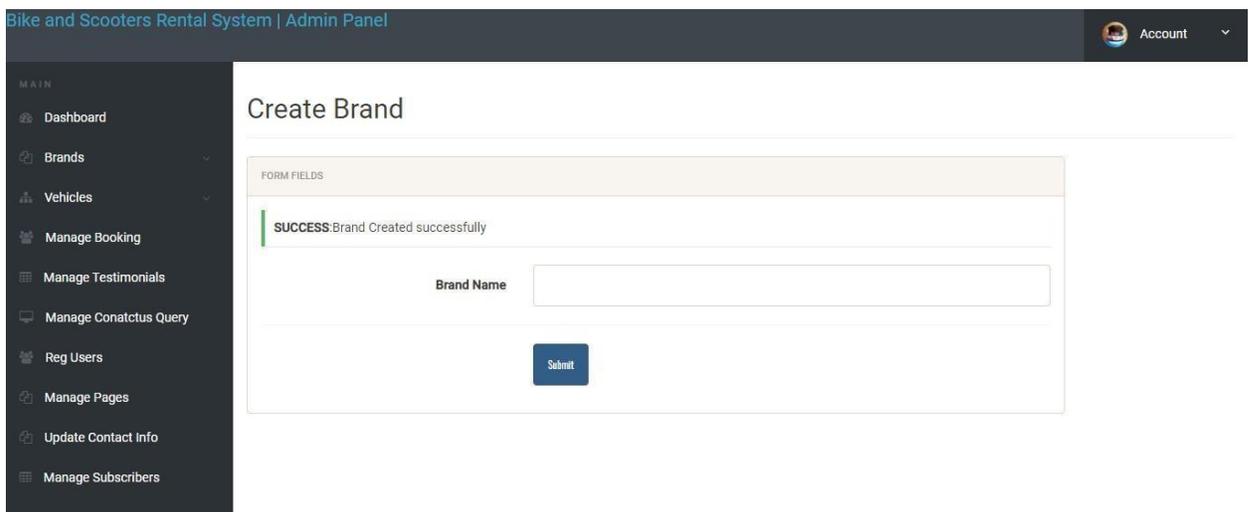


Figure: Create brand by admin

Bike and Scooters Rental System | Admin Panel Account

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Contactus Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

LISTED BRANDS

Show 10 entries Search:

#	Brand Name	Creation Date	Updation date	Action
1	KTM	2021-01-19 08:24:34	2021-01-19 22:42:23	✎ ✕
2	Bajaj	2021-01-19 08:24:50		✎ ✕
3	Honda	2021-01-19 08:25:03		✎ ✕
4	Suzuki	2021-01-19 08:25:13		✎ ✕
5	Yamaha	2021-01-19 08:25:24		✎ ✕
6	Honda Dio	2021-01-19 08:25:13		✎ ✕
7	Znen T6	2021-01-19 08:25:13		✎ ✕
8	TVS Wego	2021-01-19 08:25:13		✎ ✕
9	Ducati	2021-01-18 22:22:13		✎ ✕
10	Hiro Honda	2021-01-30 21:54:01		✎ ✕

Showing 1 to 10 of 11 entries

Figure: Admin can manage brand.

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Contactus Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

BASIC INFO

Vehicle Title* Select Brand*

Vehicle Overview*

Price Per Day(In BD)* Select Fuel Type*

Model Year* Seating Capacity*

Upload Images

Image 1* Image 2* Image 3*

Figure: Admin can add new vehicles in the dashboard.

