INSTITUTE FOR ADVANCED
COMPUTING AND
SOFTWARE DEVELOPMENT
AKURDI, PUNE

Documentation On

"ONLINE PARKING SYSTEM"

e-DAC MAY 2021

Submitted By:

Group No: 43

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Project Guide

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1. Introduction

In Metropolitan areas, most vehicle drivers have the daily concern of finding a vacant parking space especially during Rush hours hence the proposed solution is Online Parking System

It offers a reservation system where user can view various parking spaces and select specific area of their choice to view whether space is available or not. If the booking space is available, then user can book it for specific time slot. User can also view previous parking booking details using the website.

Document Purpose

The advancement in Information Technology and internet penetration has greatly enhancedvarious business processes and communication between society owners and their customerswho are purchasing the flats. This Society Management System is developed to provide thefollowing services:

Enhance Business Processes:

To be able to use internet technology to project to the global world instead of limiting theirservices to their local domain alone, thus increase their return on investment (ROI).

Online Parking System:

It offers a reservation system where user can view various parking spaces and select specific area of their choice to view whether space is available or not. If the booking space is available, then user can book it for specific time slot. User can also view previous parking booking details using the website.

Problem Statement

In Metropolitan areas, most vehicle drivers have the daily concern of finding a vacant parking Space especially during Rush hours. It takes a lot of time in search of parking space availability So we proposed the solution of Online Parking system.

Product Scope

It offers a reservation system where user can view various parking spaces

and select specific area of their choice to view whether space is available or not.

If the booking space is available, then user can book it for specific time slot.

User can also view previous parking booking details using the website.

- Users/Drivers can book parking spaces according to specific city,area,location
- J2EE Technology used for the development of the application.
- Web-platform means that the system will be available for access 24/7 except when there is a temporary server issue which is expected to be minimal.

Aims & Objectives

Specific goals are: -

- To produce a web-based system that allow the admin to add User and provide functionalities to its role.
- To ease User by providing different functionalities to it.
- Admin can add Parking spaces

Overall Description

- **III. PROPOSED SYSTEM**

Product functionality:

Online Parking System provides the features for User, Admin. Itincludes several functionalities

describes as below:

User:

It provides facility to Create new user, Sign In,, Login, Logout and book parking spaces as per availability. User can see booking history also User can book parking spaces before arriving.

Admin:

The admin can add parking spaces according to city, area and location. Admin can view customer details, view parking, view booking.

Advantages of Online Parking System

- User can view various parking spaces and select specific area of their choice
- It saves user time in search of parking space available in specific area.

Disdvantages of Online Parking System

- It requires Internet connection

Users and Characteristics:

Admin:

- Admin can login to the system.
- View the list customers/users.
- Add new parking location.
- View parking details
- View booking details

User:

- User can login to the system.
- User can create new user.
- User can change password.
- User can book parking spaces.
- Payment.
- User can update profile.
- User can see parking history.

Operating Environment:

Server Side:

Processor: Intel® Xeon® processor 3500 series
HDD: Minimum 500GB Disk Space
RAM: Minimum 2GB
OS: Windows 10
Database: Mysql

Client Side (minimum requirement):

Processor: Intel Dual Core
HDD: Minimum 80GB Disk Space
RAM: Minimum 1GB
OS: Windows 7, Linux

Design and Implementation Constraints:

- The application will use React as Frontend and Spring boot ,MySQL as backend
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.
- Since Online Parking system is a web-based application, internet connectionmust be established.
- The Online Parking System will be used on PCs and will function via internetor intranet in any web browser.

Specific Requirement

External Interface Requirements:

User Interfaces:

- All the users will see the same page when they enter in this website. This page asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

Hardware Interfaces:

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

Application Interfaces:

OS: Windows 10

Web Browser:

The system is a web-based application; clients need a modern web browser such as Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces:

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.
- This application will communicate with the database that holds all the booking information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfil the request fired by the user.

