

# **Final Year Project Report on Digital Vehicle Parking System**

**BY**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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**DHAKA, BANGLADESH**

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## APPROVAL

This Project/internship titled “**Digital Vehicle Parking System**” submitted by “**M. Atique Faisal Rafi**”, ID No: 172-15-10028 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06-01-2022.

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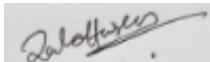
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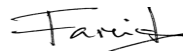
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## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Zerin Nasrin Tumpa, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## **ABSTRACT**

Now a day the congestion of traffic level increase day by day. With due respect of population of country of Bangladesh. People in general are much interested to buy personal vehicle then public transportation. Our principle center is around secure vehicle leaving for the vehicle proprietor in Dhaka city. As a matter of fact, when individuals headed off to some place they deal with enormous issues leaving their vehicles. To tackle this issue, I have made a web application for the vehicle proprietor and householder so they can deal with an agreement and safely leave their vehicle. The motivation behind the Digital Vehicle Parking System is to mechanize the current manual framework with the assistance of electronic gear and undeniable PC programming, satisfying their prerequisites, so their significant information. The justification behind the work for managing Vehicle Parking by and large all over town. It tracks all of the bits of knowledge with respect to the Parking Space, Parking Slots, Parking Fees. The customer will send sales to the parking space owner and following enduring the requesting customer will be allowed to leave his vehicle in the garage and at the hour of returning customer needs to pay the garage owner the charge of that time vehicle was there. . It likewise helps in the presentation of all capacities contrasted with our venture. Our endeavor centers around Business process motorization, for instance we have endeavored to computerize various patterns of the Digital Vehicle Parking System.

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# Chapter-1

## INTRODUCTION

### 1.1 Introduction

Primary goal of the Project on “Digital Vehicle Parking System” is to deal with all subtleties of vehicle, parking, parking space, parking Slots, parking fees. It deals with all the data about vehicles, vehicle identity, parking Fees. The venture is completely worked at the authoritative end and subsequently just the director is ensured admittance. The reason for the work for overseeing Vehicle Parking to a great extent out and about. It tracks every one of the insights regarding the Parking Space, Parking Slots, Parking Fees. The client will send solicitation to the carport proprietor and in the wake of tolerating the solicitation client will be permitted to leave his vehicle in the carport and at the hour of returning client needs to pay the carport proprietor the charge of that time vehicle was there. I figure it will be best for the vehicle proprietors it will get their vehicle and secure undesirable gridlocks and the street site way will be in every case free. Subsequently diminish the gridlock and carport proprietor will get some cash from that way.

#### **Functionality Provided by the Digital Vehicle Parking System:**

- Show Details of the Car and Parking Slot
- Manage the information of Parking
- Search Parking Space by Location
- Increasing the efficiency of parking the vehicles
- Integration of all record of parking slots.
- Manage the information of Vehicle
- Protect & Secure user Vehicle
- Increase the garage owner income
- Reduce Road Side Jam

## 1.2 Motivation

The Main goal of our system is to deal with the subtleties of vehicle, parking space, parking slots, parking Fees. It deals with all information about the vehicle, vehicle numbers, parking fees. We can see a lot of vehicle is parking here and there on the side of the road thus make huge traffic jam for the people. It also creates disturbance for the people who are walking in the road. Sometime parking vehicle become trashed by other vehicles, sometime these vehicles stolen by the thief. Because these vehicles are not secure from them. So I had planned that to do something to reduce this problem and protect vehicle from being stolen and use some free garage.

## 1.3 Objectives

- Provide parking system that is efficient and easy to use
- Reduce the traffic jam beside the road
- To make use of free garage.
- Secure and protect vehicle from being Stolen
- Booking for parking slot
- Easy payment System

## 1.4 Expected Outcome

It might assist gather with idealizing the board exhaustively. The assortment be self-explanatory, straightforward, and workable part. It will help one the knowledge to know last year's management in a clean and amazing way. It also helps in the performance of all functions compared to our project. Our venture focuses on Business process mechanization, for example we have attempted to automate different cycles of the Digital Vehicle Parking System.

- Secure Vehicle
- Protect vehicle for being stolen
- Reduce traffic jam
- Manage parking slot
- Manage parking fees
- Garage will be used properly
- Garage owner will be benefited and earn money

## 1.5 Report Layout

**Chapter (1):** Here we are talking about the aim and background and the expected outcome of our developed system.

**Chapter (2):** This is the feasibility analysis part for our system, we have analysed some feasibility tests for our design system.

**Chapter (3):** we name it requirement analysis of this section and discuss and design UML, DFD, LDF and all project essential things.

**Chapter (4):** Design and all required specification things will be discussed here.

**Chapter (5):** Another important part will be this, here all the implementation and testing and results will be discussed.

**Chapter (6):** How much impact it has on our society and environment that will be included here.

**Chapter (7):** The last but in the list conclusion and further for our system that will be discussed here.

## **Chapter-2**

### **BACKGROUND**

#### **2.1 Introduction**

The system has been made to reduce the problem of winning in the rehearsing manual framework. It is a web-based application and is available for all kinds of people like house owners and vehicle owners. It will reduce the vehicle parking problem in our country. It will also solve the roadside traffic jam problem from our country and make vehicles safe and secure for the vehicle owner and also make path for the house and the garage owner for a part-time income using their parking space.

#### **2.1 Economic Feasibility**

Our venture focuses on Business process mechanization, for example we have attempted to automate different cycles of the Digital Vehicle Parking System. It is some essential things to think about when developing a project or a system. we have to keep in mind the technology which will reduce our cost.

- It distinguishes the chance of working on a current framework, fostering another framework, and creating refined evaluations for additional improvement of the framework.
- It is utilized to acquire the framework of the issue and choose whether a possible or fitting arrangement exists or not.

#### **2.3 Technical Feasibility**

This protected the look at of function, performance, and constraints which could have an effect on the capacity to gain a suitable system. For this feasibility look at, we studied whole capability to be supplied with inside the system, as defined with inside the System Requirement Specification (SRS), and checked if the whole thing turned into feasible the usage of a one of a kind variety of frontend and backend platforms.

## **2.4 Operational Feasibility**

No doubt the proposed machine is absolutely GUI primarily based totally this is very person-pleasant and all inputs to be taken all self-explanatory even to a layman. Besides, a right education has been carried out to permit recognize the essence of the machine to the customers in order that they experience snug with a new machine. As always our examine is worried the customers are snug and satisfied because the machine has reduced down their masses and doing.

## **2.5 Identification of Need**

Assuming any facts changed into to be located it became needed to undergo the various registers, records there ought to exist not anything like document age. There could continually be superfluous usage of time whilst coming into facts and recovering information. another trouble become that it was extraordinarily tough to tune down errors whilst coming into the records. while the facts had been entered it became virtually difficult to refresh these data.

## **2.6 Related Work**

Our main focus is on secure vehicle parking for the vehicle owner in Dhaka city. Actually when people went somewhere they face huge problem to parking their vehicle. To solve this problem, I have made a web app for the vehicle owner and house holder so that they can manage a contract and securely parking their vehicle. I have analysis some other project and research paper also they just working only parking management work. In [2], [3] these are some research paper they try to solve the parking management problem and [7], [8] they are working on Arduino project only. But there is no web app for this field. So I made a web app to manage parking system and secure the vehicle for vehicle owner. And the garage owner also gets some profit from here. I have upgrade the manual parking system to a digital parking system. Thus help both the vehicle owner and the Garage owners also.

## Chapter 3

### Requirement Specification

#### 3.1 Business Process Modeling

Basically, we want to evaluate our project in our country's people. For this reason, at first, we choose to make some parts of this project as non-productive business. We prefer Business Process Modeling. we can put it to use business cause. We select enterprise manner modeling due to the fact of its improving efficiency, transparency, process agility etc.

