Project Report on

Online Parking Portal

Submitted in partial fulfilment for the award of
Post Graduate Diploma in Advance Computing

PG-DAC

Guided By:

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CERTIFICATE

This is to certify that the project work under the title 'Online Parking Portal' is done by Rathod Venkateshkumar, Rathod Shital, Kanse Akshay, Kajal Phapale, AkashTiwari in partial fulfilment of the requirement for award of Diploma in Advanced Computing Course

Mrs. Prajakta Patil
Project Guide

Mr. Bhanu Pratap Singh
Head of Department

Date:16th April 2022

ACKNOWLEDGEMENT

This project "**ONLINE PARKING PORTAL**" was truly a great learning experience for us and we are submitting this work to Advanced Computing Training School (CDAC ACTS).

We are very glad to mention Ms. Prajakta Patil for her valuable guidance to work on this project. Her guidance and support helped us to overcome various obstacles and intricacies during the course of project work.

We are highly grateful to Mr.Bhanu sir, Head of Department of Netcom training Centre, C-DAC, for her guidance and support whenever necessary during the course of our journey to acquire Post Graduate Diploma in *Advanced Computing (PG-DAC)* through C-DAC ACTS, Pune.

Our heartfelt thanks goes to Mr.Nishant sir, who gave all the required support and kind coordination to provide all the necessities.

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Introduction :

This project is about mobile management of parking areas. A parking lot or car park is a dedicated cleared area that is intended for parking vehicles. In most countries where cars are a major mode of transportation, parking lots are a feature of every city and suburban area. Shopping malls, sports stadiums, megachurches, and similar venues often feature parking lots over large areas. Parking is a problem is now a days in every big city it consumes a lot of time to find the right place to park your vehicles. It overcomes the problem of finding a parking space in commercial areas that unnecessary consumes time. So this system assist the user to online find and book the space for parking it will help the management to reduce the parking issue and also increase their revenue. This system will save the user time in search of parking areas and reduce the need of human resources in order to manage parking space. In this Web application we can access the information of parking slots in the building where is free. By finding the empty space the user is able to book the slot. This application also provides information about the user like Car No, License No. and mobile number. After selecting the empty space in the parking slot the user is able to pay the amount and confirm his/her booking.

2. Existing System :

In the existing Online Parking Reservation systems, domestic and local level parking areas are not covered also parking for various vehicles are not preferred. So this makes the current system trivial and incomplete.

3. Proposed System :

The proposed Online Parking Reservation system provides a smarter way for customer to select parking location, parking duration, extend parking duration. It also provides parking reservation for various types of vehicles under one parking portal.

4. Advantages :

1) Users can get learn about parking areas for particular locations
2) It saves user time in search of parking space available in such a long parking area.
3) Cost-effective.

5. Assumptions :

1) Vendor is available to provide service 24x7.
2) Services within one region/city.

6. Future Scope :

1) Implementation of Live Location
2) App Development.

Project Overview

¤ Purpose :

√ The purpose of this project is to ease the process of parking through the web application. In this we mainly concentrate on parking slots in the building and the user is able to book the slot before entering into the building.

¤ Scope :

√ A detailed study of the existing system is necessary. The functions of the system, requirements of the user, structure of the current system is made through the system study. The problems faced in the current system are found and solution pertaining to it is done in the system study.

¤ Feasibility :

√ A feasibility study is an analysis that takes all of a project's relevant factors into account—including economic, technical, and scheduling considerations—to ascertain the likelihood of completing the project successfully.

√ A feasibility study is simply an assessment of the practicality of a proposed plan or project.

√ The following feasibility studies were conducted to make sure that our software is feasible.

a) Technical feasibility

Technical feasibility includes the software's and hardware that are needed to develop the system Software's and hardware have to be chosen according to the client requirements. We have to be very clear about what are the technologies that are to be required for the development of the new system. Find out whether the organisation currently processes the required technologies. Is the required technology available with the organization?

b) Operational feasibility

As per this study, we came to the conclusion that system is user friendly and easy to maintain.

This test of feasibility asks if the system will work when it is developed and installed.

The project offers a great deal of user experience and convenience to the target group.

c) Economical feasibility

Economic feasibility attempts to weigh the costs of developing and implementing a new system. To develop the project from top to bottom, the estimated cost will comes under this feasibility. It defines whether the client is able to pay the estimated cost or not. If the client is unable to spend then the software's have to be changed.

Project Description

▫ Technology Stack

➢ Backend

Category	Technology Name
Framework	Spring Boot
ORM Tool	Hibernate
Database	MySQL
Build Tool	Maven
Language	Java

➢ Frontend

Category	Technology Name
Framework	ReactJs
Language	HTML, CSS, Javascript

▫ User Classes :

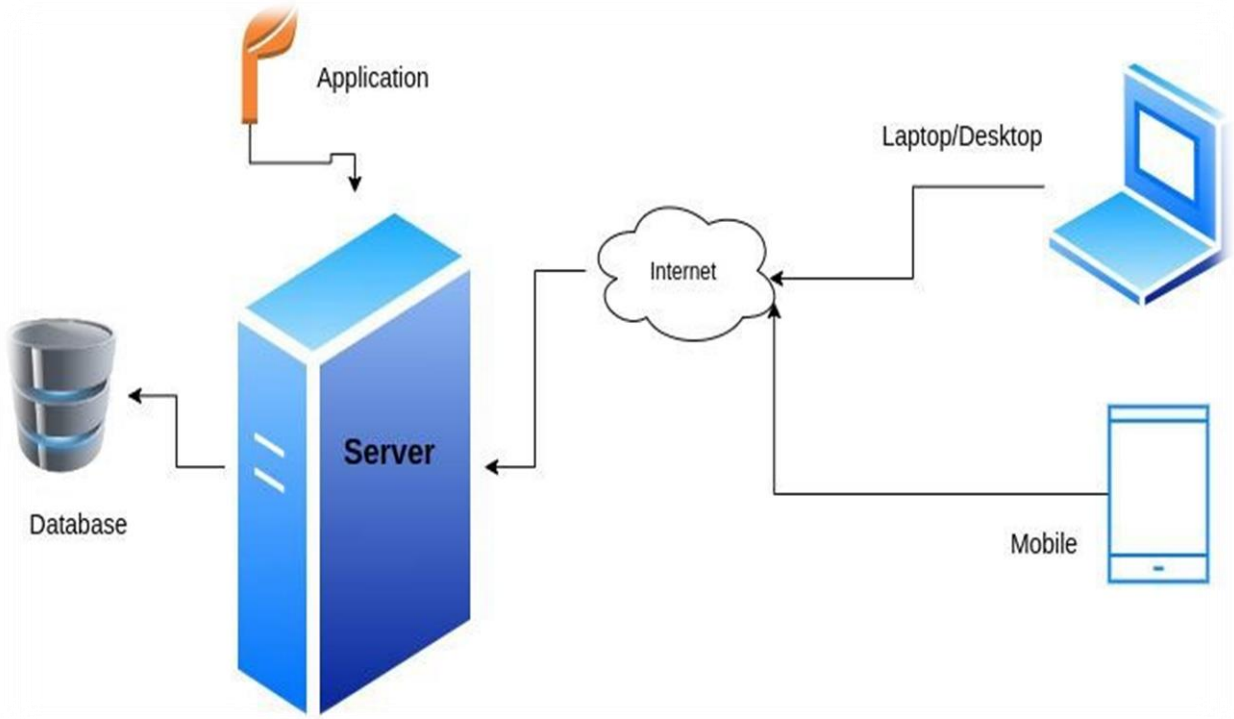
➢ Admin

The super user, admin class represents complete authority over the system. An admin can,
a)Add Parking details.
b)Delete Parking details.
c) Edit/Update Parking details.

➢ Customer

Once the customer register, Customer can,
a) Add Vehicle details whether it is car or bike.
b) View Parking Slots available in particular given area.
c) Book a Slot for the specific time.
d) Once the slot clicked then further confirm the booking.