System Design

Activity Diagram

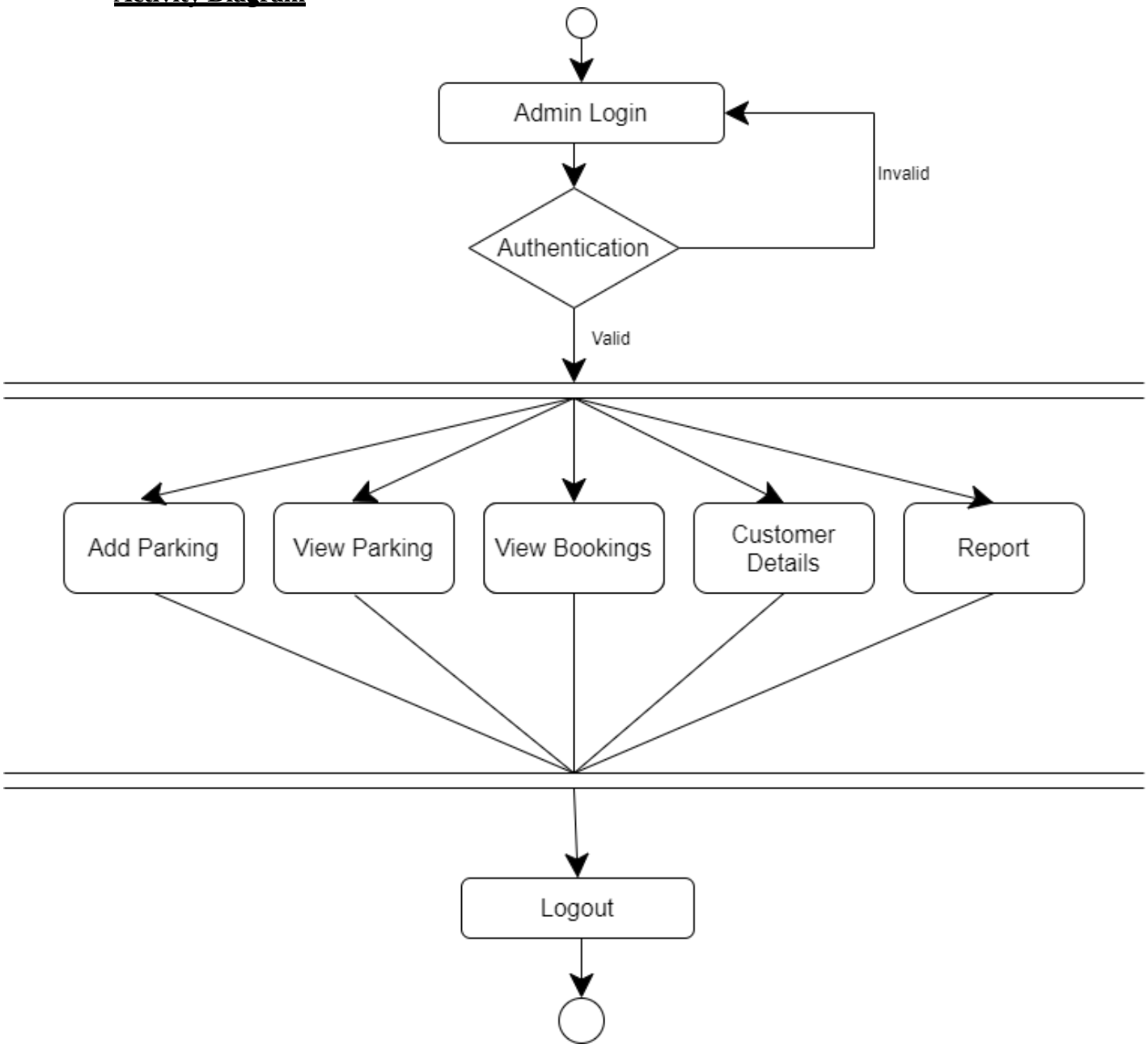


Figure 1: Admin Activity Diagram