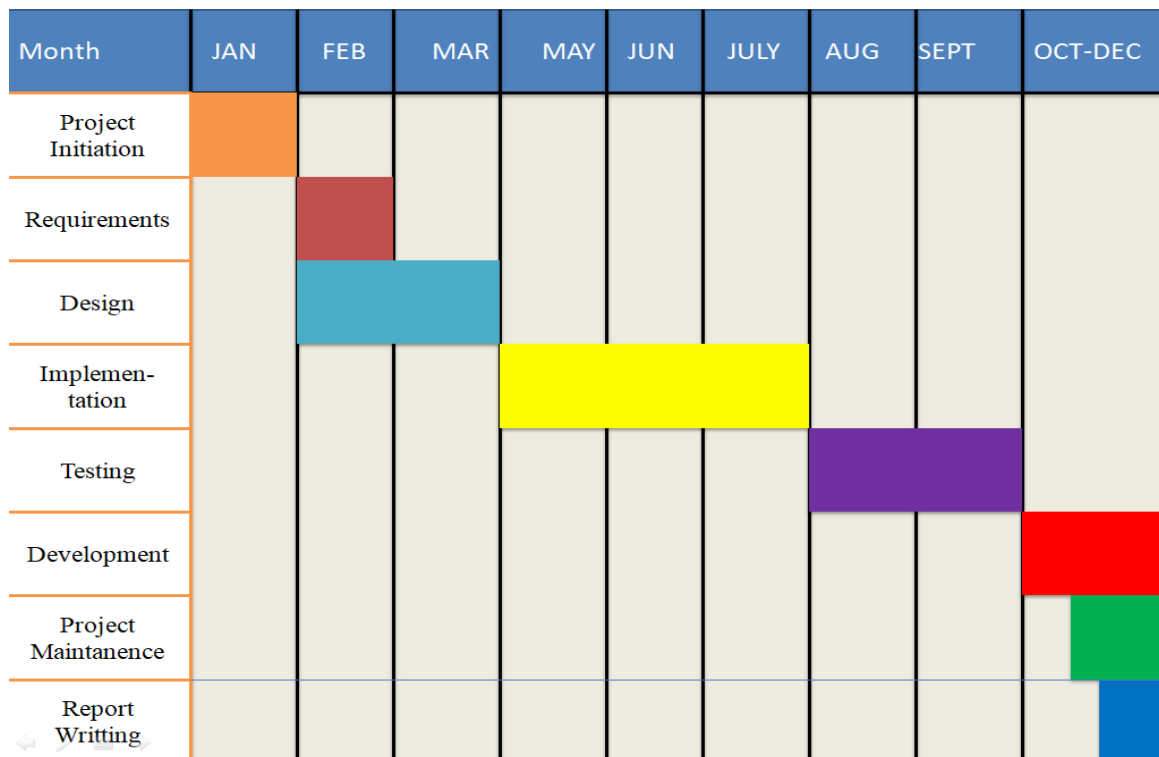


Figure 3.1.1: Gantt chart for Digital Vehicle Parking System

It facilitates with a deeper understanding how could be our system work. We can know total time spend to complete all the task of our project.

### 3.2 Requirement Collection and Analysis

Demand investigation affects system interactions with other parts of the framework and further imposes certain limitations. The engineer develops key pre-programmed requirements that provide critical testing. Should our team neglect to collect all the necessary building or planning requirements we will then face a major problem. In this way, in such a case the diversity of need should be an important obligation of the committed party. The capacity and execution allotted to programming as a feature of framework designing are refined by building up a total data portrayal, a nitty gritty useful and social depiction, a sign of execution prerequisites and plan imperatives, proper approval measures, and different information relevant to necessities.

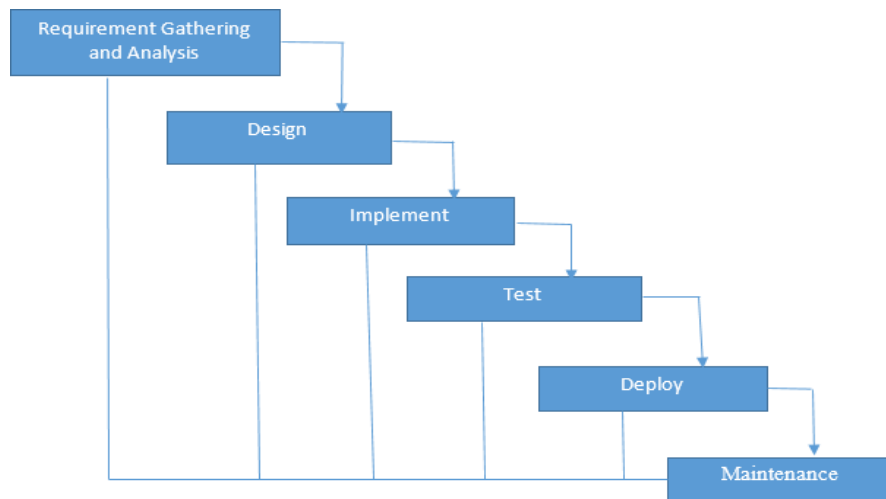


Figure 3.2: Waterfall Model for Digital Vehicle Parking System

In our project Waterfall Model has been used for development. Because in line with our task function its very effective, easy, and smooth to apprehend



### 3.3 Use case Modeling and Description

This Use Case Diagram is a realistic portrayal of the communications of some of the components of the automobile Parking machine. It addresses the method utilized in framework investigation to differentiate. provide an explanation for and kind out framework conditions of the automobile Parking system. The number one entertainers of the automobile Parking machine on this Use Case Diagram Are Admin, Agent, a consumer who play out the different types of usage cases like manipulating vehicle. manipulate Parking. manage Parking Slots, manipulate Parking space, manipulate Parking expenses. control car proprietor, control automobile quantity. manipulate customers and complete vehicle Parking System Operations. significant components of the UML use case graph of the vehicle Parking system are displayed on the image under.

The significant components of the UML among actors and the use cases of Digital Vehicle Parking System:

**Admin:** Use cases of Admin are managing vehicles, parking, parking slots., parking space, parking Fees, vehicles owner, users and full system operations, parking slots

**Users:** For user Use Case are search parking, Allot parking. check charges, make payments, manage profile.

**Agent:** If we look on agent/house holder then we can see the Use Case consisting collect payments, calculate parking charges, assign parking

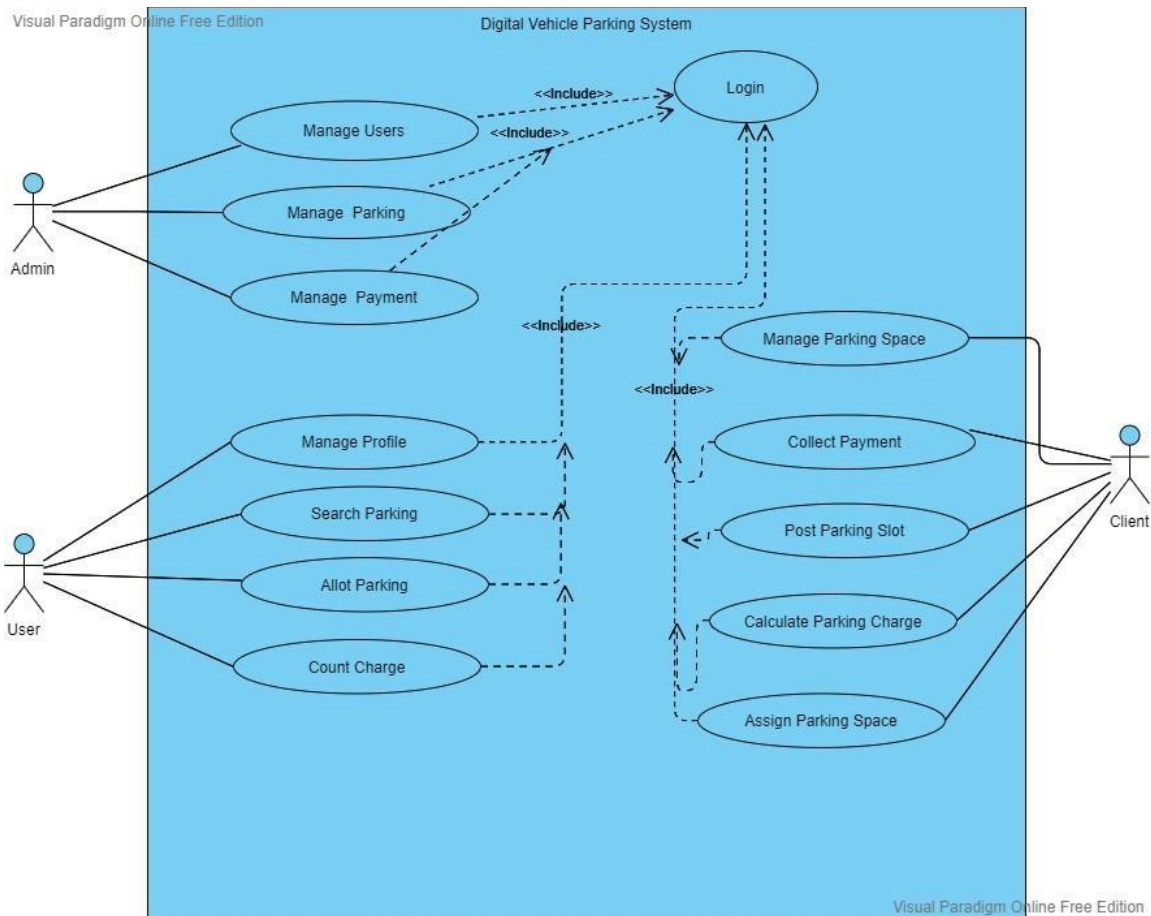


Figure 3.3: Use case Diagram for Digital Vehicle Parking System

Our gadget has the following set of use cases. Inside the device of our challenge users can be ordinary or prepared. Both users need to log in first after which get the carrier. A person without registration can view the website but if he/she attempts to study the book then should log in to the website. For finishing successful login, the net apps, the person has to top off a few basic facts. If any user wants to read premium books, he/she has to buy a package. User has to payment by using PayPal account. Admin has to log in first. Then he can update and delete books.