Architecture Diagram



Software Requirements Specification

▫ Functional Requirements

➢ Complete System

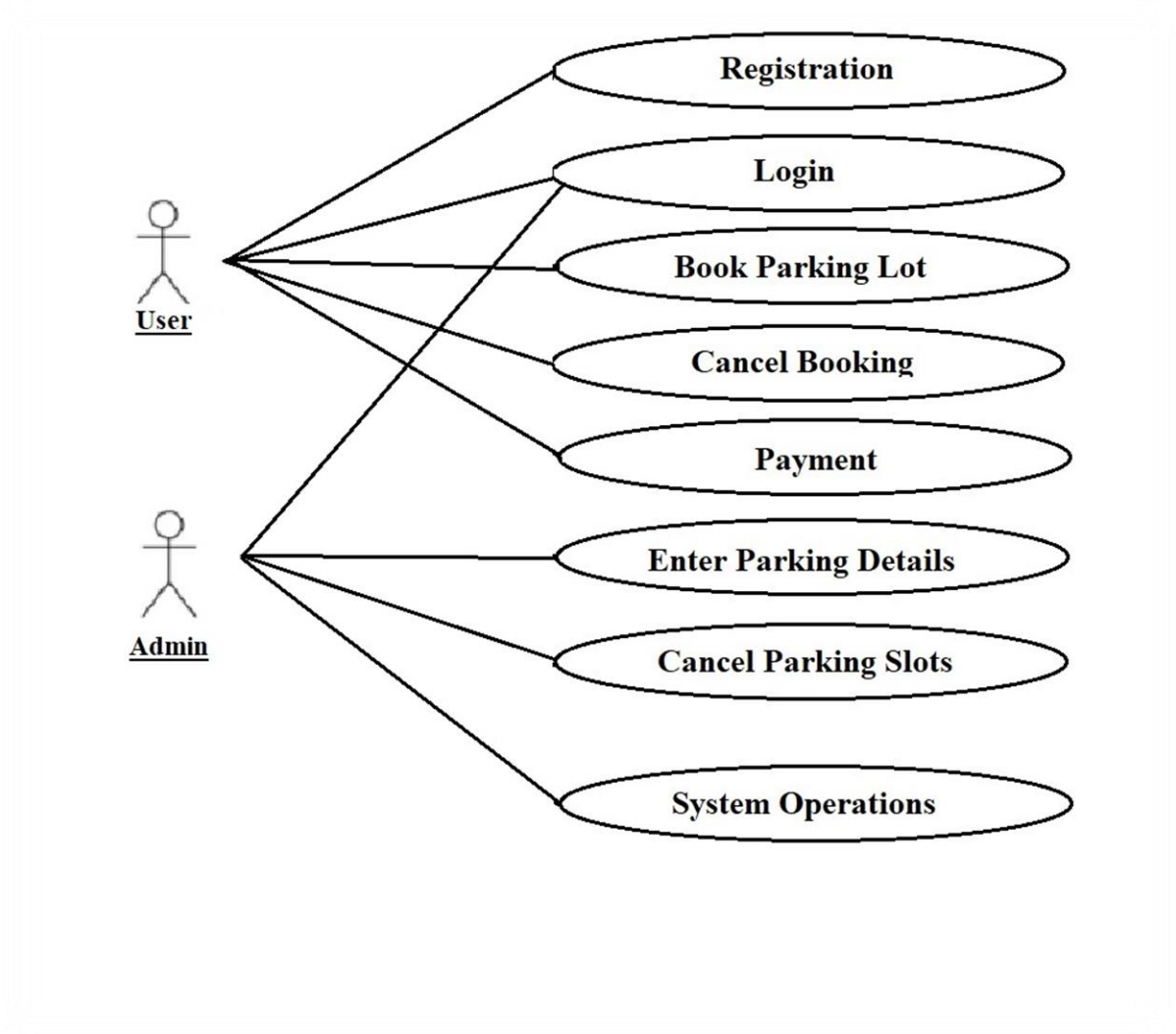


Figure 1: Use case diagram

There is an entry interface that is intended to facilitate the actors [Admin|Vendor|Customer] to login to the system provided they have their own user account, i.e., already registered with the system . If not then register as Vendor or Customer. User has to enter the login credentials i.e. Username and Password information for Login.

◆ **Scenario 1: Mainline Sequence**

1. **Administrator:** Enter Admin Username and Password.
2. **System:**
   a) Display the Admin dashboard where admin can approve request for vendors.
   b) Can Fetch all the Pending facility List.

◆ **Scenario 2: Mainline Sequence**

1. **User:** Once registered, enter User Username and Password.
2. **System:**
   a) Display the User dashboard where a User can add his/her Vehicle details.
   b) User can Fetch Approved Parking Facility List.
   c) And then after, Fetch User can Book a Parking Slot and confirmed booking.

➢ **Sequence in detail**

◆ **ADMIN**

❖ **Add Parking Facility**

Mainline Sequence:

1. **Admin:** Admin login.
2. **System:** Opens page which shows Add Parking Facility button.
3. **Admin:** Admin clicks on Add Parking Facility button.
4. **System:** Opens page which shows form to add Parking Facility details.
5. **Admin:** Fill the Information and click on the Add button.
6. **System:** Parking Facility get add to the Admin.

❖ **Delete Parking Facility**

Mainline Sequence:

1. **Admin:** Admin login.
2. **System:** Opens page which shows Delete Parking Facility button.
3. **Admin:** Admin clicks on Delete Parking Facility button.
4. **System:** Opens page which shows message that Parking Facility details deleted successfully.

❖ **Edit/Update Parking Facility**

Mainline Sequence:

7. **Admin:** Admin login.
8. **System:** Opens page which shows Edit Parking Facility button.
9. **Admin:** Admin clicks on Edit Parking Facility button.
10. **System:** Opens page which shows form to Edit Parking Facility details.
11. **Admin:** Fill the Information and click on the Edit/Update button.
12. **System:** Parking Facility get updated to the Admin.

❖ **View Various Lists**

Mainline Sequence:

13. **Admin:** Admin login.
14. **System:** Opens page where in Sidebar showing User details, Booking details, Parking details, Admin Payment details.
15. **Admin:** Admin clicks on any one by one and See the Lists.

◆ **User**

❖ **Register User**

Mainline Sequence:

1. **User**: User Signup.
2. **System:** Opens User Registration page.
3. **User:** User Enters Data with vehicle info.
4. **System**: After Click on register redirect to login page.

❖ **Parking Facility List**

Mainline Sequence:

1. **User:** User can See the List of Parking Facility.
2.
3. **System:** Opens page which shows search task for searching the available parking in particular Area.
4. **User:** User Enter the details of area and click on Serach button.
5. **System:** Shows the Parking Facility in given Area.

❖ **Book Slot**

Mainline Sequence:

1. **User:** User clicks on Book Slot in Parking Facility List.
2. **System:** Opens page which shows form in which customer book the slot with StartDate and EndDate.
3. **User:** Customer Enter the details of StartDate and EndDate and click on Book button.
4. **System:** Shows the message that Booking is Confirmed.
5. **User:** Click on the Make Payment Button And Fill The Card details.
6. **System:** Shows the Payment Success in Admin Payment List.

▫ Non-Functional Requirement

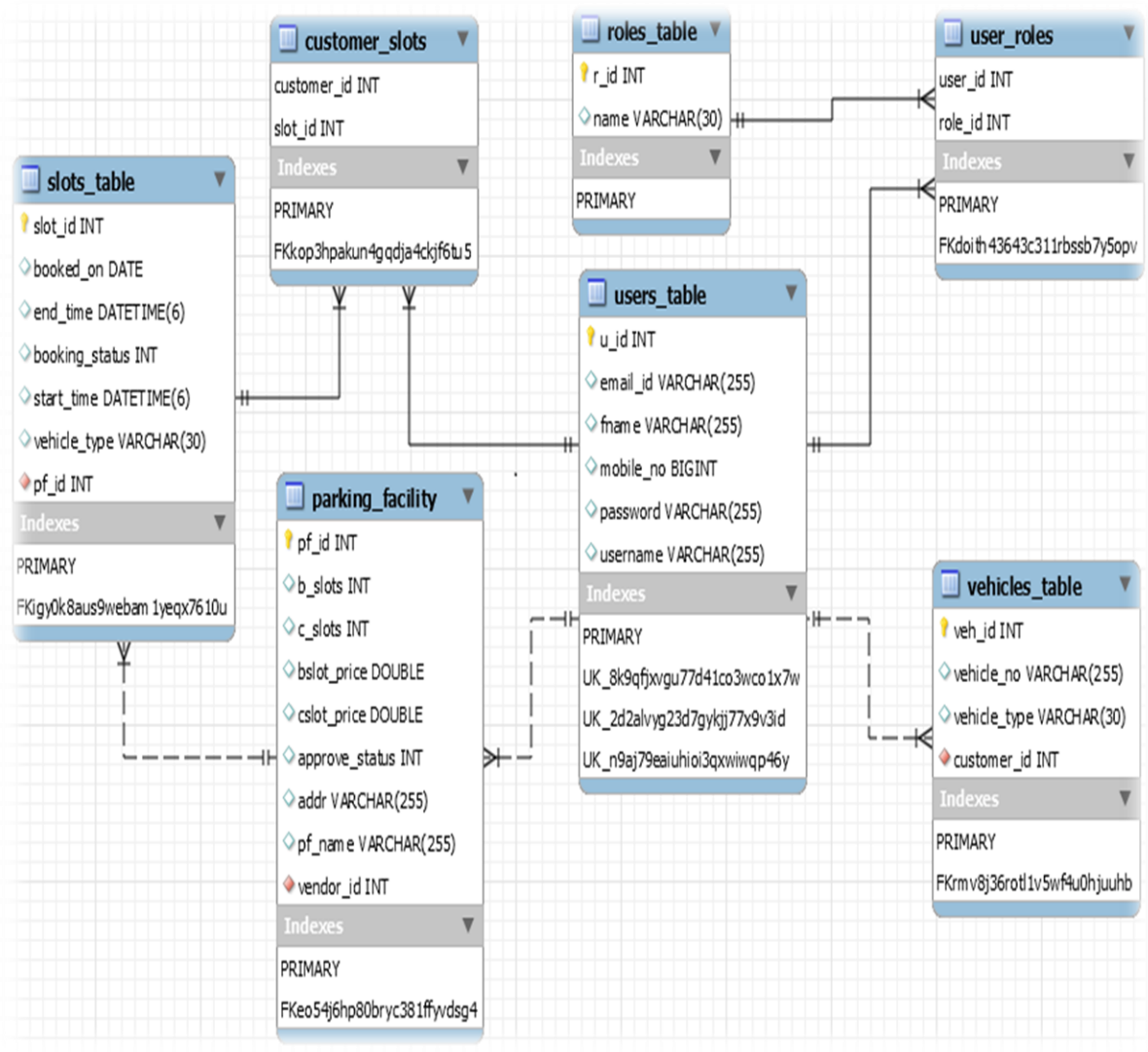
➢ **Performance Requirement**

1. The time between request and response should be less.
2. Minimum time should be taken by the application to display the result.
3. In case of power failure, the data should be stored in the state that was last saved by the user.

➢ **Security Requirement**

1. One session per user
2. Passwords shall never be viewable at the point of entry or at any other time.
3. User are not allowed to update their own information.