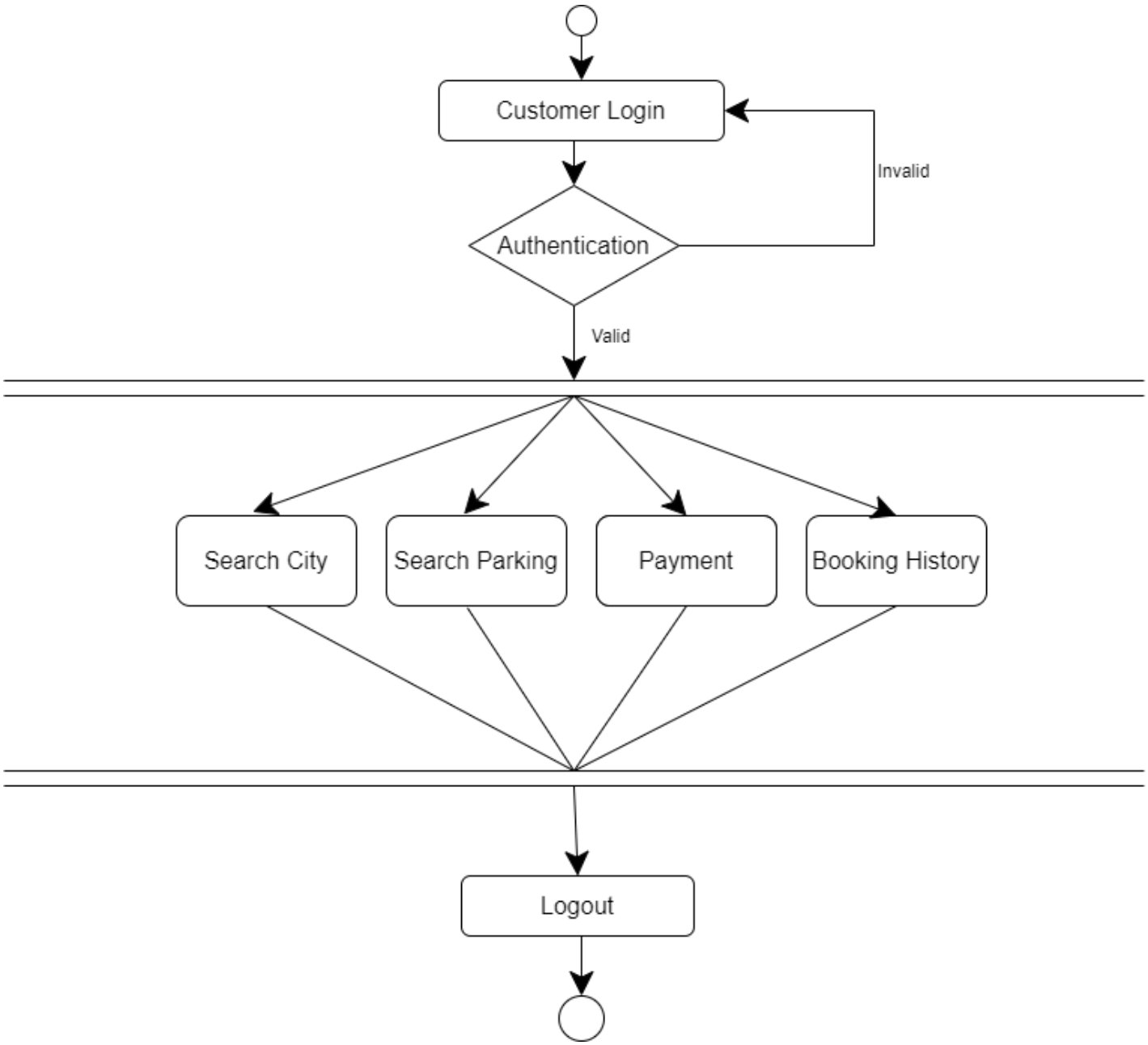


Figure 2User Activity Diagram

Data Flow Diagram

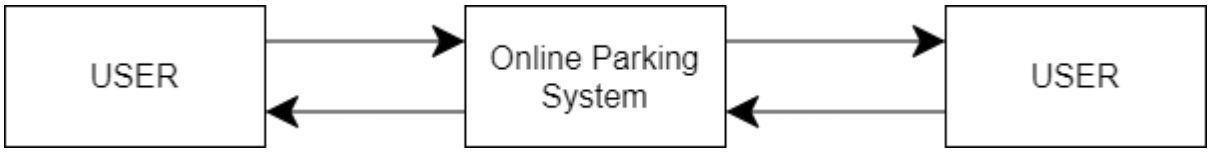