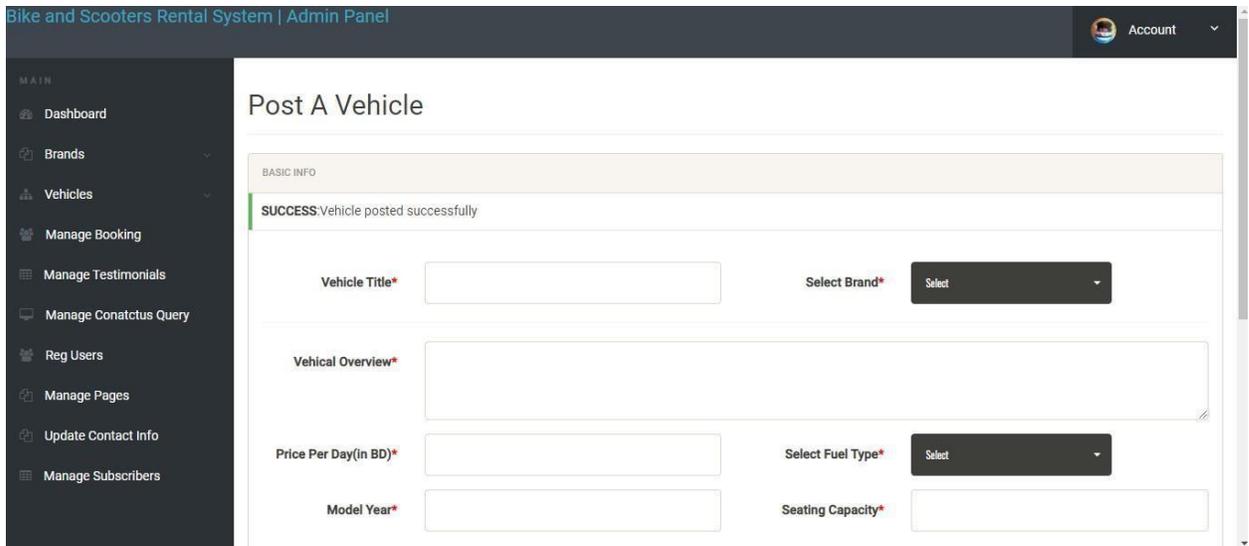


Figure: Admin add successfully new vehicles in the dashboard.

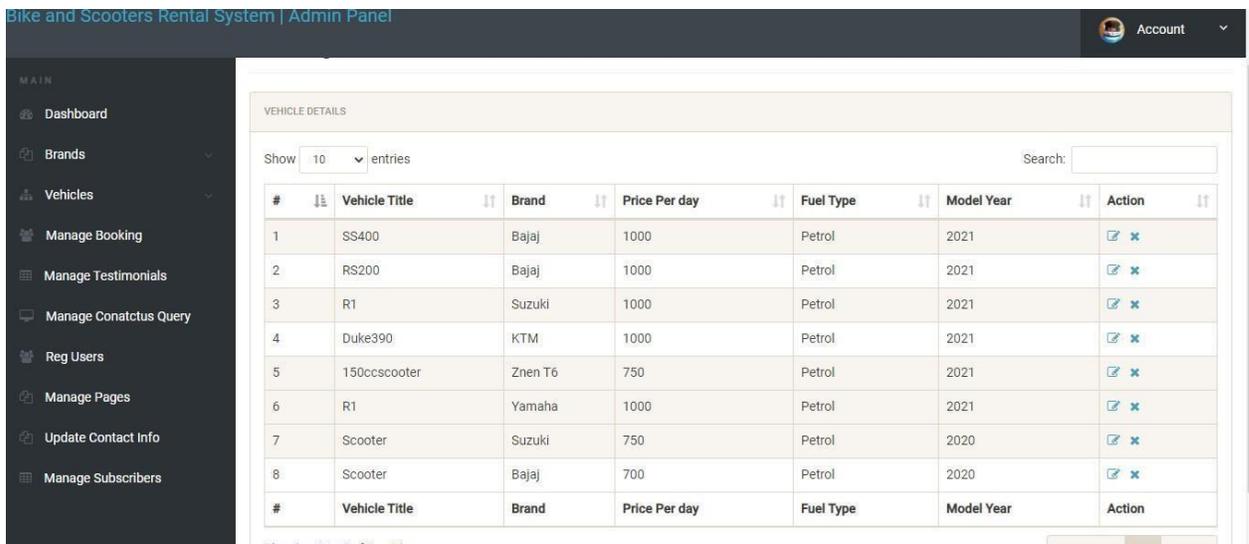


Figure: Admin can manage all vehicles in the dashboard.