Database Table



Entity Relationship Diagram

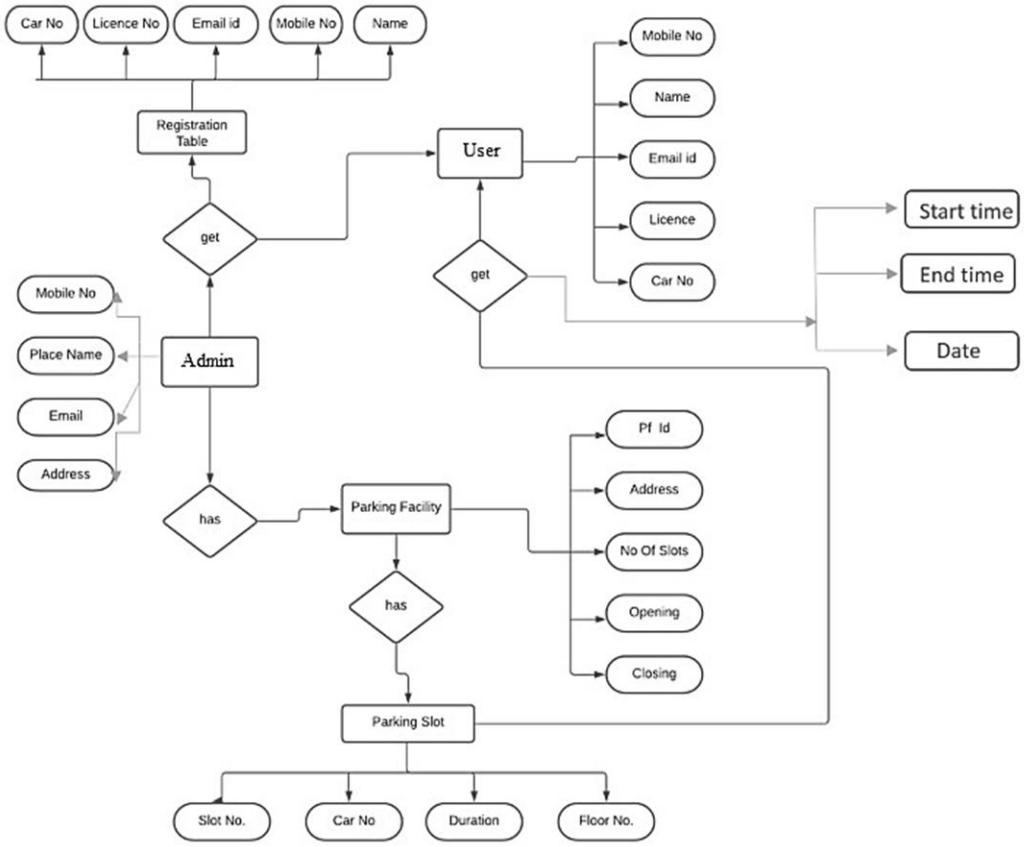


Figure - ER Diagram

UML Diagram

- **DFD Diagram**

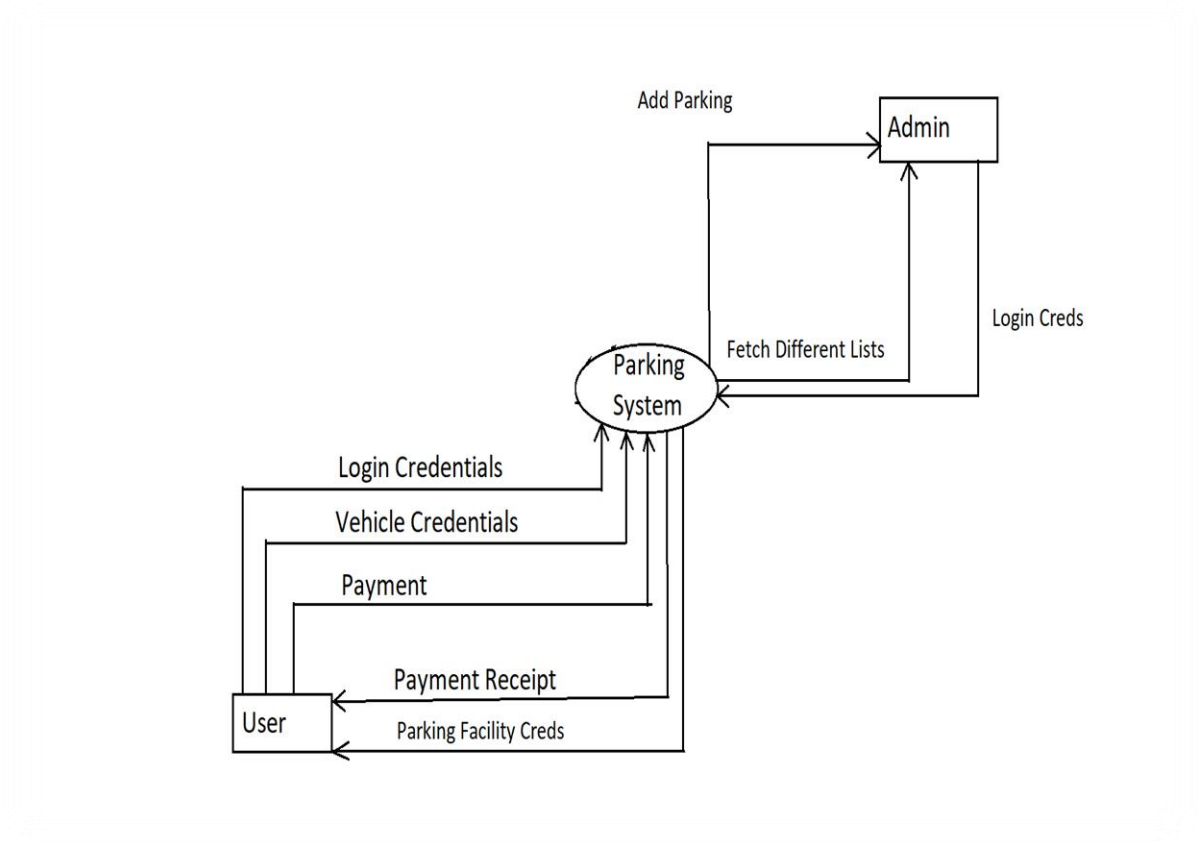


Figure - DFD Level Diagram

¤ Class Diagram

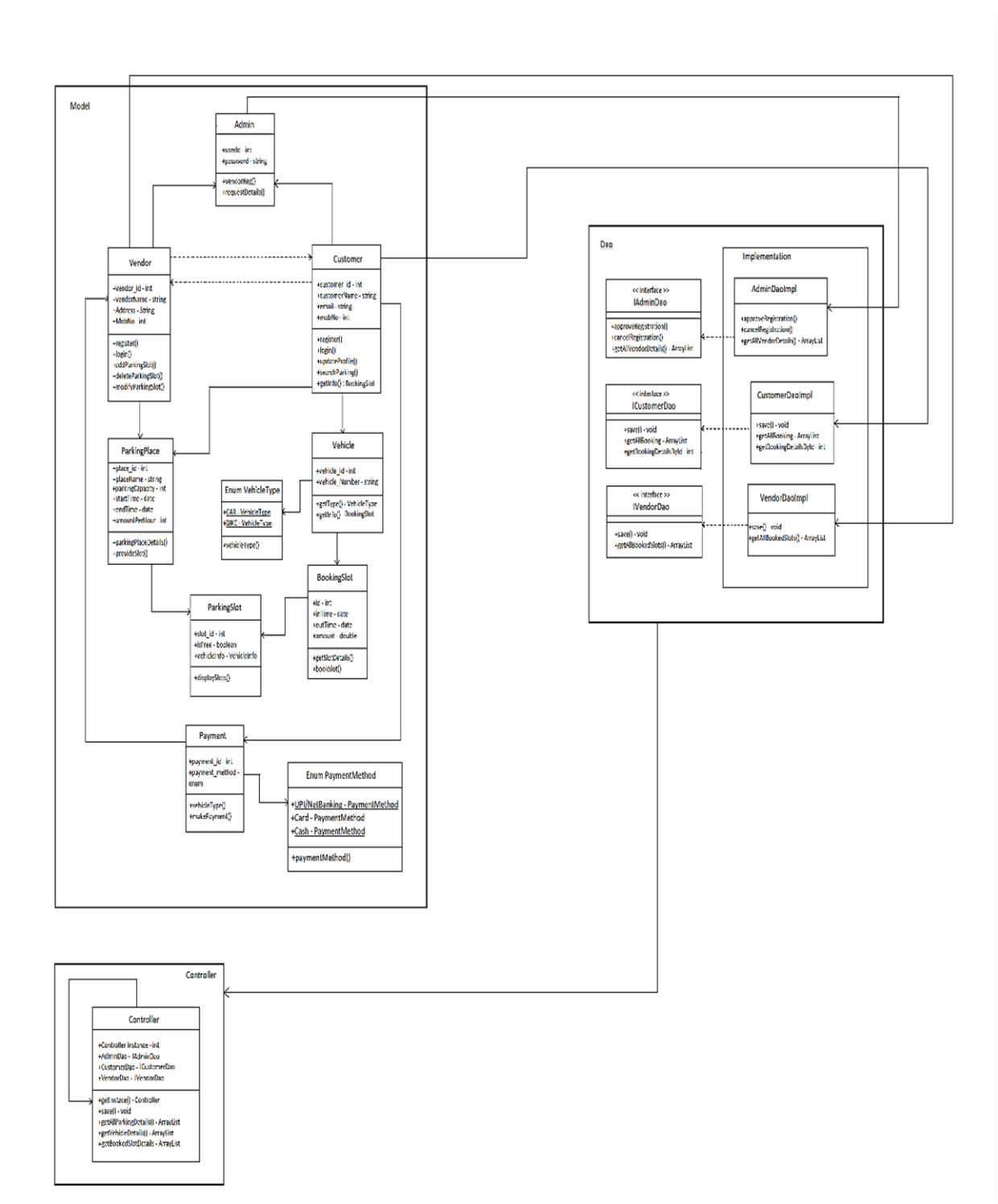
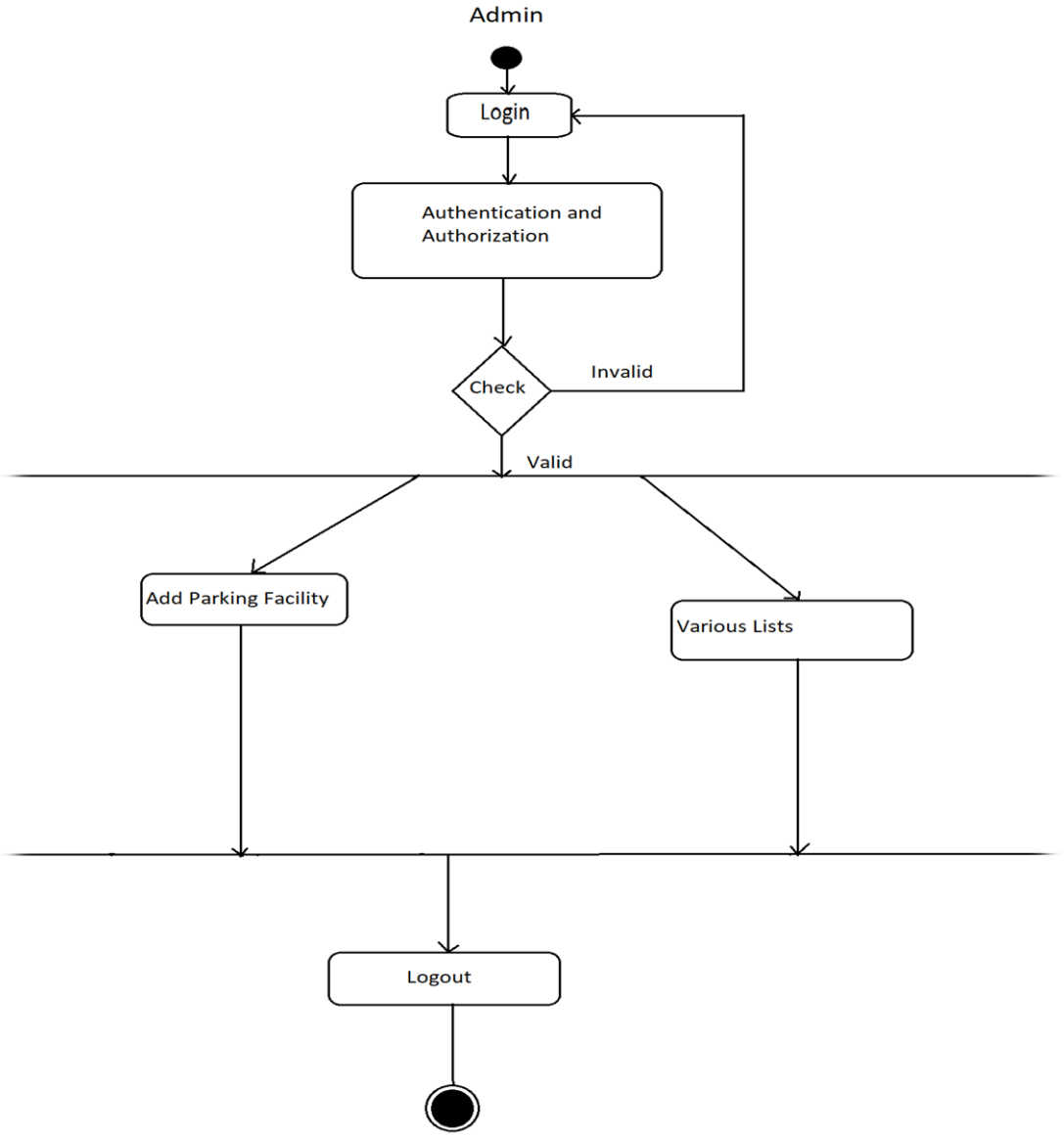