### 3.4 Logical Data Model

The Logical Data Model is utilized to characterize the design of information components and to set connections between them. The coherent information model adds additional data to the reasonable information model components. The benefit of utilizing a Logical information model is to give an establishment to shape the base for the Physical model. Be that as it may, the displaying structure stays conventional

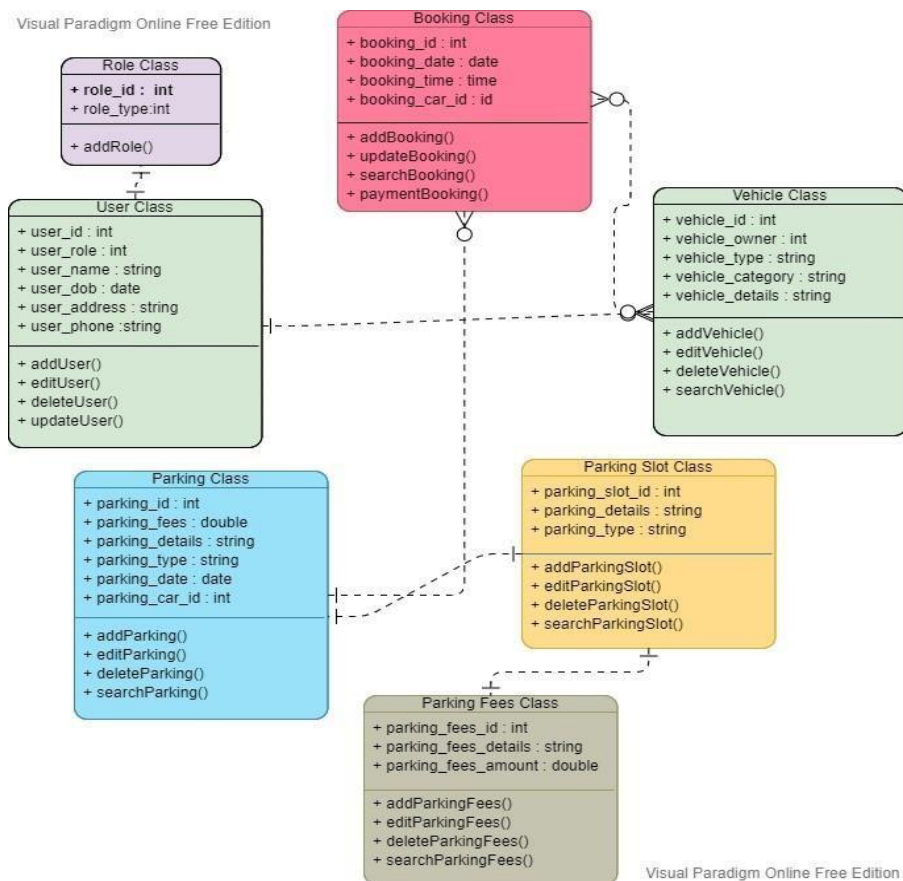
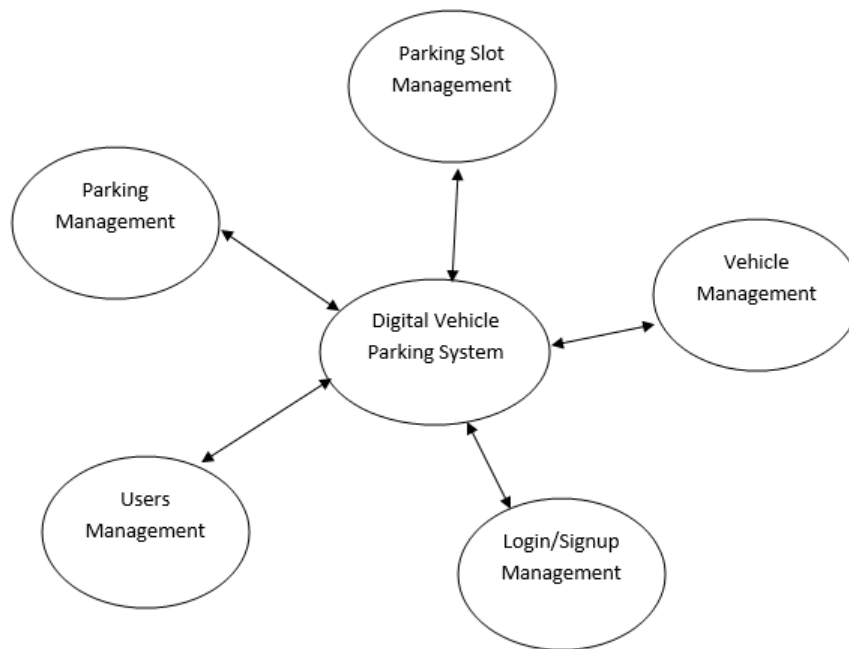


Figure 3.4: Logical data model for Digital Vehicle Parking System

It helps to organize identify areas for business process improvement, design well-information application. It also reduces cost and increase the efficiency, it also provides a basis for future model.

### 3.5 Data Flow Diagram

Digital vehicle parking system records flow chart is regularly applied as a starter step to make a definition of the vehicle Parking without meticulously describing the scenario, that could later be elaborated. It often contains and huge application dataflow and cycles of the car Parking method. It includes all the patron flow and their substances like all the development of the car, parking, parking area, slots, fees car owner all of the under graphs had been utilized for the perception of facts managing and organized plan of the car Parking interplay and operating circulate.



Level 0 DFD

Figure 3.5.1: DFD Level 0 for Digital Vehicle Parking System

In the above figure we can see the Zero DFD of Digital vehicle parking system, which is the initial stage of our system.

Level 1 information waft diagram highlights predominant features of a system. Visualize incoming information drift, processes, and output data flows. First level DFD for our system shows how the framework is separated into sub-frameworks (processes), every one of which manages at least one of the information streams to or from an outer specialist, and which together give all of the usefulness for our system framework overall

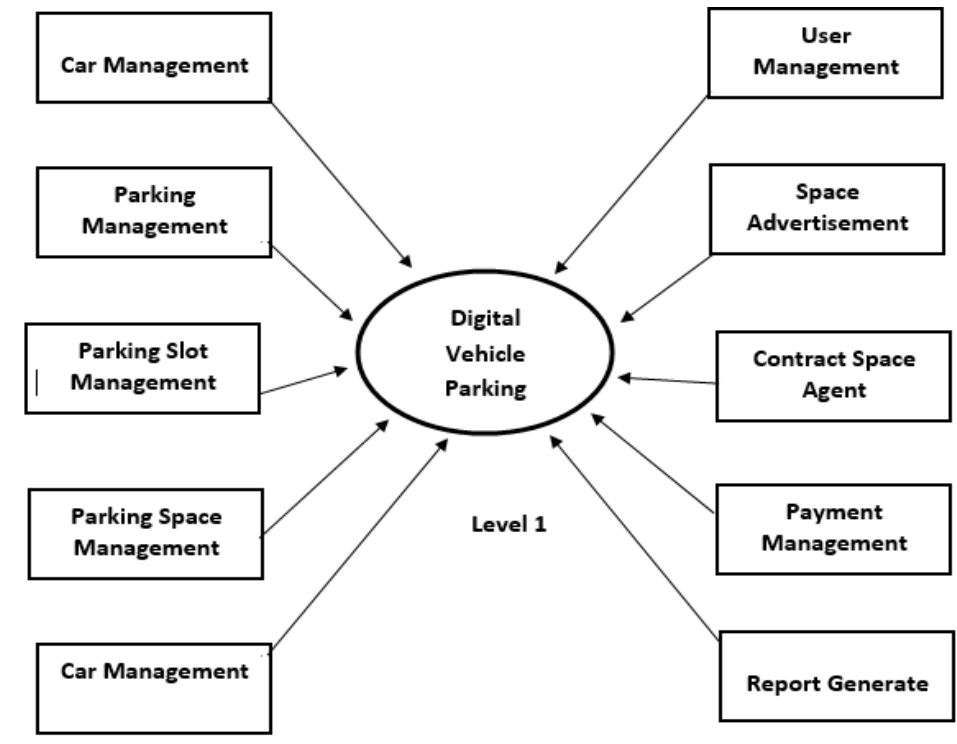


Figure 3.5.2: Level 1 DFD of digital vehicle parking system.

DFD level 2 then, at that point, goes one stage further into parts of Level 1 of the Digital Vehicle Parking System. It might require more functionalities of vehicle parking to arrive at the vital degree insight regarding vehicle parking working.