Bike and Scooters Rental System | Admin Panel Account

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Contact Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

Manage Testimonials

USER TESTIMONIALS

Show 10 entries Search:

#	Name	Email	Testimonials	Posting date	Action
1	Nobel Sarker	nobel@gmail.com	I love to travel every where.	2021-01-30 21:48:55	Inactive
#	Name	Email	Testimonials	Posting date	Action

Showing 1 to 1 of 1 entries PREVIOUS 1 NEXT

Figure: Admin can manage testimonial which are given by users.

Bike and Scooters Rental System | Admin Panel Account

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Contact Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

Manage Contact Us Queries

USER QUERIES

Show 10 entries Search:

#	Name	Email	Contact No	Message	Posting date	Action
1	Halel Uddin	helal@gmail.com	01821474836	Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum	2021-01-21 02:03:07	Read
#	Name	Email	Contact No	Message	Posting date	Action

Showing 1 to 1 of 1 entries PREVIOUS 1 NEXT

Figure: Admin can manage contacts.

Bike and Scooters Rental System | Admin Panel

localhost says
Do you really want to Confirm this booking

Account

Manage Bookings

BOOKINGS INFO

SUCCESS:Booking Successfully Confirmed

Show 10 entries Search:

#	Name	Vehicle	From Date	To Date	Message	Status	Posting date	Action
1	Nobel Sarker	Bajaj , SS400	25/1/2021	27/1/2021	personal work	Confirmed	2021-01-25 05:13:00	Confirm / Cancel
2	Athen Sarker	Yamaha , R1	28/01/2021	3/2/2021	personal work	Confirmed	2021-01-28 07:56:58	Confirm / Cancel
3	Salla Sonji	Znen T6 , 150ccscooter	28/01/2021	30/01/2021	personal work	Not Confirmed yet	2021-01-28 08:13:59	Confirm / Cancel
4	Junayet	Honda , Bike	9/3/2021	13/3/2021	Personal work	Confirmed	2021-03-10 05:44:40	Confirm / Cancel
5	Junayet	Honda , Bike	9/3/2021	13/3/2021	Personal work	Not Confirmed yet	2021-03-10 05:44:53	Confirm / Cancel

Showing 1 to 5 of 5 entries

Figure: Admin confirm the booking.

Bike and Scooters Rental System | Admin Panel

Account

Manage Bookings

BOOKINGS INFO

Show 25 entries Search:

#	Name	Vehicle	From Date	To Date	Message	Status	Posting date	Action
1	Nobel Sarker	Suzuki , R1	1/2/2021	2/2/2021	for travel	Confirmed	2021-01-30 21:50:47	Confirm / Cancel
2	Eusha	Bajaj , SS400	1/2/2021	2/2/2021	personal work	Confirmed	2021-01-30 23:08:35	Confirm / Cancel
3	Dity	Znen T6 , 150ccscooter	3/2/2021	5/2/2021	personal work	Confirmed	2021-03-02 11:30:50	Confirm / Cancel
4	Asha	Suzuki , Scooter	3/2/2021	6/2/2021	Personal work	Confirmed	2021-03-02 12:15:59	Confirm / Cancel

Showing 1 to 4 of 4 entries

PREVIOUS 1 NEXT

Figure: Admin can manage booking.

Bike and Scooters Rental System | Admin Panel Account

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Conatctus Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

Registered Users

REG USERS

Show 10 entries Search:

#	Name	Email	Contact no	DOB	Address	City	Country	Reg Date
1	Alit Sarker	alit@gmail.com	01721474836		Dhammondi	Dhaka	Bangladesh	2021-01-19 11:59:27
2	Anik Mia	anik@gmail.com	01921474764		Demra	Dhaka	Bangladesh	2021-01-21 12:00:49
3	Sonjii	sonjii@gmail.com	01521474659	03/02/1990	Uttara	Dhaka	Bangladesh	2021-01-21 12:01:43
4	Nobel Sarker	nobel@gmail.com	01721487654	03/02/1995	Dhamrai,Dhaka	Dhaka	Bangladesh	2021-01-22 12:03:36
5	Eusha	eusha@gmail.com	0178676456	15/10/2003	Dhaka, uttora	Dhaka	Bangladesh	2021-01-30 23:04:42
6	Dity	dity@gmail.com	0171991933	02/01/1996	Farmgate, Dhaka	Dhaka	Bangladesh	2021-03-02 11:27:48
7	Asha	asha@gmail.com	0178676456	12/11/2000	Hajipur,Jamalpur	Jamalpur	Bangladesh	2021-03-02 12:13:29
8	Junayet	junayet@gmail.com	0171991933	02/01/1996	dhaka, Uttora	Dhaka	Bangladesh	2021-03-11 23:10:03

Figure: Admin can manage registered users.

Bike and Scooters Rental System | Admin Panel Account

MAIN

- Dashboard
- Brands
- Vehicles
- Manage Booking
- Manage Testimonials
- Manage Conatctus Query
- Reg Users
- Manage Pages
- Update Contact Info
- Manage Subscribers

Manage Pages

FORM FIELDS

select Page:

selected Page: Privacy And Policy

Page Details

B I U [Icons] Font Size... Font Family... Font Format... [Icons]

At vero eos et accusamus et iusto odio dignissimos ducimus qui blandit praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

Figure: Admin can manage all pages.

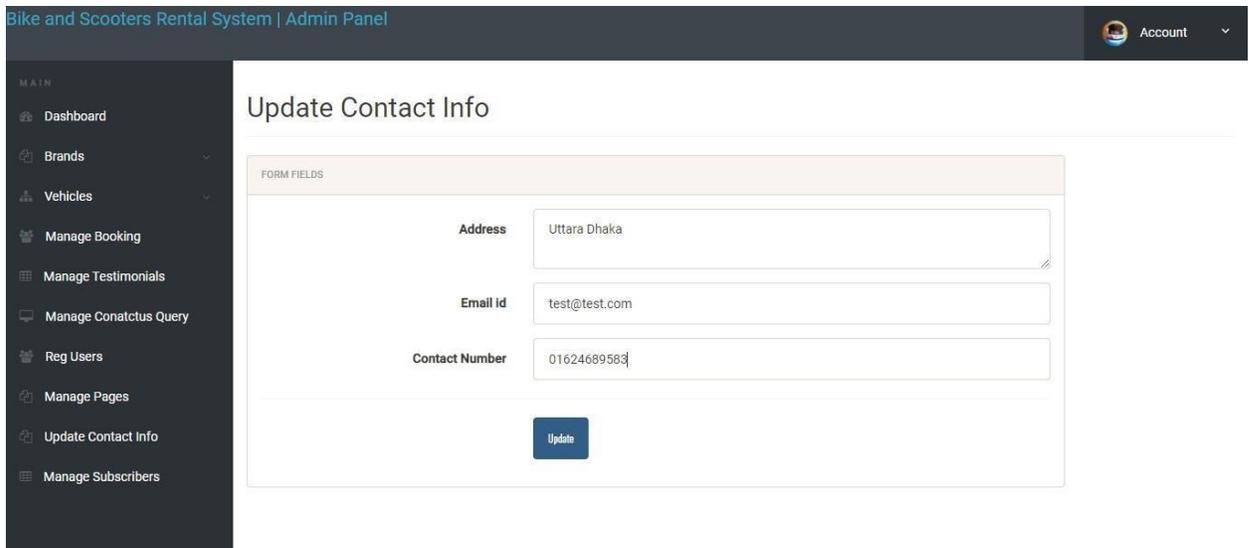


Figure: Admin can manage contact information.