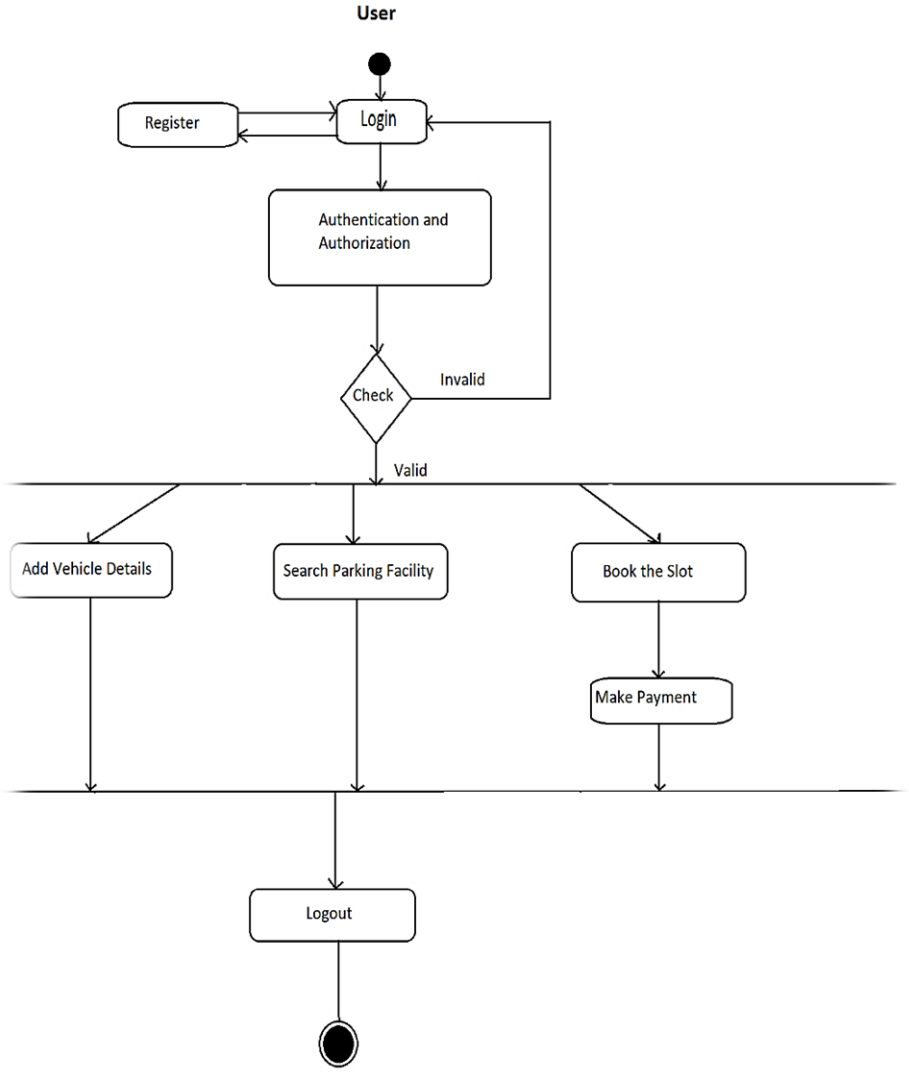
Figure - Class Diagram

¤ Activity Diagram

➢ Admin Activity Diagram



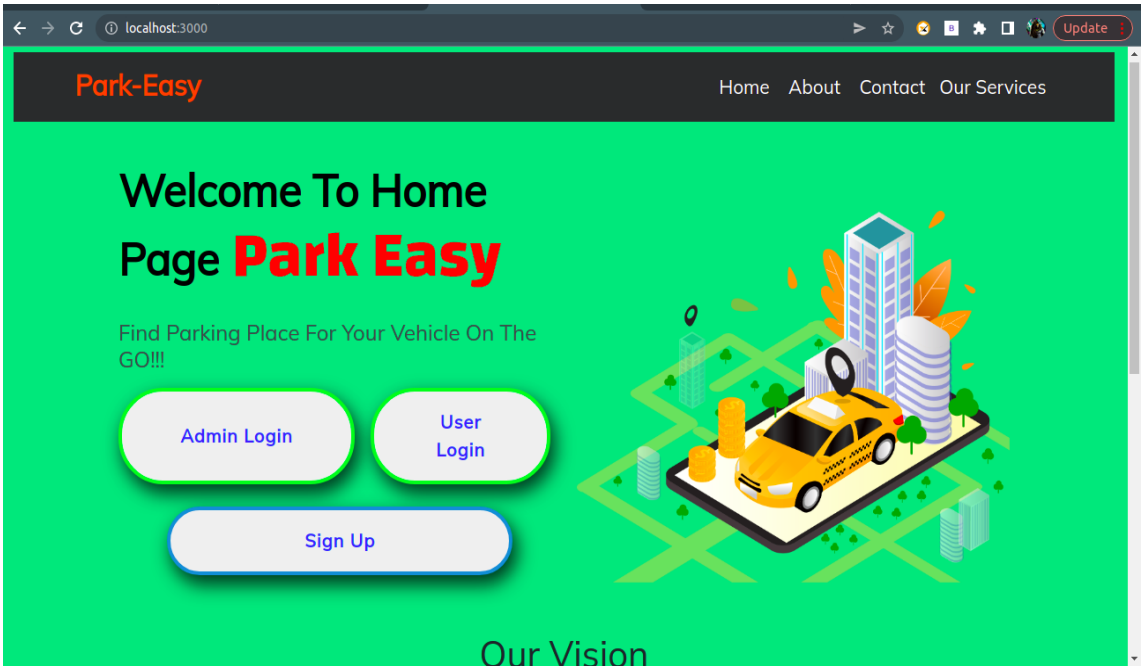
➢ User Activity Diagram



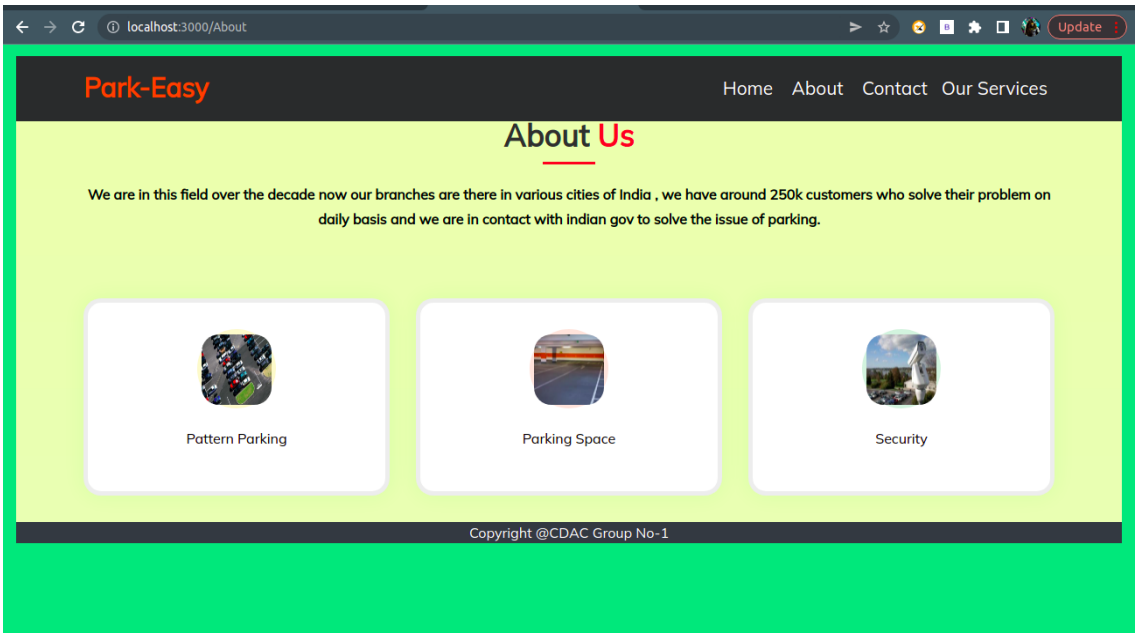
User Interface

¤ Common Functionality