Figure 4: Level 0 Data Flow Diagram

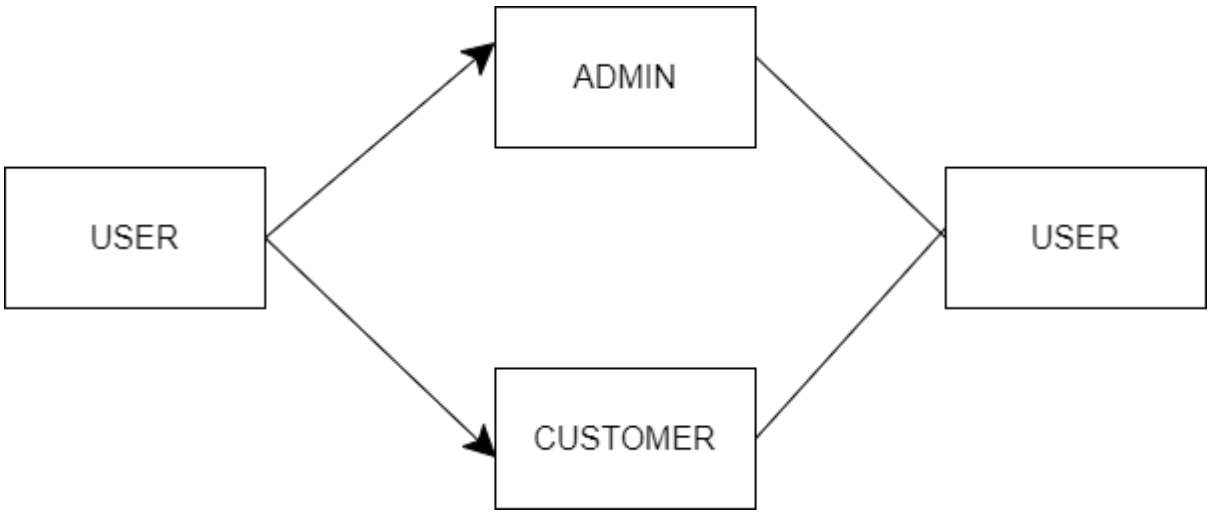


Figure 5: Level 1 Data Flow Diagram

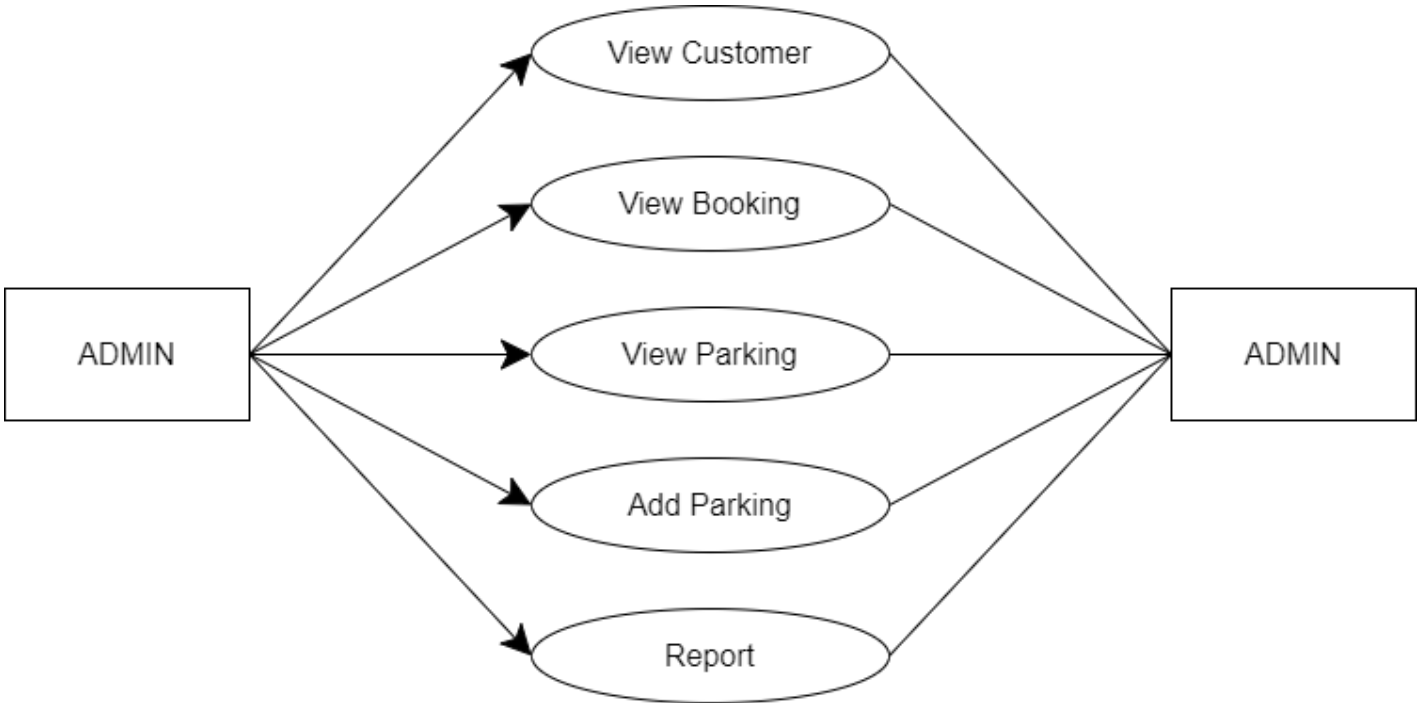