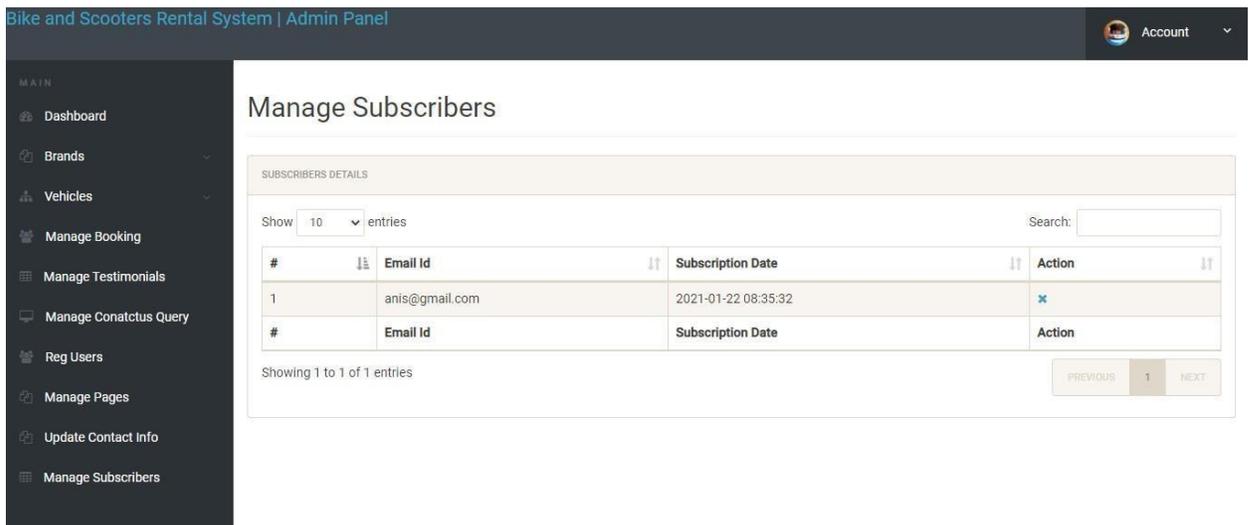


Figure: Admin can manage subscribers.

System code:

```

1  <?php
2  //error_reporting(0);
3  if(isset($_POST['signup']))
4  {
5      $fname=$_POST['fullname'];
6      $email=$_POST['emailid'];
7      $mobile=$_POST['mobileno'];
8      $password=md5($_POST['password']);
9      $sql="INSERT INTO tblusers(FullName,EmailId,ContactNo,Password) VALUES(:fname,:email,:mobile,:password)";
10     $query = $dbh->prepare($sql);
11     $query->bindParam(':fname',$fname,PDO::PARAM_STR);
12     $query->bindParam(':email',$email,PDO::PARAM_STR);
13     $query->bindParam(':mobile',$mobile,PDO::PARAM_STR);
14     $query->bindParam(':password',$password,PDO::PARAM_STR);
15     $query->execute();
16     $lastInsertId = $dbh->lastInsertId();
17     if($lastInsertId)
18     {
19         echo "<script>alert('Registration successfull. Now you can login');</script>";
20     }
21     else
22     {
23         echo "<script>alert('Something went wrong. Please try again');</script>";
24     }
25     }
26
27     >
28
29