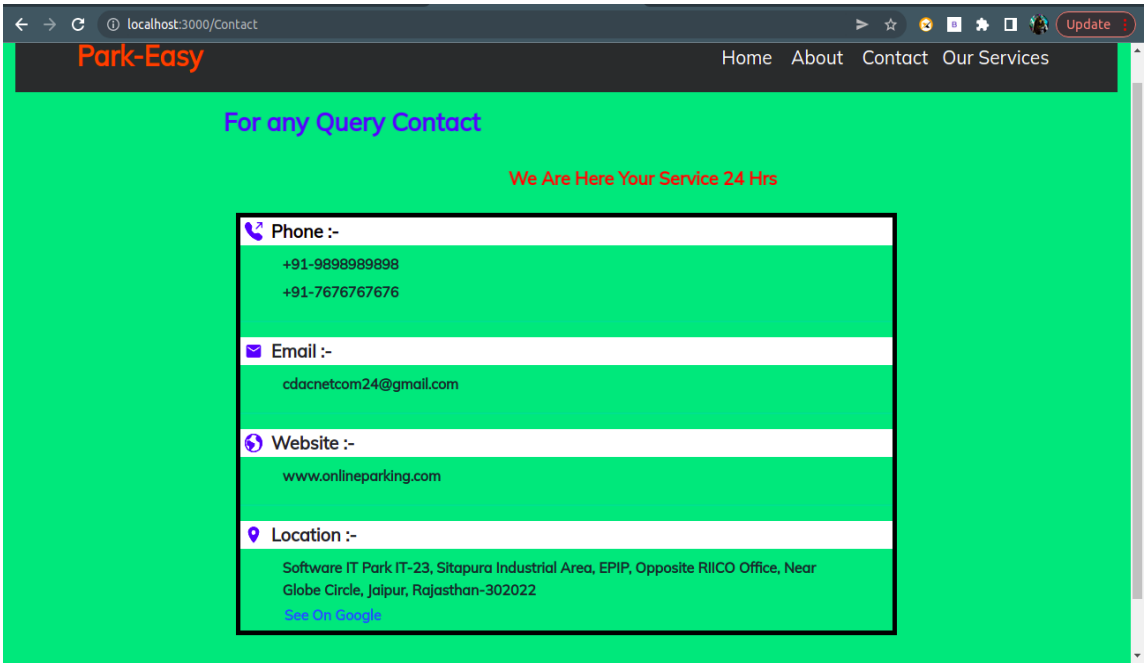
➢ Home Page



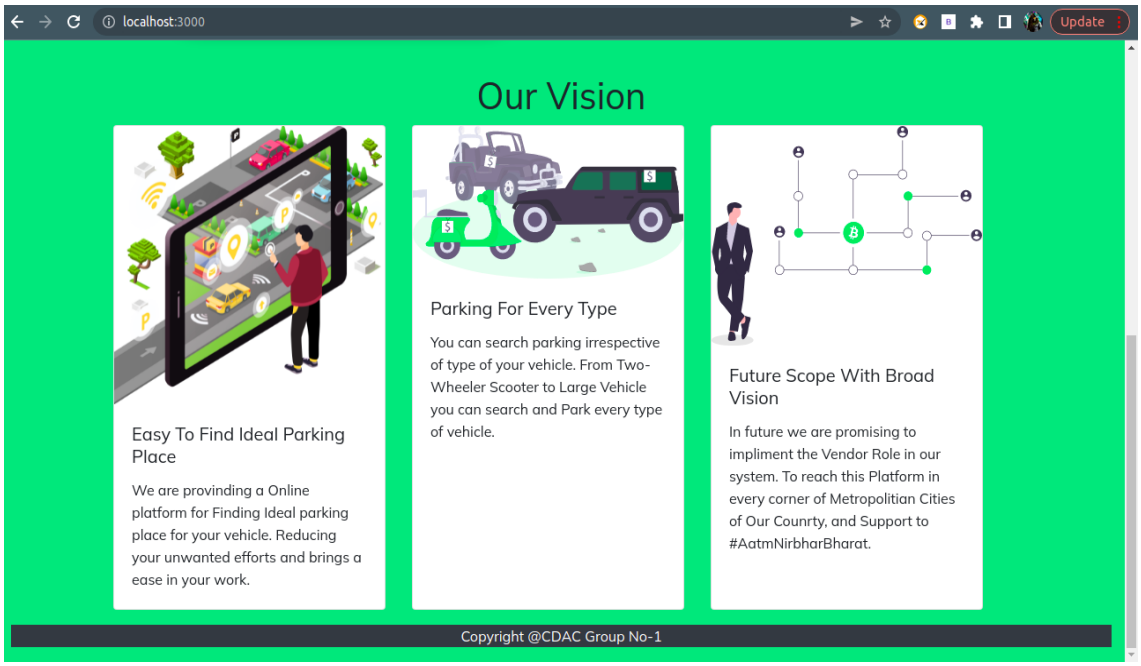
➢ About Screen Page



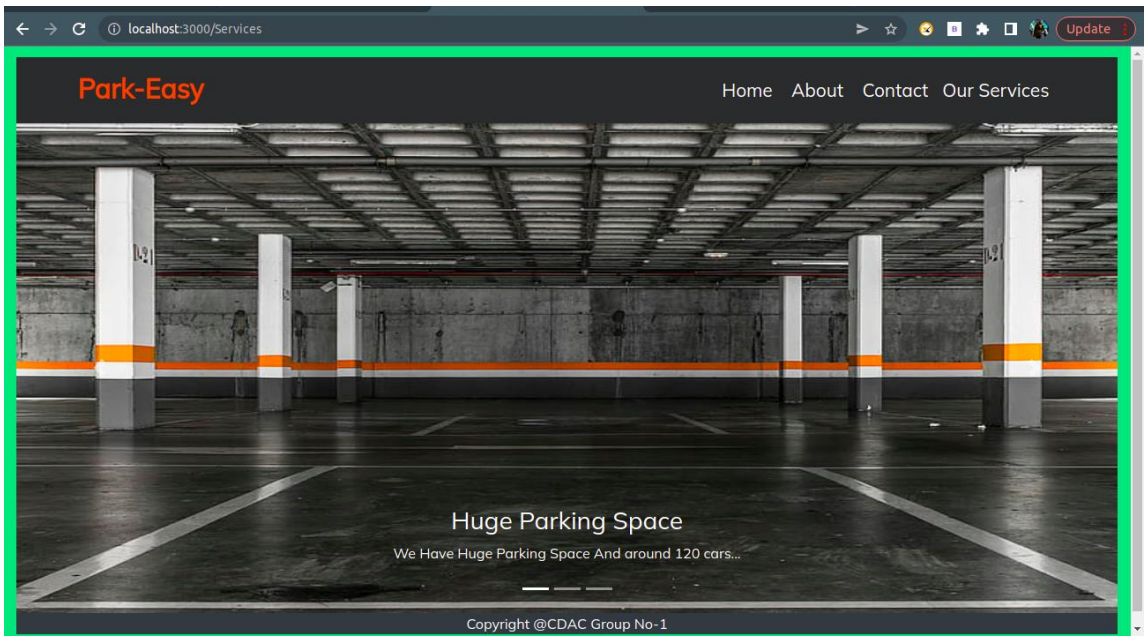
➢ Contact Page



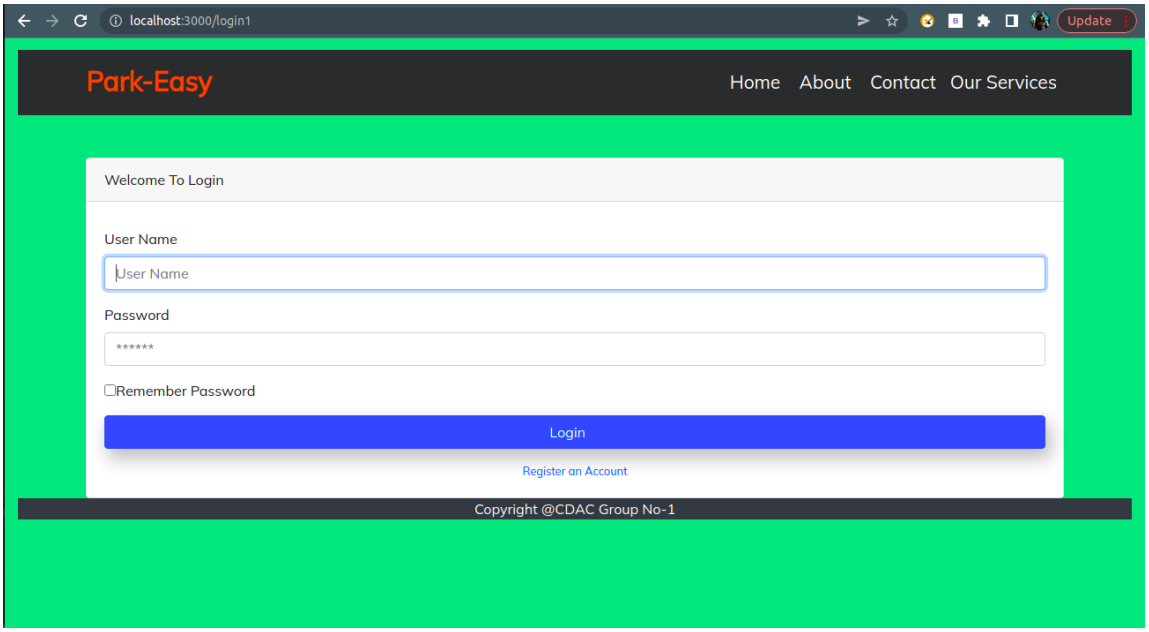
➢ Footer Page



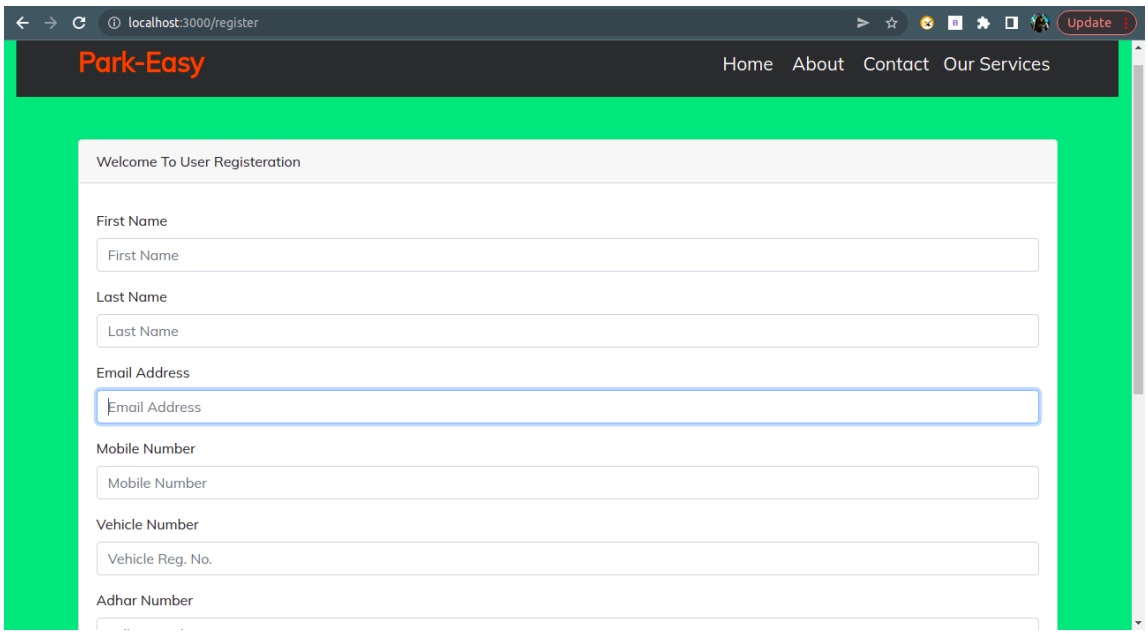