Figure 6: Level 2 Data Flow Diagram for Admin

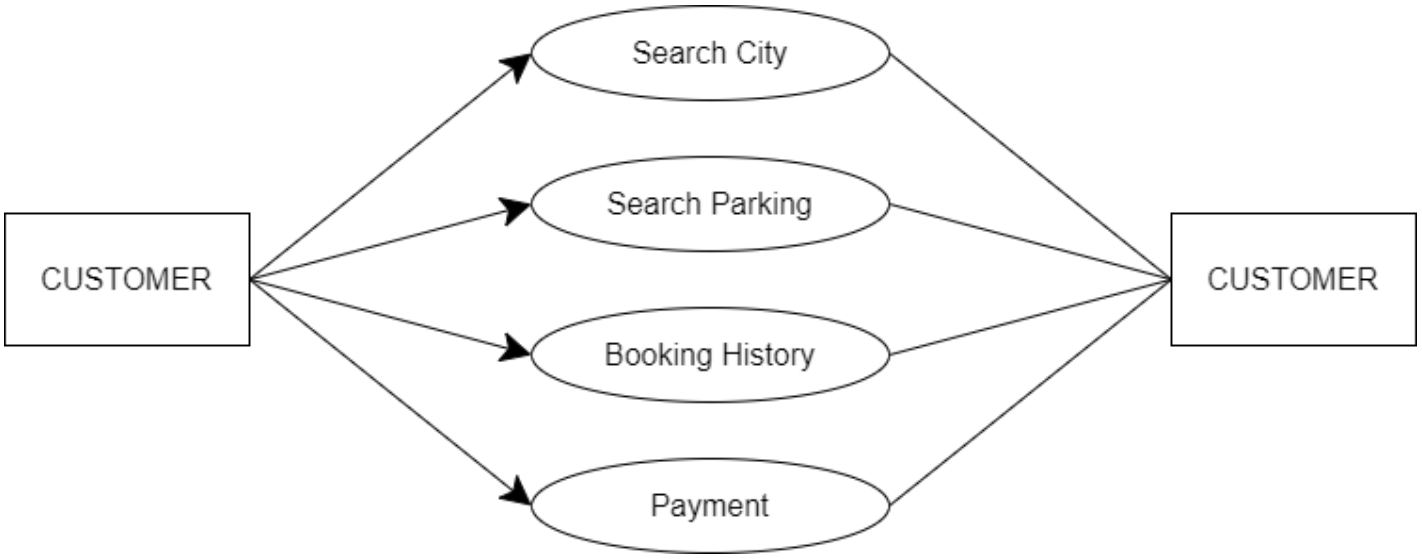


Figure 7: Level 2 Data