```

Figure: Customer Signup form code

```

30 <script>
31 function checkAvailability() {
32 $("#loaderIcon").show();
33 jQuery.ajax({
34 url: "check_availability.php",
35 data: 'emailid='+$("#emailid").val(),
36 type: "POST",
37 success:function(data){
38 $("#user-availability-status").html(data);
39 $("#loaderIcon").hide();
40 },
41 error:function (){}
42 });
43 }
44 </script>
45 <script type="text/javascript">
46 function valid()
47 {
48 if(document.signup.password.value!= document.signup.confirmpassword.value)
49 {
50 alert("Password and Confirm Password Field do not match !!");
51 document.signup.confirmpassword.focus();
52 return false;
53 }
54 return true;
55 }
56 </script>
59 <div class="modal-content">
60 <div class="modal-header">
61 <button type="button" class="close" data-dismiss="modal" aria-label="Close"><span aria-hidden="true">&ti
62 <h3 class="modal-title">Sign Up</h3>
63 </div>
64 <div class="modal-body">
65 <div class="row">
66 <div class="signup_wrap">
67 <div class="col-md-12 col-sm-6">
68 <form method="post" name="signup" onSubmit="return valid();">
69 <div class="form-group">
70 <input type="text" class="form-control" name="fullname" placeholder="Full Name" required="req
71 </div>
72 <div class="form-group">
73 <input type="text" class="form-control" name="mobilen0" placeholder="Mobile Number" maxlength=
74 </div>
75 <div class="form-group">
76 <input type="email" class="form-control" name="emailid" id="emailid" onBlur="checkAvailability
77 <span id="user-availability-status" style="font-size:12px;"></span>
78 </div>
79 <div class="form-group">
80 <input type="password" class="form-control" name="password" placeholder="Password" required="r
81 </div>
82 <div class="form-group">
83 <input type="password" class="form-control" name="confirmpassword" placeholder="Confirm Passw
84 </div>
85 <div class="form-group checkbox">
86 <input type="checkbox" id="terms_agree" required="required" checked="">
87 <label for="terms_agree">I Agree with <a href="#">Terms and Conditions</a></label>
88 </div>
89 <div class="form-group">
90 <input type="submit" value="Sign Up" name="signup" id="submit" class="btn btn-block">

```

Figure: Customer login form code

```

1  <?php
2  if(isset($_POST['login']))
3  {
4  $email=$_POST['email'];
5  $password=md5($_POST['password']);
6  $sql ="SELECT EmailId,Password,FullName FROM tblusers WHERE EmailId=:email and Password=:password";
7  $query= $dbh -> prepare($sql);
8  $query-> bindParam(':email', $email, PDO::PARAM_STR);
9  $query-> bindParam(':password', $password, PDO::PARAM_STR);
10 $query-> execute();
11 $results=$query->fetchAll(PDO::FETCH_OBJ);
12 if($query->rowCount() > 0)
13 {
14 $_SESSION['login']=$_POST['email'];
15 $_SESSION['fname']=$results->FullName;
16 $currentpage=$_SERVER['REQUEST_URI'];
17 echo "<script type='text/javascript'> document.location = '$currentpage'; </script>";
18 } else{
19
20     echo "<script>alert('Invalid Details');</script>";
21
22 }
23
24 }
25
26 ?>
27

```

```

28 <div class="modal fade" id="loginform">
29     <div class="modal-dialog" role="document">
30         <div class="modal-content">
31             <div class="modal-header">
32                 <button type="button" class="close" data-dismiss="modal" aria-label="Close"><span aria-hidden="true">&ti
33                 <h3 class="modal-title">Login</h3>
34             </div>
35             <div class="modal-body">
36                 <div class="row">
37                     <div class="login_wrap">
38                         <div class="col-md-12 col-sm-6">
39                             <form method="post">
40                                 <div class="form-group">
41                                     <input type="email" class="form-control" name="email" placeholder="Email address*">
42                                 </div>
43                                 <div class="form-group">
44                                     <input type="password" class="form-control" name="password" placeholder="Password*">
45                                 </div>
46                                 <div class="form-group checkbox">
47                                     <input type="checkbox" id="remember">
48                                 </div>
49                                 <div class="form-group">
50                                     <input type="submit" name="login" value="Login" class="btn btn-block">
51                                 </div>
52                             </form>
53                         </div>
54                     </div>
55                 </div>
56             </div>