➢ Our Service Page



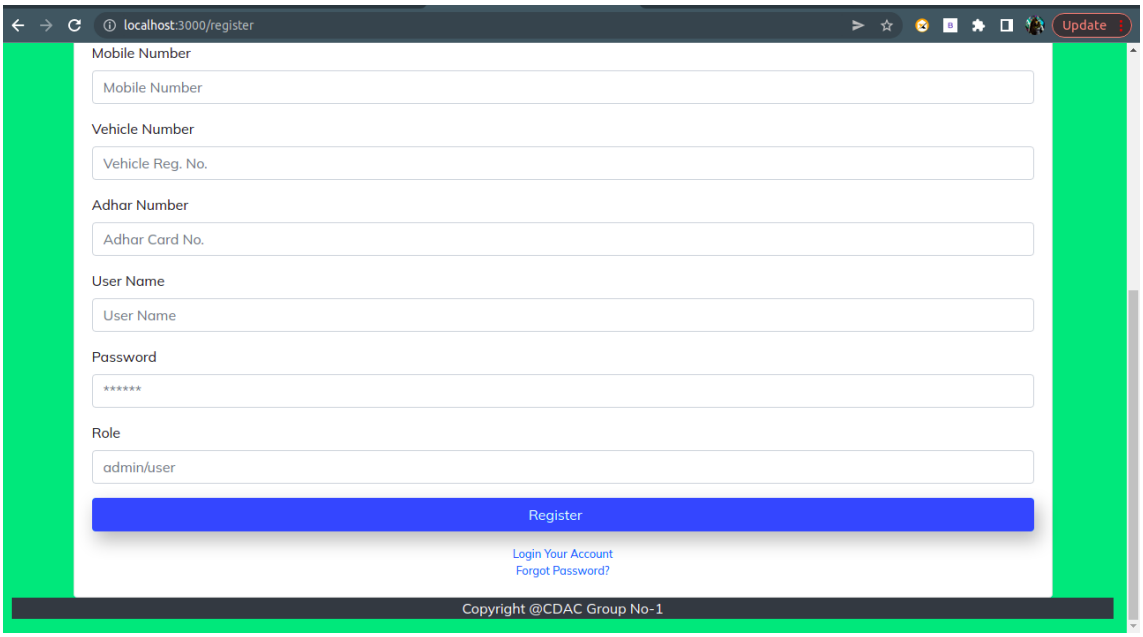
➢ Login Page



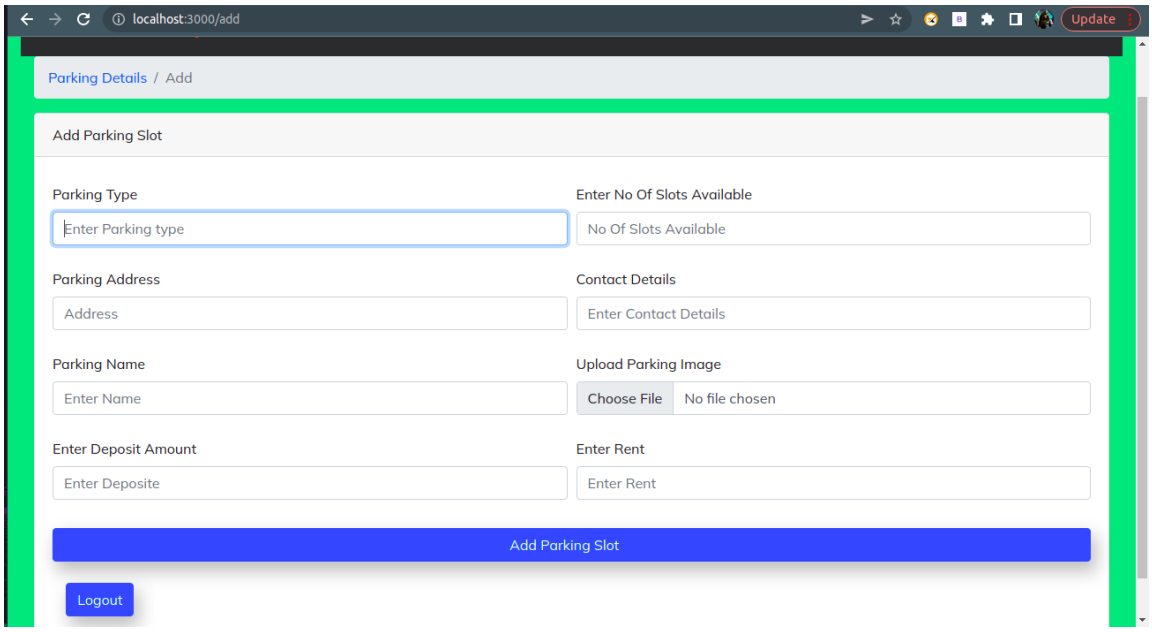
➢ User Registration Page 1



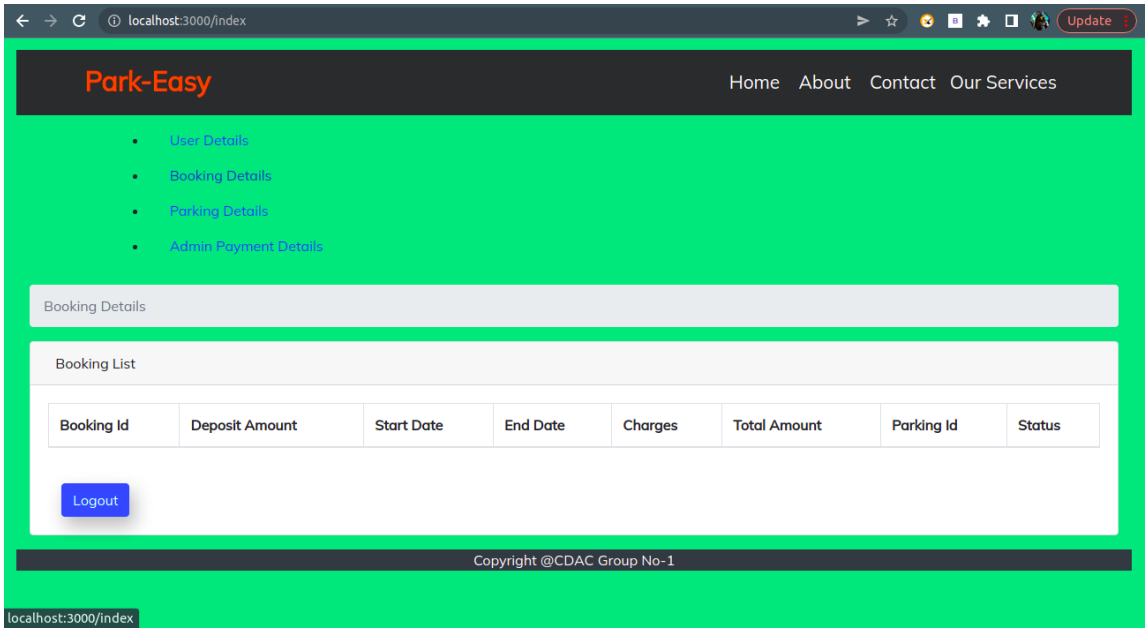
➢ User Registration Page 2



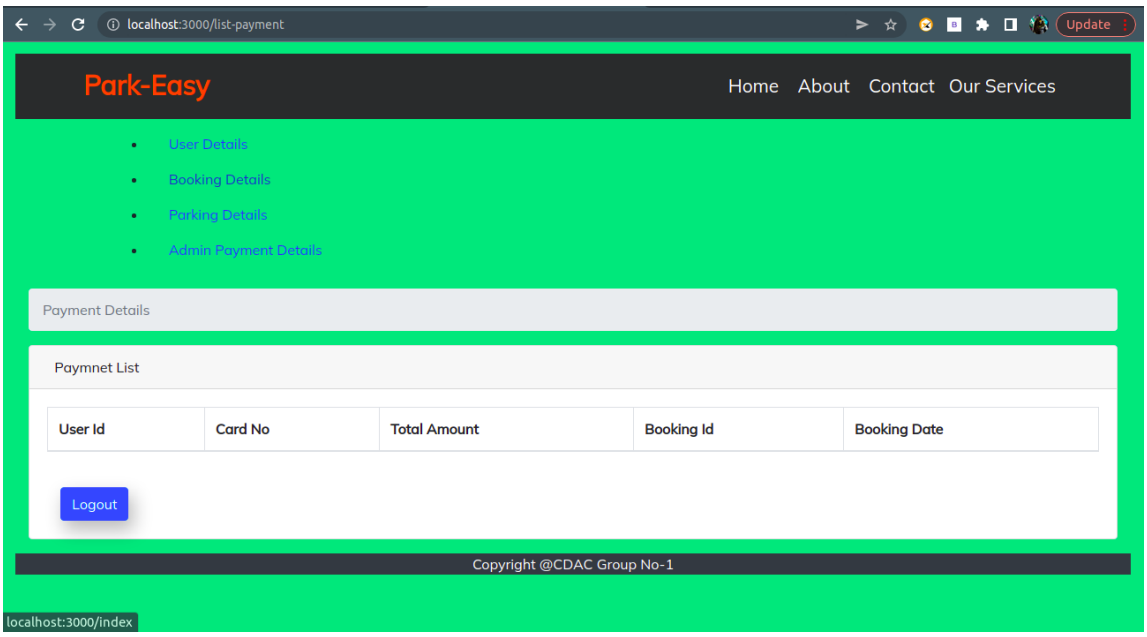