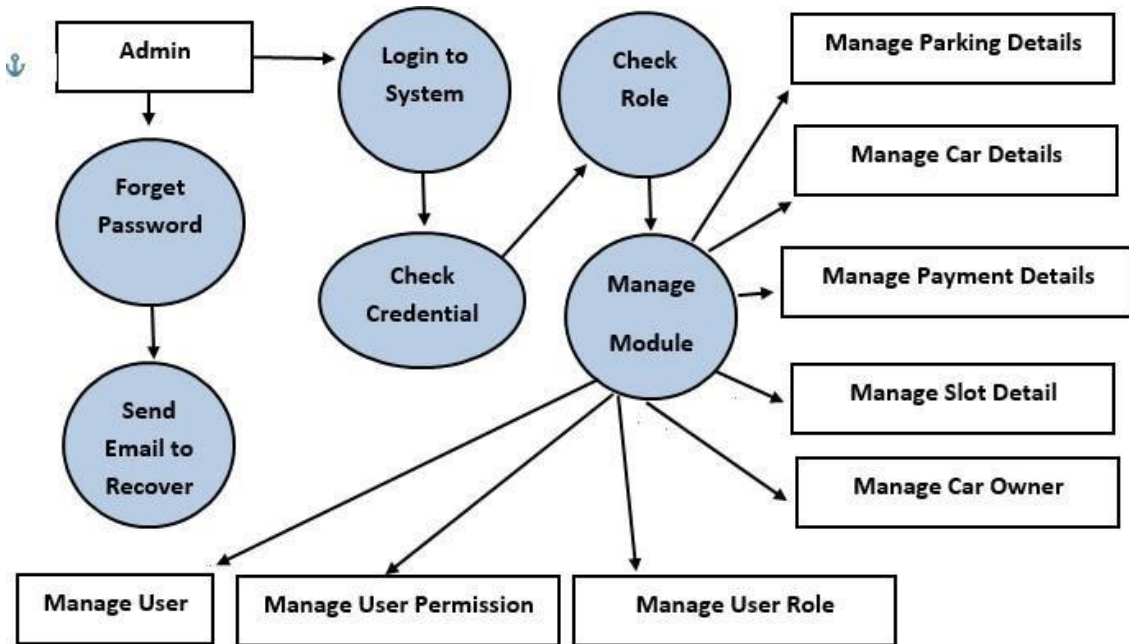


Figure 3.5.3: Level 2 DFD for empire knowledge.

Here is the level 2 DFD of our system, and we have described one of part here so that anyone can easily understand about our system carefully.

## CHAPTER 4

### DESIGN SPECIFICATION

#### 4.1 Structure Model

A structural model is a design map for an enormous programming framework or group of frameworks (space). The underlying model utilized in a space addresses the place of assembly for compromises among practicality and execution, quality and effectiveness. Thusly, various spaces will probably have diverse underlying models. The possibility of an underlying model developed out of the Ada Simulator Validation Program (ASVP), which set up the adequacy of Ada for continuous preparing reproduction  
In this stage, an intelligent framework is constructed which satisfies the given necessities.

**1. Primary Design Phase:** It is the first phase where the system is arranged at the square level. The squares are made dependent on the assessment done in the issue ID stage. Different squares which is made for different limits highlight is put on restricting the information stream between blocks. Thus, developments of each sort item that require more correspondence are kept in one square.

**2. Secondary Design Phase:** This is another phase which called secondary phase the secondary design phases the nitty-gritty plan of each square is performed.

Overall errands engaged with the plan interaction are the accompanying:

- Plan different squares for by and large framework processes.
- Plan more modest, smaller, and functional modules in each square.
- Plan diverse database plans.
- Decide nuances of tasks to achieve the best convenience.
- Plan the kind of wellsprings of data and yields of the structure.
- Perform documentation of the plan.

## 4.2 Front-end Design

This area will cover what sorts of programming language I used to construct up the Hungry Chomps the board framework. Next to this, this segment will cover the advancement and execution design just as preparing for the framework utilizing.

There is such a lot of programming language to foster an electronic application. Among every one of them I have picked the accompanying language to foster the framework:

- Html
- CSS
- Bootstrap
- JavaScript's
- JQuery
- PHP

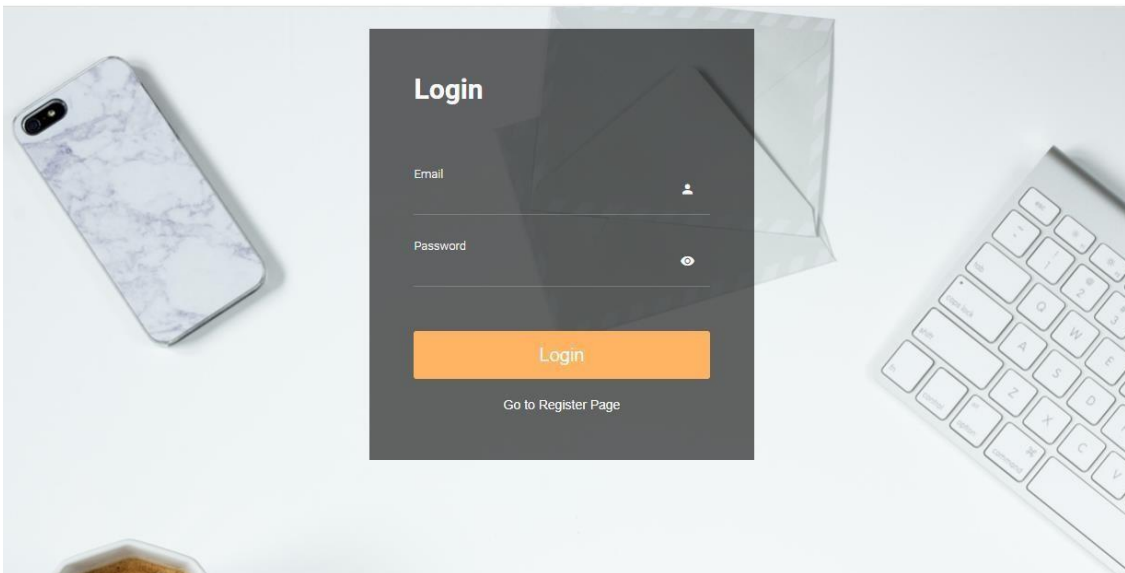


Figure 4.2: Front-end design of login page.

Here is the design of User Login page where user need to give their email and password to login in their dashboard. Only Correct credential allow user to access their dashboard.



## 4.2.1 HTML

HTML is used to make electronic information, which might be regarded on the www. each and each web page includes a motion of relationship with diverse pages and this is known as links. it could be helped by using headways, as an example, Cascading fashion Sheets (CSS) and scripting vernaculars, for example, JavaScript.

## 4.2.2 CSS

CSS is a basic component for making style (e.g., text styles, colors, dispersing) to Web reports. Exploration was done into Cascading Style Sheets (CSS) and the various ways it very well may be utilized to control both design and style of the site.

```
.table-danger tbody+tbody{border-color:#eb8ea4}.table-hover .table-danger: hover{background-color:#f0acbd}.table-hover .table-danger: hover>td,.table-hover .table-danger: hover>th{background-color:#f0acbd}.table-light,.table-light>th,.table-light>td{background-color:#fafafa}.table-light th,.table-light td,.table-light thead th,.table-light tbody+tbody{border-color:#f6f6f6}.table-hover .table-light: hover{background-color:#ededed}.table-hover .table-light: hover>td,.table-hover .table-light: hover>th{background-color:#ededed}.table-dark,.table-dark>th,.table-dark>td{background-color:#c6c8ca}.table-dark th,.table-dark td,.table-dark thead th,.table-dark tbody+tbody{border-color:#95999c}.table-hover .table-dark: hover{background-color:#b9bbbe}.table-hover .table-dark: hover>td,.table-hover .table-dark: hover>th{background-color:#b9bbbe}.table-focus,.table-focus>th,.table-focus>td{background-color:#cbcacf}.table-focus th,.table-focus td,.table-focus thead th,.table-focus tbody+tbody{border-color:#9e9ca6}.table-hover .table-focus: hover{background-color:#bebd3}.table-hover .table-focus: hover>td,.table-hover .table-focus: hover>th{background-color:#bebd3}.table-alternate,.table-alternate>th,.table-alternate>td{background-color:#d9cdde}.table-alternate th,.table-alternate td,.table-alternate thead th,.table-alternate tbody+tbody{border-color:#b9a2c2}.table-hover .table-alternate: hover{background-color:#cbed4}.table-hover .table-alternate: hover>td,.table-hover .table-alternate: hover>th{background-color:#cbed4}.table-active,.table-active>th,.table-active>td{background-color:#e0f3ff}.table-hover .table-active: hover{background-color:#c7e9ff}.table-hover .table-active: hover>td,.table-hover .table-active: hover>th{background-color:#c7e9ff}.table .thead-dark th{color:#fff;background-color:#212529;border-color:#32383e}.table .thead-light th{color:#6c757d;background-color:#f8f9fa;border-color:#e9ecef}.table-dark{color:#fff;background-color:#212529}.table-dark th,.table-dark td
```

Figure 4.2.2: CSS of the front-end design

Here we can see some sample CSS code that we have used to design our website and give them a perfect look so that it become user friendly.