```

```

Bike and Scooters Rental System > 📄 bike-listing.php
58 <section class="page-header listing_page">
59   <div class="container">
60     <div class="page-header_wrap">
61       <div class="page-heading">
62         <h1>Bike and Scooters Listing</h1>
63       </div>
64       <ul class="coustom-breadcrumb">
65         <li><a href="#">Home</a></li>
66         <li>Bike and Scooters Listing</li>
67       </ul>
68     </div>
69   </div>
70   <!-- Dark Overlay-->
71   <div class="dark-overlay"></div>
72 </section>
73 <!-- /Page Header-->
74
75 <!--Listing-->
76 <section class="listing-page">
77   <div class="container">
78     <div class="row">
79       <div class="col-md-9 col-md-push-3">
80         <div class="result-sorting-wrapper">
81           <div class="sorting-count">
82 <?php
83 //Query for Listing count
84 $sql = "SELECT id from tblvehicles";
85 $query = $dbh -> prepare($sql);
86 $query->bindParam(':vhid',$vhid, PDO::PARAM_STR);
87 $query->execute();
88 $results=$query->fetchAll(PDO::FETCH_OBJ);
89 $cnt=$query->rowCount();
90 ?>

```

Figure: Bike & Scooter listing form code

```

95 <?php $sql = "SELECT tblvehicles.*,tblbrands.BrandName,tblbrands.id as bid from tblvehicles join tblbrands on t
96 $query = $dbh -> prepare($sql);
97 $query->execute();
98 $results=$query->fetchAll(PDO::FETCH_OBJ);
99 $cnt=1;
100 if($query->rowCount() > 0)
101 {
102 foreach($results as $result)
103 { ?>
104 <div class="product-listing-m gray-bg">
105 <div class="product-listing-img">
108 <h5><a href="vehical-details.php?vhid=<?php echo htmlentities($result->id);?>"><?php echo htmlenti
109 <p class="list-price">TK <?php echo htmlentities($result->PricePerDay);?> Per Day</p>
110 <ul>
111 <li><i class="fa fa-user" aria-hidden="true"></i><?php echo htmlentities($result->SeatingCapacity)
112 <li><i class="fa fa-calendar" aria-hidden="true"></i><?php echo htmlentities($result->ModelYear);?
113 <li><i class="fa fa-motorcycle" aria-hidden="true"></i><?php echo htmlentities($result->FuelType);
114 </ul>
115 <a href="vehical-details.php?vhid=<?php echo htmlentities($result->id);?>" class="btn">View Details
116 </div>
117 </div>
118 <?php }} ?>
119 </div>
120
121 <!--Side-Bar-->
122 <aside class="col-md-3 col-md-pull-9">
123 <div class="sidebar_widget">
124 <div class="widget_heading">
125 <h5><i class="fa fa-filter" aria-hidden="true"></i> Find Your Bike and Scooters </h5>
126 </div>
127 <div class="sidebar_filter">

```

Figure: Bike & Scooter listing form code

```

80 <?php
87 $useremail=$_SESSION['login'];
88 $sql = "SELECT * from tblusers where EmailId=:useremail";
89 $query = $dbh -> prepare($sql);
90 $query -> bindParam(':useremail',$useremail, PDO::PARAM_STR);
91 $query->execute();
92 $results=$query->fetchAll(PDO::FETCH_OBJ);
93 $cnt=1;
94 if($query->rowCount() > 0)
95 {
96 foreach($results as $result)
97 { ?>
98 <section class="user_profile inner_pages">
99 <div class="container">
100 <div class="user_profile_info gray-bg padding_4x4_40">
101 <div class="upload_user_logo"> 
102 </div>
103
104 <div class="dealer_info">
105 <h5><?php echo htmlentities($result->FullName);?></h5>
106 <p><?php echo htmlentities($result->Address);?><br>
107 <?php echo htmlentities($result->City);?>&nbsp;&nbsp;<?php echo htmlentities($result->Country); ?></p>
108 </div>
109 </div>
110 <div class="row">
111 <div class="col-md-3 col-sm-3">
112 <?php include('includes/sidebar.php');?>
113
114 <div class="col-md-6 col-sm-8">
115 <div class="profile_wrap">
116 <h5 class="uppercase underline">My Bookings </h5>
117 <div class="my_vehicles_list">
118 <ul class="vehicle_listing">