➢ Add Parking Facility Page



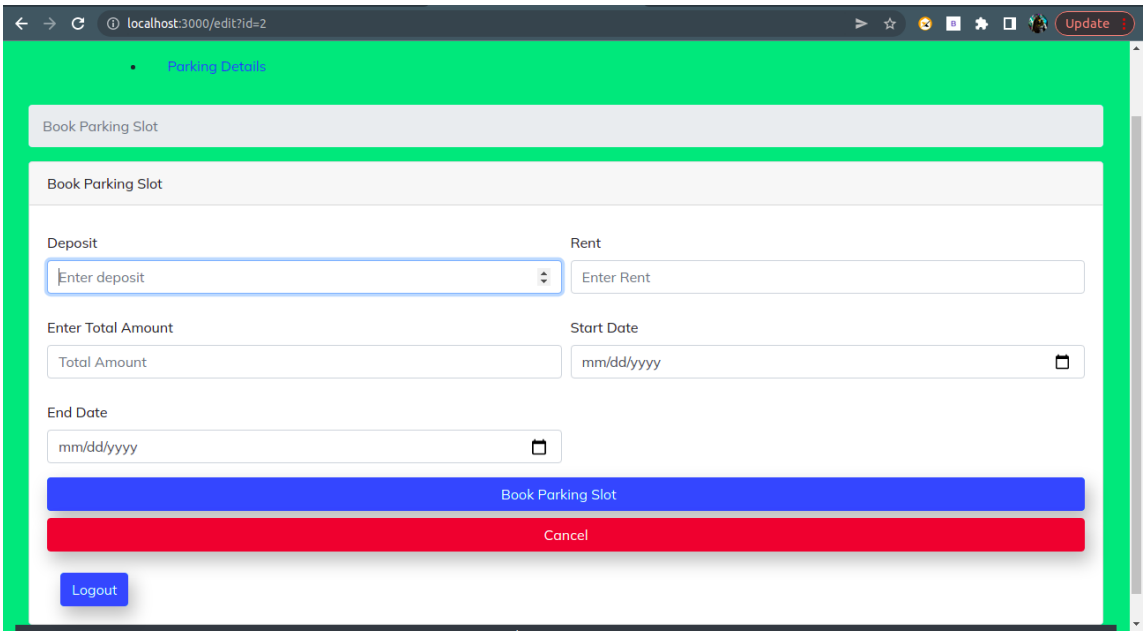
➢ Booking List



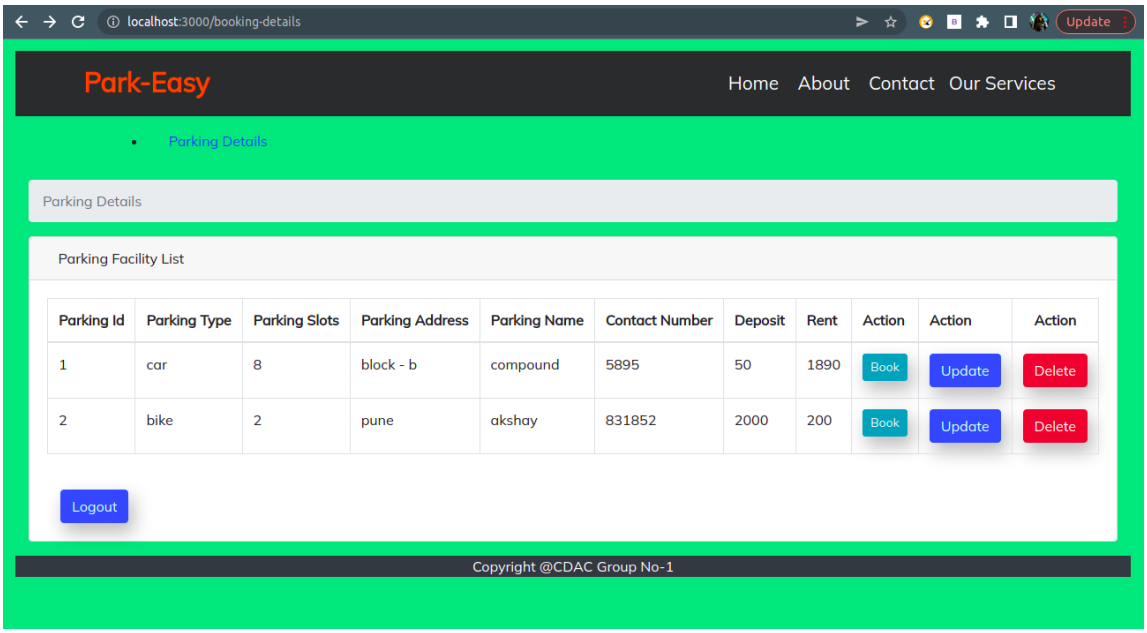
➢ Payment Details



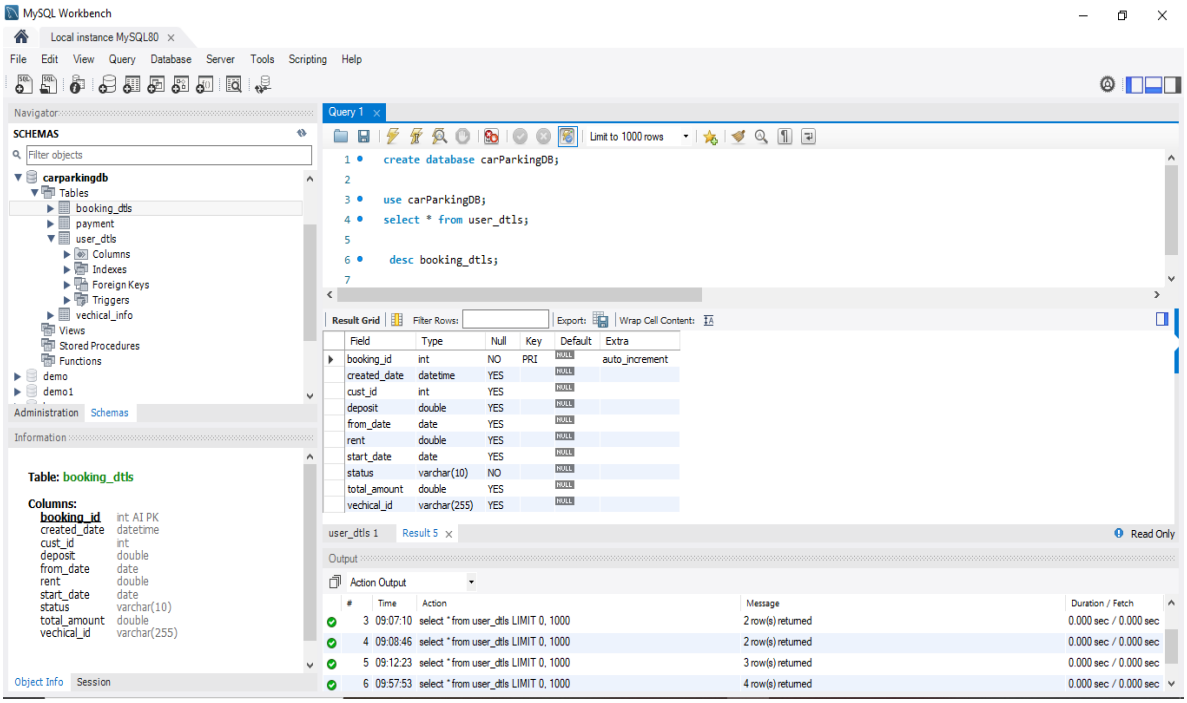
➢ Booking Parking Facility



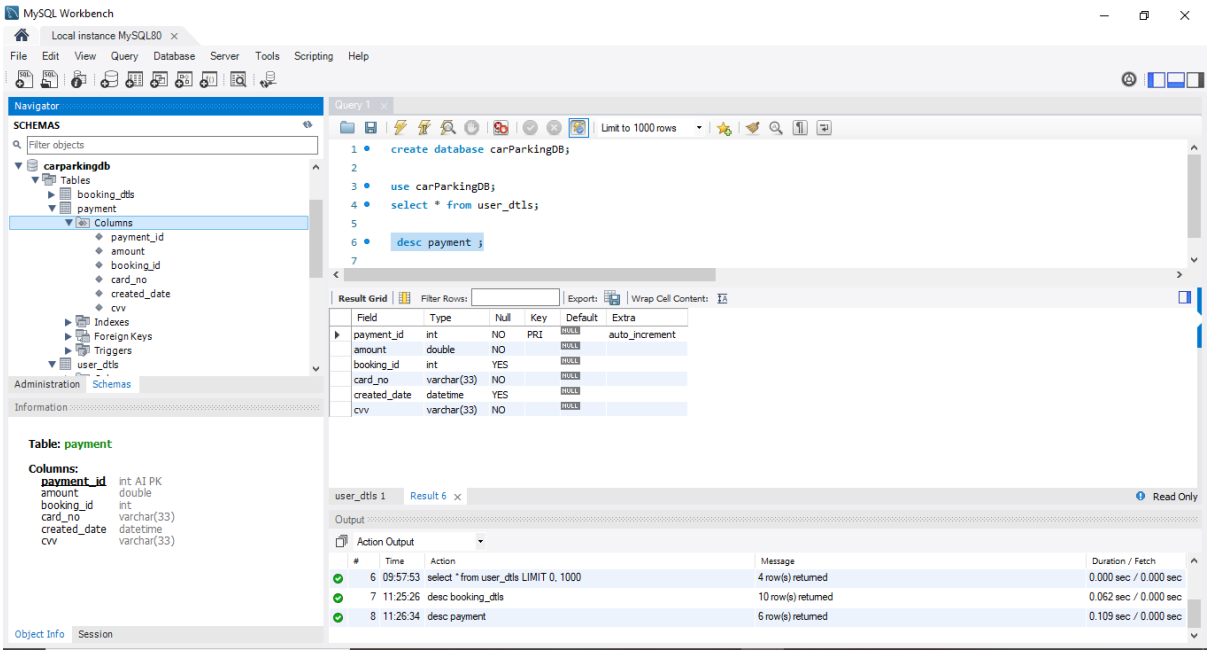