### 4.2.3 Bootstrap

Bootstrap contains hypertext markup language and CSS-based arrange formats for various interface elements and is planned to ease net advancement. By refreshing the CSS, you'll be able to befits current drifts chop-chop. The engineers ought to focus additional on association elements because the actual bootstrap can wear down commonplace views on info, which might be modified later forward you would like to style.

```
50     background-color: transparent;
51     -webkit-text-decoration-skip: objects;
52 }
53
54 a:active,
55 a:hover {
56     outline-width: 0;
57 }
58
59 abbr[title] {
60     border-bottom: none;
61     text-decoration: underline;
62     text-decoration: underline dotted;
63 }
64
65 b,
66 strong {
67     font-weight: inherit;
68 }
69
70 b,
71 strong {
72     font-weight: bolder;
73 }
```

Figure 4.2.3: Bootstrap design of Digital Vehicle Parking System

### 4.2.4 Java Script

Java Script is also known as JS. it's far a dynamic programming language. Basically it is the programming language of the web for its lightweight. JavaScript gives web pages' interactive components that connect with a client. It is at this point used by 94.5% of all locales and, notwithstanding at first being arranged as a client side language, JavaScript has now progressed toward the server-side of destinations (by virtue of Node. js), mobile phones (on account of React Native and Ionic) and workspace (benevolence of Electron).

```

$(document).on('click', '#interested', function(event) {
    event.preventDefault();
    var pk=$(this).attr('value');
    $.ajax({
        type:'POST',
        url:'{% url 'interested_event' %}',
        data: {'event_id':pk, 'csrfmiddlewaretoken': '{{ csrf_token }}'},
        dataType:'json',
        success : function (response) {
            $("#interested-section").html(response['form']);
            console.log("done");
        },
        error: function (rs,e) {
            console.log(rs.responseText);
        }
    });
});

```

Figure 4.2.4: Java Script code of Digital Vehicle Parking System

## 4.3 Back-end Design

Backend design contains a worker, an utility, and a database. it's miles simply forming code that isn't visible direct or eye to eye. this is a focal piece of programming and the total structure relies on it. it's miles likewise referred to as employee side programming. The essentials of backend net improvement contain dialects, for example, Java, Ruby, Python, Hypertext Preprocessor, .net and so on. There are heaps of multipliers remains alive respect the scripting dialects or the laborer side dialects data base, framework, data base association, security, check, endorsement, data affirming, data fortifications as well.

### 4.3.1 PHP

The appearance of PHP current website specialists has not actually settled with the help of use estimation posted on various destinations. Also, the pursued programming language, PHP is moreover more notable than other programming tongues. At this point, nearly around 82% of the destinations are using PHP as a server-side programming language.

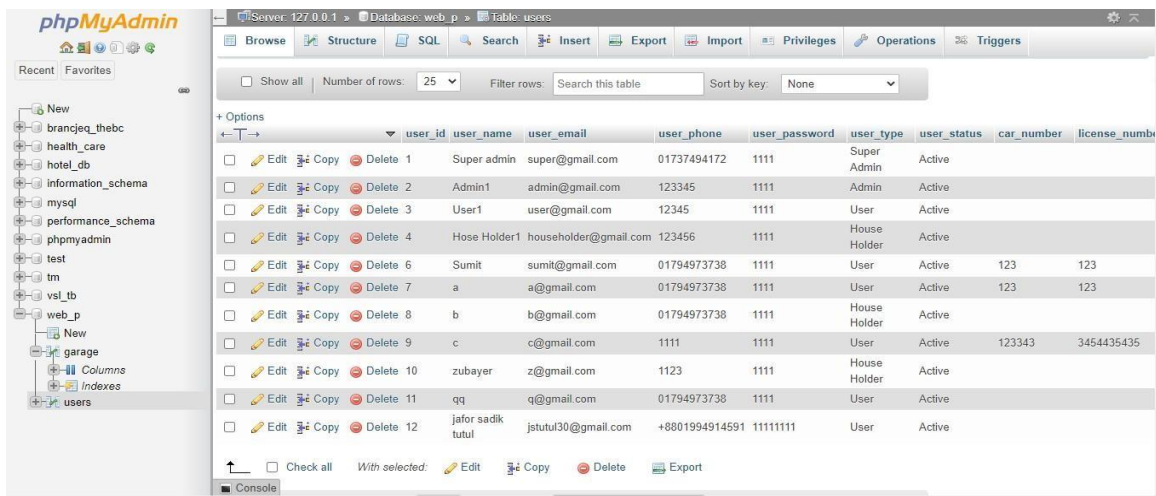
Coming up next are a couple of features given that depicts the meaning of PHP in web headway.

### Reason for choosing these PHP:

- It's easy to learn and use
- It's open-source, free and friendly
- All OS compatibility
- Flexible and dynamic
- Resources, resources, resources
- All the things you can do with PHP
- It enjoys strong community support
- It is well connected with databases
- There's a lot of legacy code

## 4.3.2 MYSQL

MYSQL is the standard language for storing, controlling and retrieving data from databases. Designed to manage data stored in an integrated data management system (RDBMS). MySQLite databases are server-free and independent, as they read and compose data into a record.



	user_id	user_name	user_email	user_phone	user_password	user_type	user_status	car_number	license_number
<input type="checkbox"/>	1	Super admin	super@gmail.com	01737494172	1111	Super Admin	Active		
<input type="checkbox"/>	2	Admin1	admin@gmail.com	123345	1111	Admin	Active		
<input type="checkbox"/>	3	User1	user@gmail.com	12345	1111	User	Active		
<input type="checkbox"/>	4	Hose Holder1	householder@gmail.com	123456	1111	House Holder	Active		
<input type="checkbox"/>	6	Sumit	sumit@gmail.com	01794973738	1111	User	Active	123	123
<input type="checkbox"/>	7	a	a@gmail.com	01794973738	1111	User	Active	123	123
<input type="checkbox"/>	8	b	b@gmail.com	01794973738	1111	House Holder	Active		
<input type="checkbox"/>	9	c	c@gmail.com	1111	1111	User	Active	123343	3454435435
<input type="checkbox"/>	10	zubayer	z@gmail.com	1123	1111	House Holder	Active		
<input type="checkbox"/>	11	qq	q@gmail.com	01794973738	1111	User	Active		
<input type="checkbox"/>	12	jafor sadik tutul	jatutul30@gmail.com	+8801994914591	11111111	User	Active		

Figure 4.3.2: Using MYSQL for database

## 4.4 Implementation Requirements

- To complete the Backend of the system we need a server site language that is PHP.
- For storing the data, we will need a MySQL Database
- It is intended to deal with information in a relational database management system.
- We design the website by using html, css and bootstrap.
- The website gives some features to all clients.
- Java script is used for creating network-driven applications.
- An error message will be showed for invalid data.
- Bootstrap is used for dynamic strut
- Some Django Libraries.

## Implementation and Testing

### 5.1 System cutover from the development architecture to the implementation architecture:

**Pilot:** It is one of the system of executing another framework in an association. in this manner one of the piece of the created framework will execute for making sure that the piece of the framework is moving along as expected.

**Parallel:** It is an another aspect way the created framework runs alongside the old framework.

**Big Bang:** For controlling this situation, created framework was sent straightforwardly. The old framework isn't permitted subsequent to sending the new framework.

For "Digital Vehicle Parking System" Above all the system architecture for implementing our system I'm going to select the parallel approach. as it runs an current device with the brand new system, there may be a large danger to get better if the brand new device isn't working well. My proposed tool is going to be changed the entire gadget. with inside the path of implementation, it gives the surety that I've a backup plan if the tool had been given failure for any purpose. That's why I've selected the Parallel strategy

### 5.2 Implementation of database

The motivation behind a data set is to help your business stay coordinated and keep data effectively accessible. MySQL is a famous open-source data set administration framework usually use in web based application where we need to store all kind of data. Because MySQL is a best database for web which gives more secure and flexible data for user.

We have implement a MySQL database and we have also added a sample demo for our data table below.

The screenshot shows the phpMyAdmin interface for a MySQL database named 'web\_p' with a table named 'users'. The table contains 12 rows of user data. The columns are: user\_id, user\_name, user\_email, user\_phone, user\_password, user\_type, user\_status, car\_number, and license\_number.

user_id	user_name	user_email	user_phone	user_password	user_type	user_status	car_number	license_number
1	Super admin	super@gmail.com	01737494172	1111	Super Admin	Active		
2	Admin1	admin@gmail.com	123345	1111	Admin	Active		
3	User1	user@gmail.com	12345	1111	User	Active		
4	Hose Holder1	householder@gmail.com	123456	1111	House Holder	Active		
6	Sumit	sumit@gmail.com	01794973738	1111	User	Active	123	123
7	a	a@gmail.com	01794973738	1111	User	Active	123	123
8	b	b@gmail.com	01794973738	1111	House Holder	Active		
9	c	c@gmail.com	1111	1111	User	Active	123343	3454435435
10	zubayer	z@gmail.com	1123	1111	House Holder	Active		
11	qq	q@gmail.com	01794973738	1111	User	Active		
	jafor sadik tutul	jstutu30@gmail.com	+8801994914591	11111111	User	Active		

Figure 5.2: Implementation of database.

### 5.3 Implementation and Front-End Design

We have design a user friendly design for our user so that they can enjoy our website the they are using it. Focusing on this part we have made some amazing dashboard for both our user house owner and the vehicle owner’s that they can easily use and understood all the features easily.