```

Figure: Customer Bike & Scooter booking form code

```

114     <div class="col-md-6 col-sm-8">
115         <div class="profile_wrap">
116             <h5 class="uppercase underline">My Bookings </h5>
117             <div class="my_vehicles_list">
118                 <ul class="vehicle_listing">
119                     <?php
120                     $useremail=$_SESSION['login'];
121                     $sql = "SELECT tblvehicles.Vimage1 as Vimage1,tblvehicles.VehiclesTitle,tblvehicles.id as vid,tblbrands.BrandName
122                     $query = $dbh -> prepare($sql);
123                     $query->bindParam(':useremail', $useremail, PDO::PARAM_STR);
124                     $query->execute();
125                     $results=$query->fetchAll(PDO::FETCH_OBJ);
126                     $cnt=1;
127                     if($query->rowCount() > 0)
128                     {
129                         foreach($results as $result)
130                         { ?>
131
132                     <li>
133                         <div class="vehicle_img"> <a href="vehical-details.php?vhid=<?php echo htmlentities($result->vid)
134                         <div class="vehicle_title">
135                             <h6><a href="vehical-details.php?vhid=<?php echo htmlentities($result->vid);?>"> <?php echo htmlentities($result->VehiclesTitle);?>
136                             <p><b>From Date:</b> <?php echo htmlentities($result->FromDate);?><br /> <b>To Date:</b> <?php
137                             </div>
138                             <?php if($result->Status==1)
139                             { ?>
140                                 <div class="vehicle_status"> <a href="#" class="btn outline btn-xs active-btn">Confirmed</a>
141                                 <div class="clearfix"></div>
142                             </div>
143
144                             <?php } else if($result->Status==2) { ?>
145                             <div class="vehicle_status"> <a href="#" class="btn outline btn-xs">Cancelled</a>
146                             <div class="clearfix"></div>

```

Figure: Customer Bike & Scooter booking form code

```

Bike and Scooters Rental System > admin > index.php
46 </head>
47
48 <body>
49
50 <div class="login-page bk-img" style="background-image: url(img/adminlogin0.jpg);">
51 <div class="form-content">
52 <div class="container">
53 <div class="row">
54 <div class="col-md-6 col-md-offset-3">
55 <h1 class="text-center text-bold text-light mt-4x">Bike and Scooters Rental System</h1>
56
57 <h2 class="text-center text-bold text-light mt-4x">ADMIN LOGIN</h2>
58 <div class="well row pt-2x pb-3x bk-light">
59 <div class="col-md-8 col-md-offset-2">
60 <form method="post">
61
62 <label for="" class="text-uppercase text-sm">Your Username </label>
63 <input type="text" placeholder="Username" name="username" class="form-control">
64
65 <label for="" class="text-uppercase text-sm">Password</label>
66 <input type="password" placeholder="Password" name="password" class="form-control">
67
68
69 <button class="btn btn-primary btn-block" name="login" type="submit">LOGIN</button>
70
71 </form>
72 </div>
73 </div>
74 </div>
75 </div>
76 </div>
77 </div>
78 </div>

```

Figure: Bike & Scooter admin login

References

(2020, Feb 5). Retrieved from investopedia:

<https://www.investopedia.com/terms/f/feasibilitystudy.asp>

(2020). Retrieved from guru99: <https://www.guru99.com/software-testingintroductionimportance.html>

(2020). Retrieved from wrike: <https://www.wrike.com/project-management-guide/faq/what-isafeasibilitystudy-in-project-management/>

(2020). Retrieved from wikipedia: https://en.wikipedia.org/wiki/Test_case

(2021). Retrieved from tripadvisor:

https://en.tripadvisor.com.hk/Attraction_Reviewg667467d18544546Reviews-Bike_Scooter_Rent_Cox_s_BazarCox_s_Bazar_Chittagong_Division.html#REVIEWS

(2021). Retrieved from bbike: <http://bbike.com.bd/> *entrepreneur*.

(2021, January 01). Retrieved from entrepreneur:

<https://www.entrepreneur.com/article/344479>

motorcyclevalley. (2021, Feb 2). Retrieved from motorcyclevalley:

<https://www.motorcyclevalley.com/news/coxs-bike-started-first-bike-rental-service-inbangladesh/>