Flow Diagram for Customer

Use Case Diagram

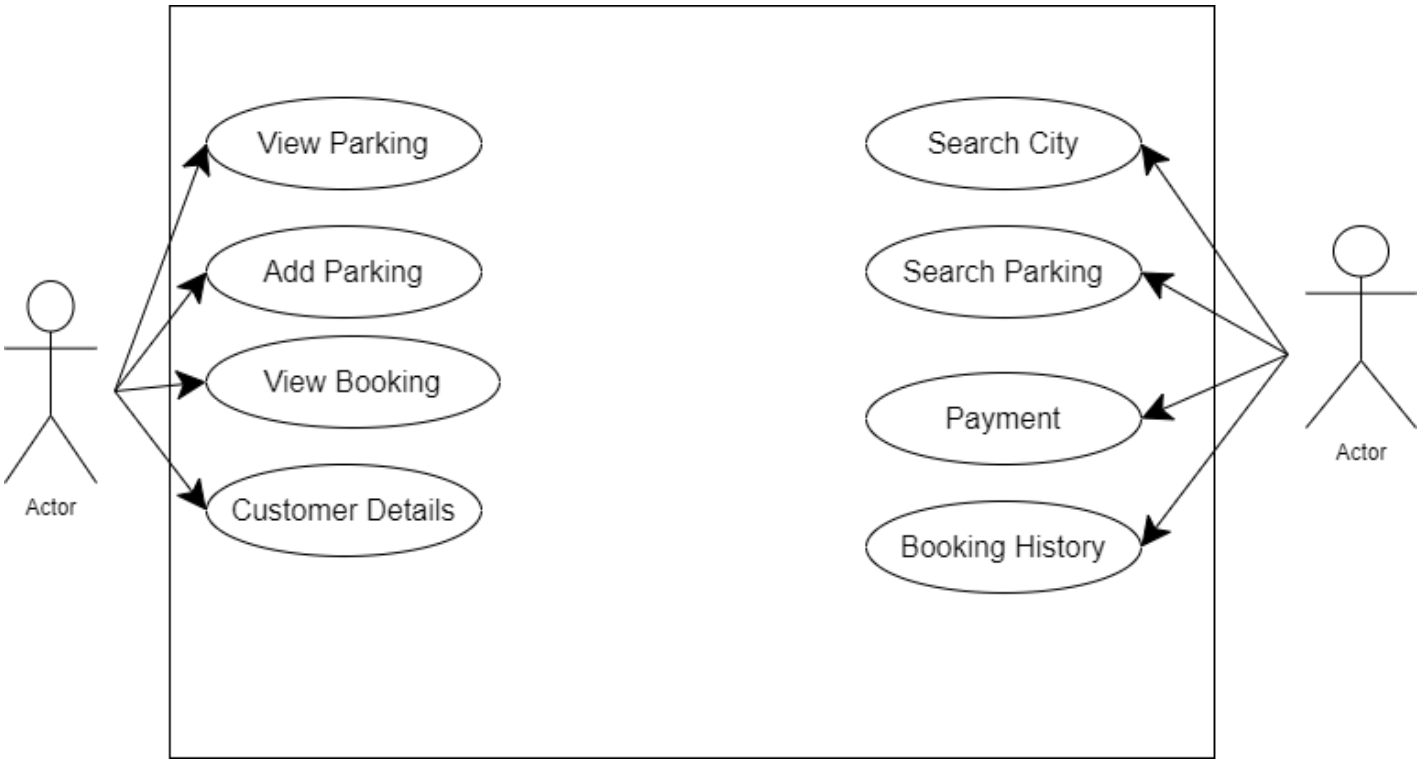
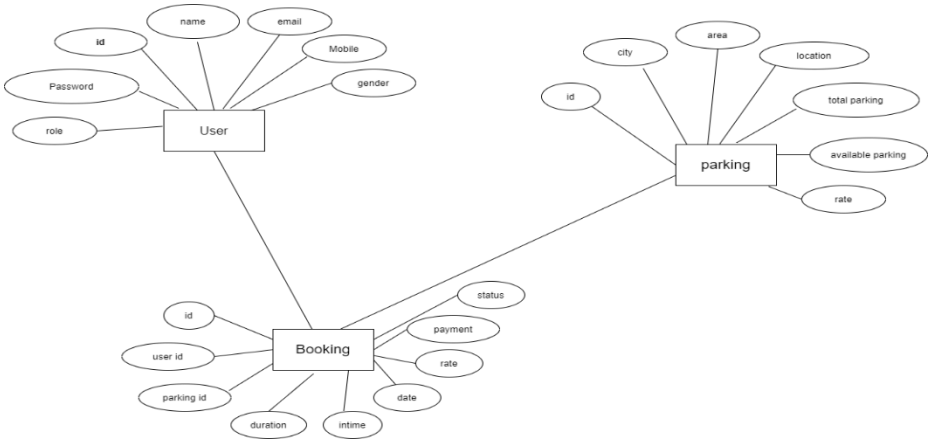