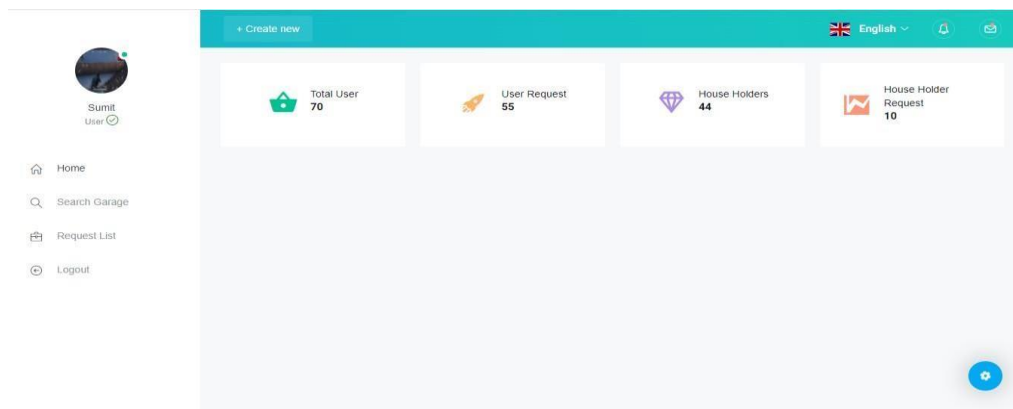


Figure 5.3.1: User Dashboard

The checking out framework associated with front-quit development to make the front of the entirety of a domain change dependably thusly the originator solicitations to constantly think about the way to subject is advancing.

This is the user dashboard design with html and CSS, a user will find all his/her essential information and need in dashboard. Here We can see some option like Search Garages, using this user can find all available garage of his nearby and also can search by the name of the location.

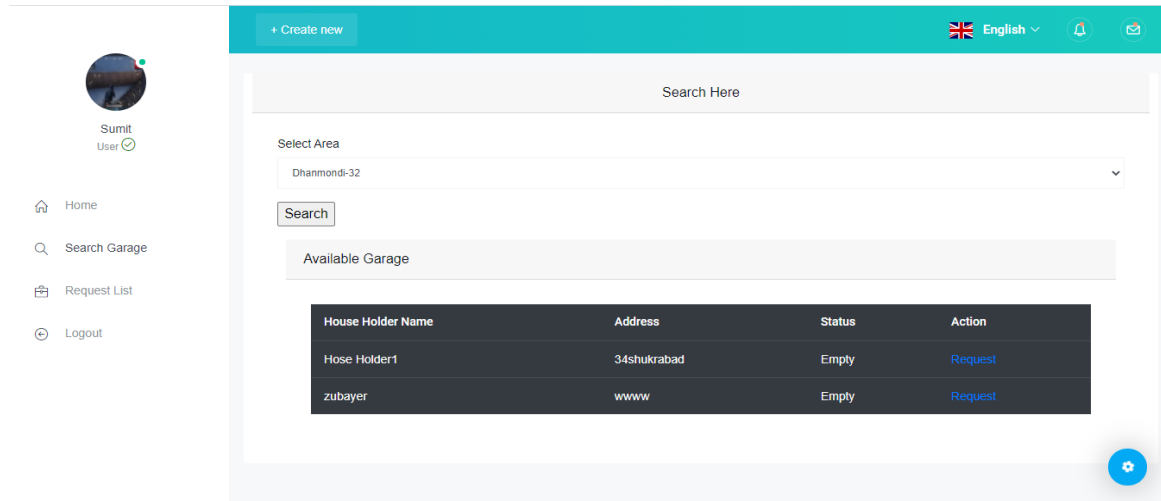


Figure 5.3.2: Garage search page

After clicking search button user will see all the available location and he can send a request to the garage owner for a rent.

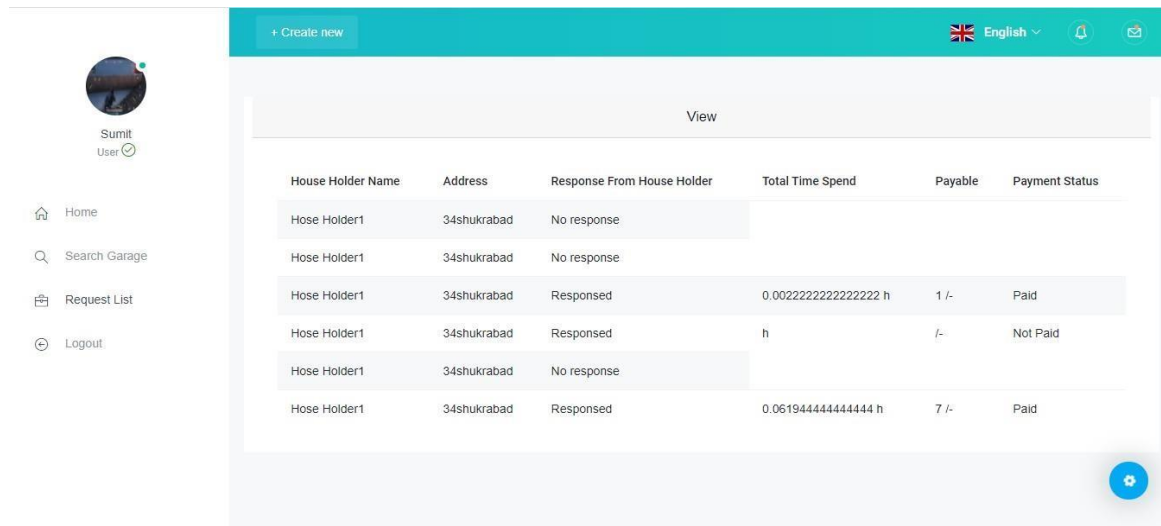


Figure 5.3.3: Garage request page



Here is the all requested list is listed in a well decorated table, user can see the request details from this page and also manage it.

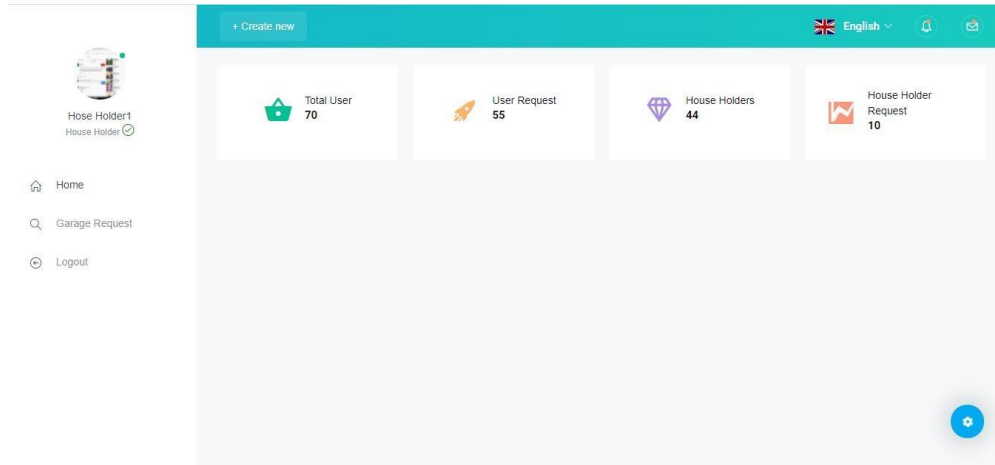


Figure 5.3.4: Garage request page

This is Garage owner dashboard where he can manage his account and all request and also receive money from the car owner.

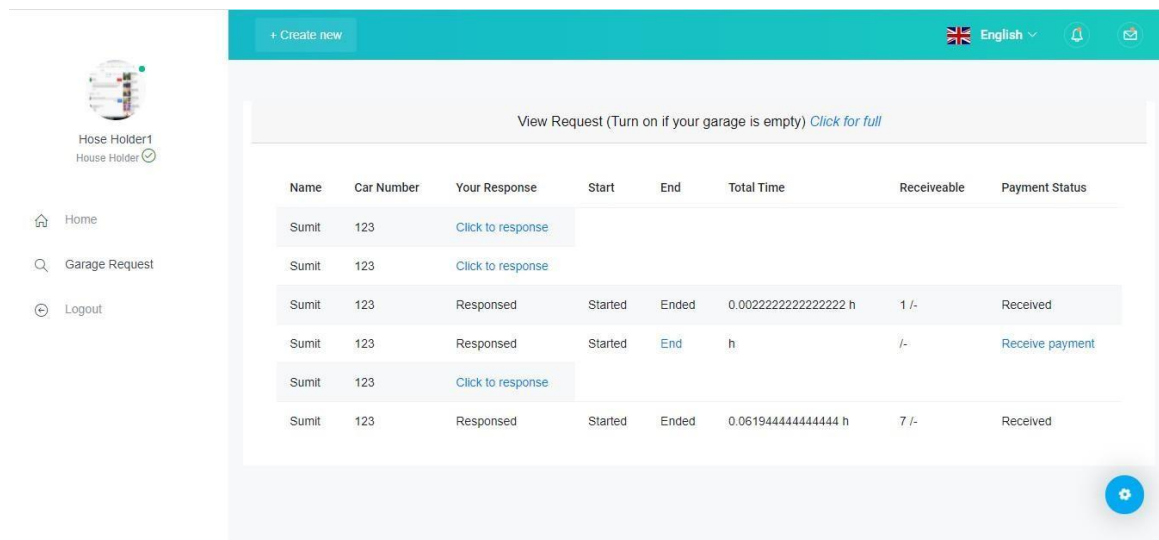


Figure 5.3.5: Car Owner request list

Here Garage owner can see all the request sent by the car owner and the request to accept the request, Garage owner can also receive payment from here and also cancel the request.