➢ Booking Parking List



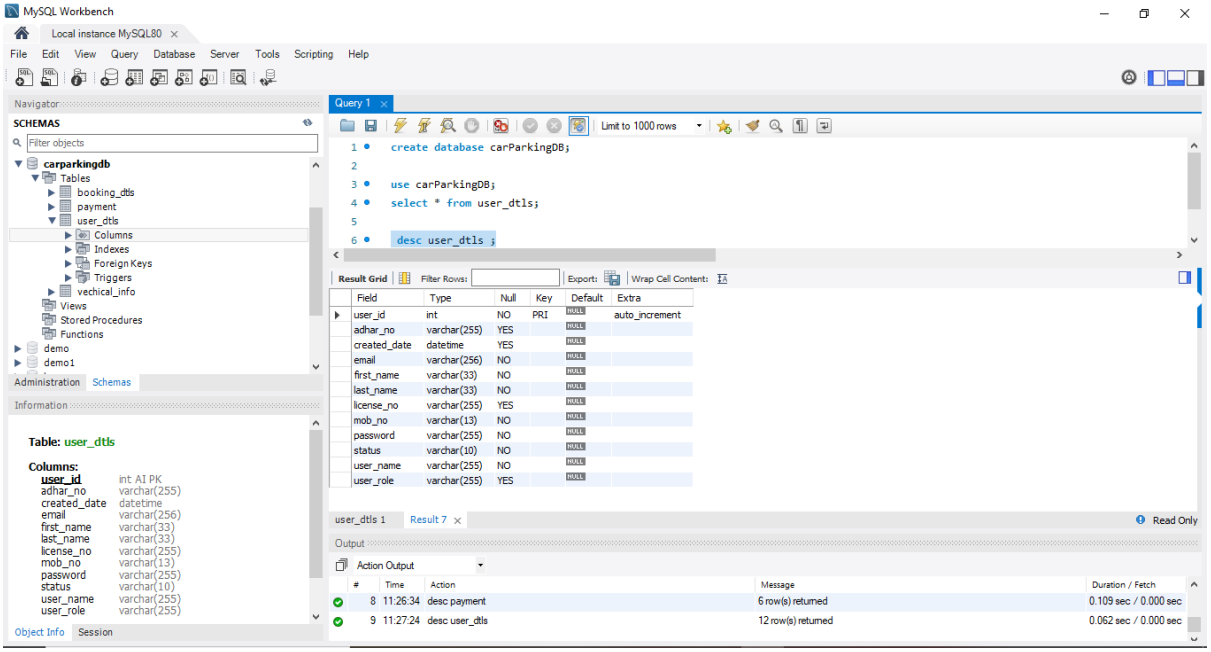
➢ Booking_dtls Table:-



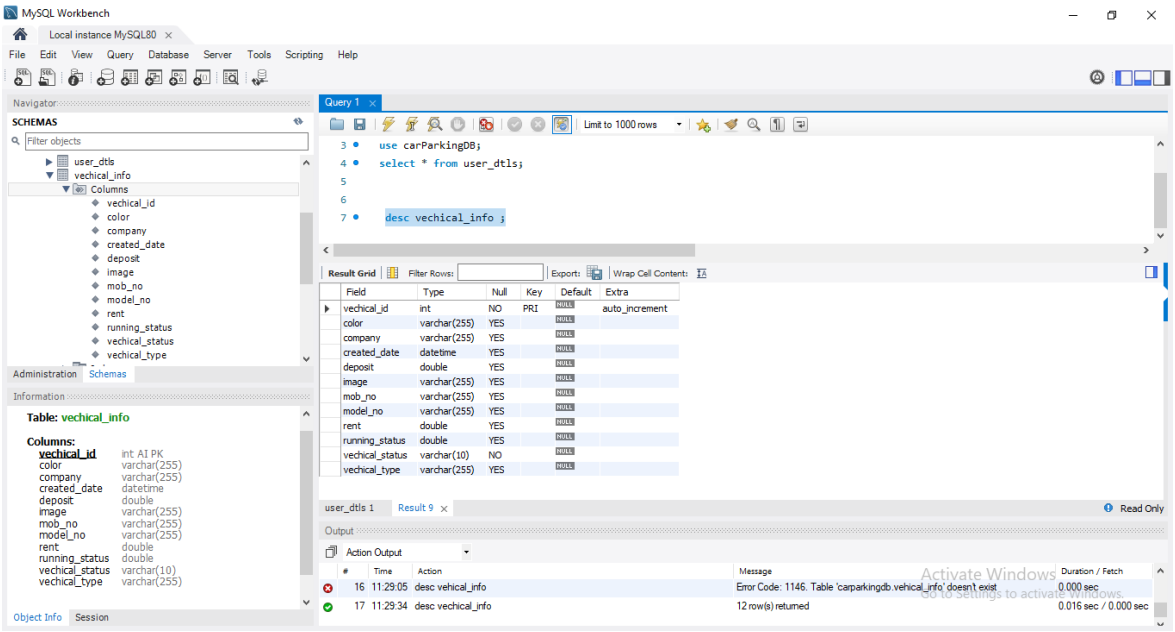
➢ Payment Table:-



➢ user_dtls Table:-



➢ Vechicle_info Table:-



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