Figure 10: Use Case Diagram

ER Diagram


name
email
id
Mobile
Password
gender
role
User
area
city
location
id
total parking
parking
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rate
status
id
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user id
Booking
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duration
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Table Structure

User table:

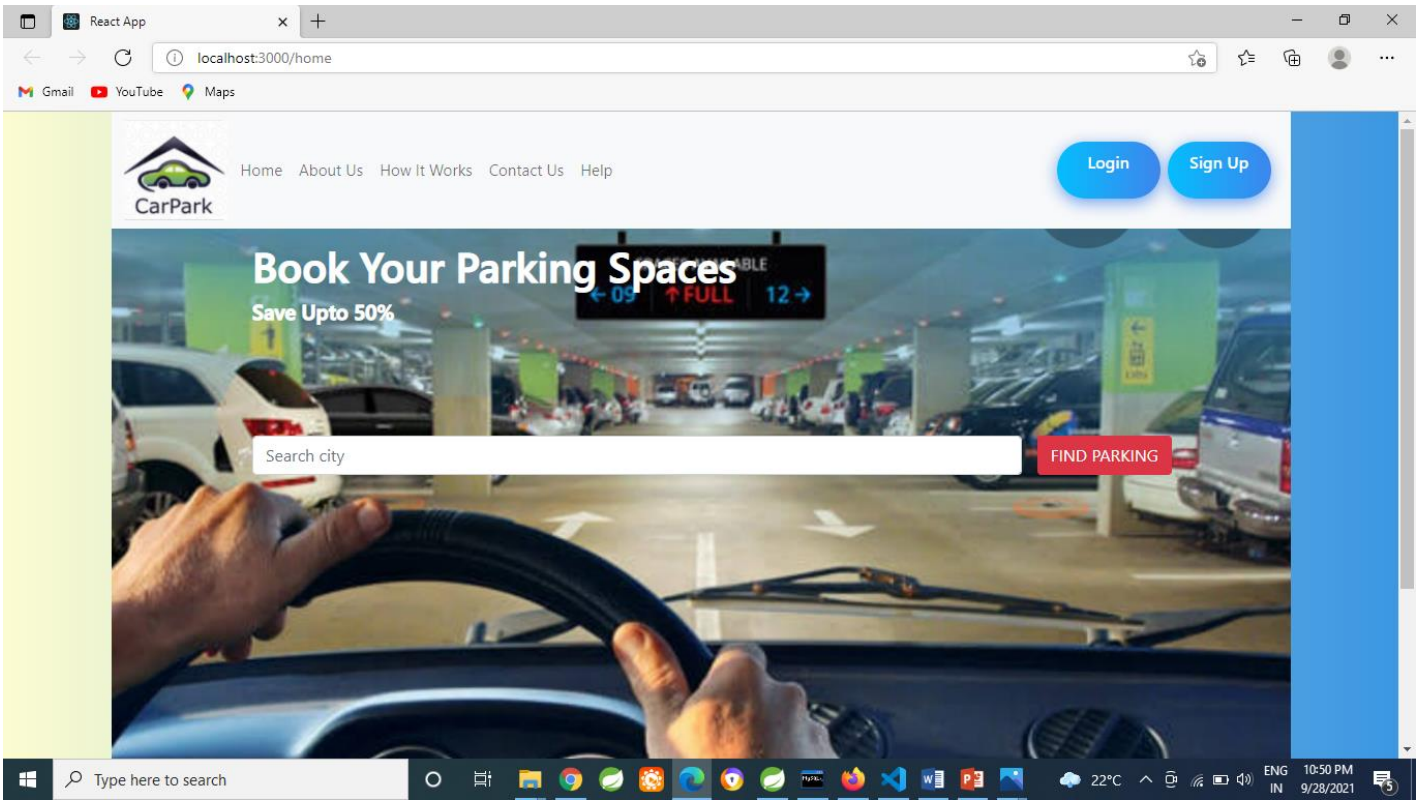
Field	Type	Null	Key	Default	Extra
U_id	Int	No	PRI	NULL	Auto_increment
Email	varchar(255)	Yes	UNI	NULL	
Gender	varchar(255)	Yes		NULL	
Mob	varchar(255)	Yes	UNI	NULL	
U_pass	varchar(255)	Yes		NULL	
pass	varchar(255)	Yes		NULL	
role	varchar(255)	yes		NULL	