**Admin:** In admin dashboard he can manage all user data, If admin want then he can deactivate any user from the website and also activate them from the request list.

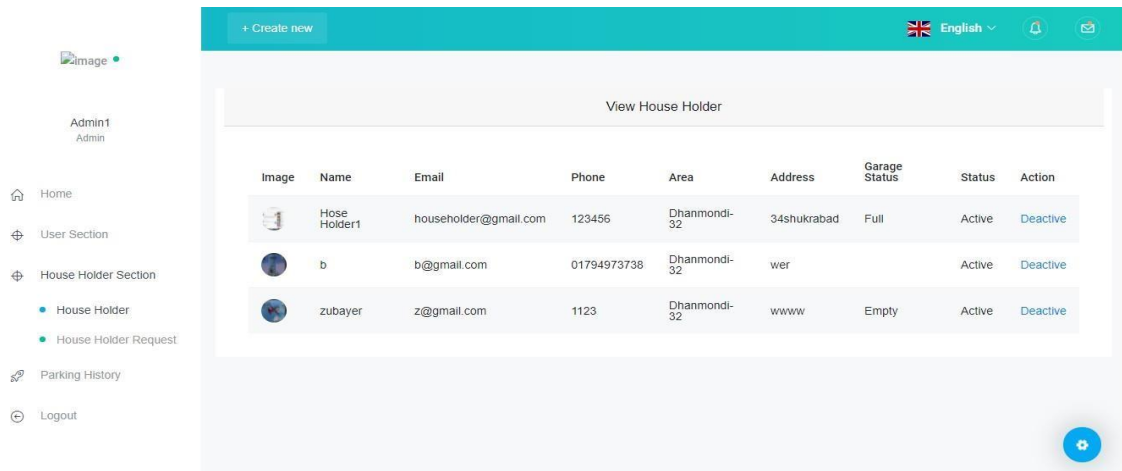


Figure 5.3.6: Admin panel user list

There is another option for the admin that he can manage house holder data and can deactivate any user from the website and also activate them from the request list.

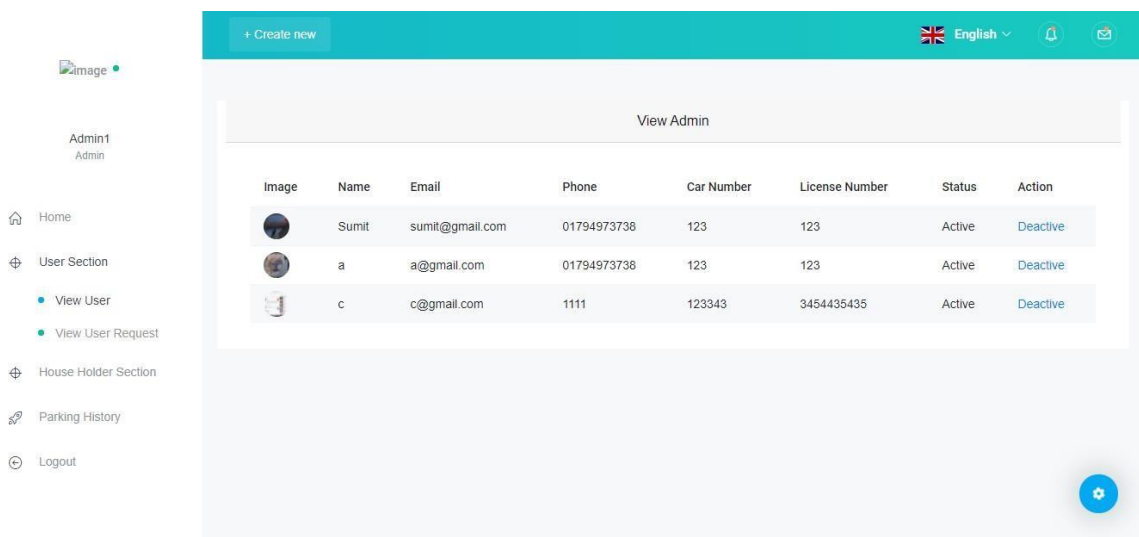


Figure 5.3.7: Admin panel house holder list

All house holder list will be displayed here, admin can also view the parking history from his dashboard so that he can get an idea about the statistic of the parking of any month,

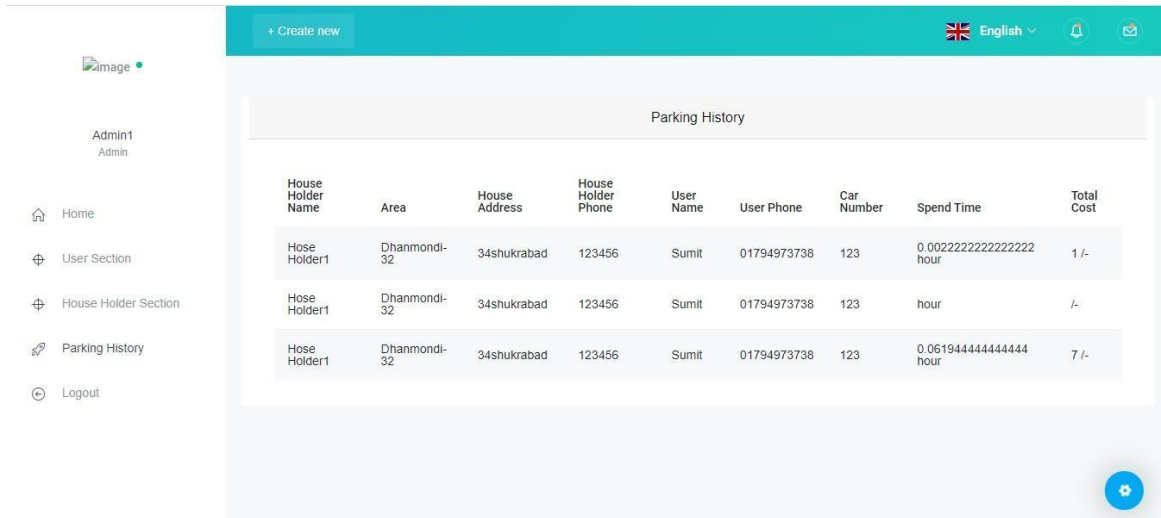


Figure 5.3.8: Admin panel parking history

**Super Admin:** A Super admin can have performed all the task that a admin can and also do some more things that an admin can't. there is table for admin list where all the admin of this website will be listed.

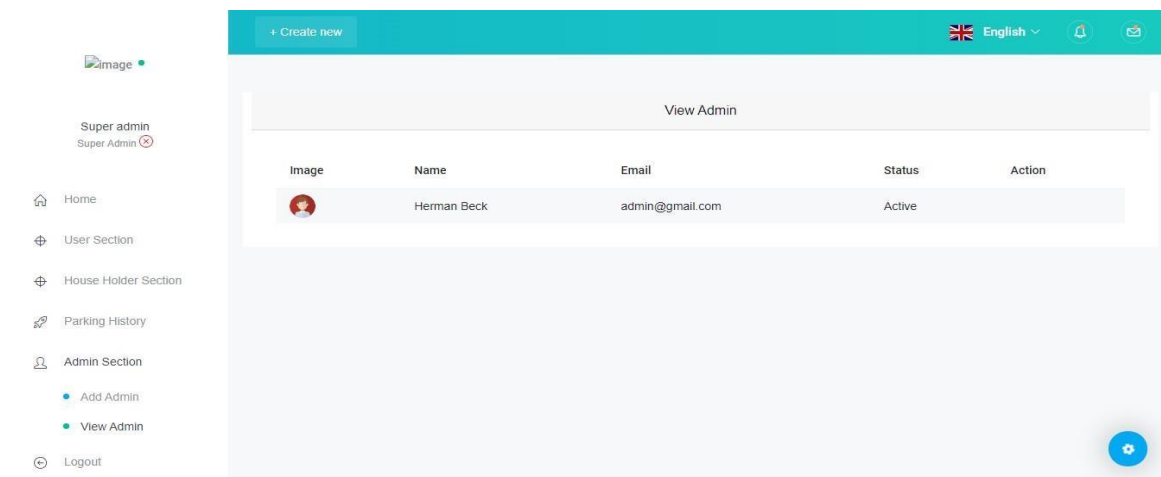
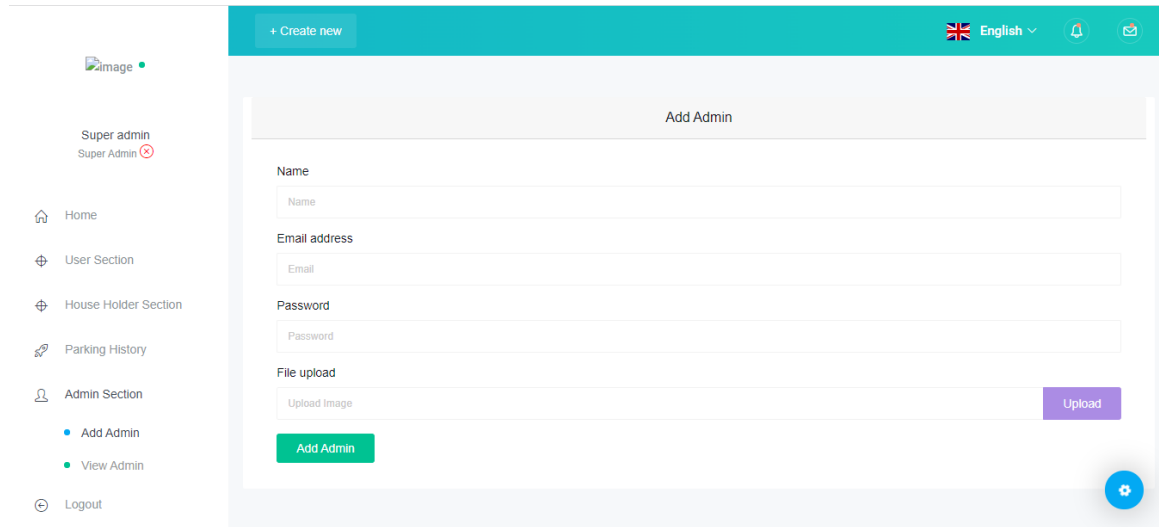


Figure 5.3.9: Super Admin panel admin list

Here we can see all the admin of this website, along with that superadmin can also add new user as a admin he just to insert the user information and do action for that.



The screenshot shows a web application interface for a Super Admin. On the left is a sidebar menu with items: Home, User Section, House Holder Section, Parking History, Admin Section (with sub-items 'Add Admin' and 'View Admin'), and Logout. The main content area is titled 'Add Admin' and contains a form with the following fields: 'Name' (text input), 'Email address' (text input), 'Password' (text input), and 'File upload' (with an 'Upload Image' button and an 'Upload' button). A green 'Add Admin' button is at the bottom of the form. The top navigation bar includes a '+ Create new' button, a language dropdown set to 'English', and notification and message icons.

Figure 5.3.10: Super Admin panel add new admin

By inserting all these information Super Admin can add a user as a admin and also manage this profile.

## 5.4 Implementation of Interactions

Execute our full system that how the associations are started, kept up, end and what prerequisites expected. Analyze different social settings in which association may be happen structure of many kind of connections. We used visual perspective online for use case chart, ER graphs, and setting outline.

## **Interaction system is based on these tools:**

1. PHP- The appearance of PHP current website specialists has not actually settled with the help of use estimation posted on various destinations. Also, the pursued programming language, PHP is moreover more notable than other programming tongues.
2. MYSQL- MYSQL allows us access and control over databases.
3. HTML- HTML is the code that is utilized to structure a page and its content.
4. CSS- Cascading Style Sheets (CSS) is a template language utilized for describing the introduction of a record written in a markup language.
5. Basically it is the programming language of the web for its lightweight

## **5.5 Training:**

Training is perhaps the main factor when an association moves with the new framework. It expands the productivity of the framework just as the legitimate usage of the framework. Via training, the staff can see how to work the new framework rapidly and adequately. Other than this, they will actually want to comprehend the mistake message and fix up the blunder message by giving the right information. Besides, if any issue happens during the training meeting, the coach will fix up the issue rapidly and will know about the issue and make important strides that the issue doesn't happen later on.

**Conclusion:** This segment was already covered to depict the programming language that I have picked for fostering the framework alongside the framework cutover from advancement design. Segment likewise depicts of information movement from the current framework to created framework just as fundamental training to keep up with and utilize the framework.

## 5.6 Testing

Software Testing is a strategy to check whether the authentic software thing orchestrates with anticipated necessities and to guarantee that the software thing is without disfigurement. It joins execution of software/framework parts utilizing manual or robotized contraptions to assess no short of what one properties of premium. The defense for software testing is to perceive goofs, openings, or missing prerequisites as opposed to confirmed necessities.

<b>Unit Test 1</b>		<b>Test Class Login</b>	<b>Design By: Name</b>	
Data Source: User Entry		Objective: test basic functionality	Tested By : Name	
Test Case	Description	Tasks	Expected Result	Actual result
1.1	test validation for login form	Username: john Password: Bangal122	User will not Login with This wrong Information	The System show error message to “Invalid Username & Password”
1.2	test validation for login form	Username: john Password: Bangal123	User will Successfully Login with To this System	User login successfully

## Chapter 6

### Impact on Society, Environment & Sustainability

#### 6.1 Impact on society

Our website will make some impact on our society. Because our website is a social website with some important things like event management, online library, job opportunity etc. Peoples had to visit different website for different options but we provide all of those options in only one website. So, it will be helpful and impactful for our society.

#### 6.2 Impact on Environment

We all know that a lot of data processing power needed to store and process websites images and videos. All that data processing power means the need for a lot data centers. Websites carbon emissions is important for environment. We have limited viewers. So expect that we can control our carbon emissions and protect environment from being polluted.

#### 6.3 Ethical Aspects:

We provide the best possible privacies and other securities for our website visitors. We realize that player privateers, confidentiality and anonymity were the most typically suggested ethical issues. We have worked in our website with these thoughts in mind. We will deliver a quality solution to our visitors. We will ensure that our visitors are satisfied with the solution we provide.

#### 6.4 Sustainability Plan:

We have our own sustainability plan. We design our website carefully so it serves its purpose indefinitely without a significant negative impact on our users. We worked hard to ensure our three pillars of sustainability like- economic viability, environment protection and social equality.

## **CHAPTER 7**

### **DISCUSSION AND CONCLUSION**

#### **7.1 Discussion and Conclusion**

Our task is simply an unassuming dare to fulfill the requirements to address their undertaking work. a few clean to apprehend coding has moreover been taken on. This bundle will come to be being a first rate package deal in enjoyable each one of the prerequisites of the challenge.

Actually we build the system to help the vehicle owner so that they can easily find a safe and secure place to parking their vehicle for a short and long time. Also take in mind to make some income source for the house and garage owners to make some profit from their free space. We live in the age of digital time and if we all use digital system then we can easily enjoy our life without nay hassle and also make our environment beautiful.

#### **7.2 Limitation of Project on Digital Vehicle Parking System**

Notwithstanding the way that I have contributed my best measures of power to make the object versatile, clean to paintings but regulations can't be blocked even by way of me. Be that as it is able to, the object affords an extensive extent of decisions to its clients a few perplexing decisions couldn't be covered into it; pretty because of coordination and usually because of the shortfall of intricacy. the lack of time becomes furthermore a vital prerequisite, likewise, it changed into unrealistic to make the item immune to bonehead and dynamic. Nonattendance of time similarly obliged me to disregard a few components, for instance, looking after the old outcomes of the candidate, and so on full-size undertakings have simplified the item to paintings regardless, for humans no longer associated with the sector of pcs yet it is perceived that a layman can also trust that it within



reason exciting at the number one case. The patron is given help at each movement to his solace in operating with the object.

**List of limitations:**

- We don't have any automatic vehicle and house holder verification system.
- We not giving any receipt for the parking and vehicles.
- The system works only web format but we do not have any mobile application, os application.

**7.3 Scope for Further Developments**

Basically, we develop this system to reduce traffic jam of road side and secure vehicle parking for the vehicle owner so that they can safe park their vehicle. Add a printer later on. There is a short of time so cannot implement all the features so, there is more unique features that should be developed in future so make our application more comfortable and useable for the peoples.

- We will have the stage on internet based servers to make it open around the world
- Coordinate various burden balancers to disseminate heaps of the framework
- Add Online Payment framework for stopping
- Showing Alert for stopping time count
- Add car owner verification
- Taking online payment
- Ride sharing option
- Launch the over the country

## **APPENDIX A**

### **Project Reflection:**

As a way as a conclusive defend, 3 picks are on hand Thesis, project, and transient process. We decide to make an assignment because we figured it might provide us a threat for making an application that is valuable. it's miles our perspective that every understudy should accomplish a few statistics to be had knowledge in real existence and follow properly. every net engineer ought to use them enjoy for making some undertakings. it's going to assist us a ton, we did not realize before the range of standards have an area for fostering a software.

## **APPENDIX B: Related Diagrams**

To uphold our conveyed works of art prior to everything, we gather a variant and base design of our application. We attempt a couple of outlines and coherent models to uncover a method for implementing our test. From the utilization case graph, we perceive our client and machine side interest in our guide. We implement our web base website utilizing PHP and MySQL. We depict the entertainers in a typical board Admin and various clients.

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# Final Report

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