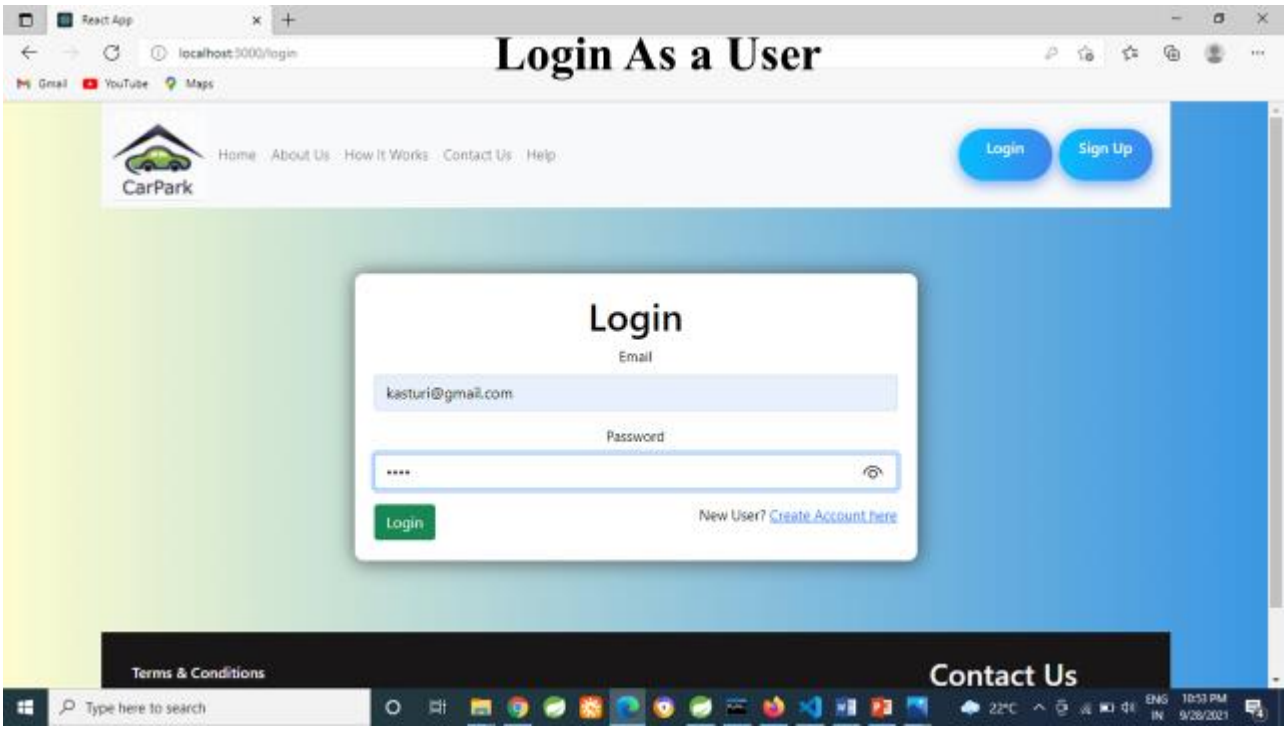
Parking Table

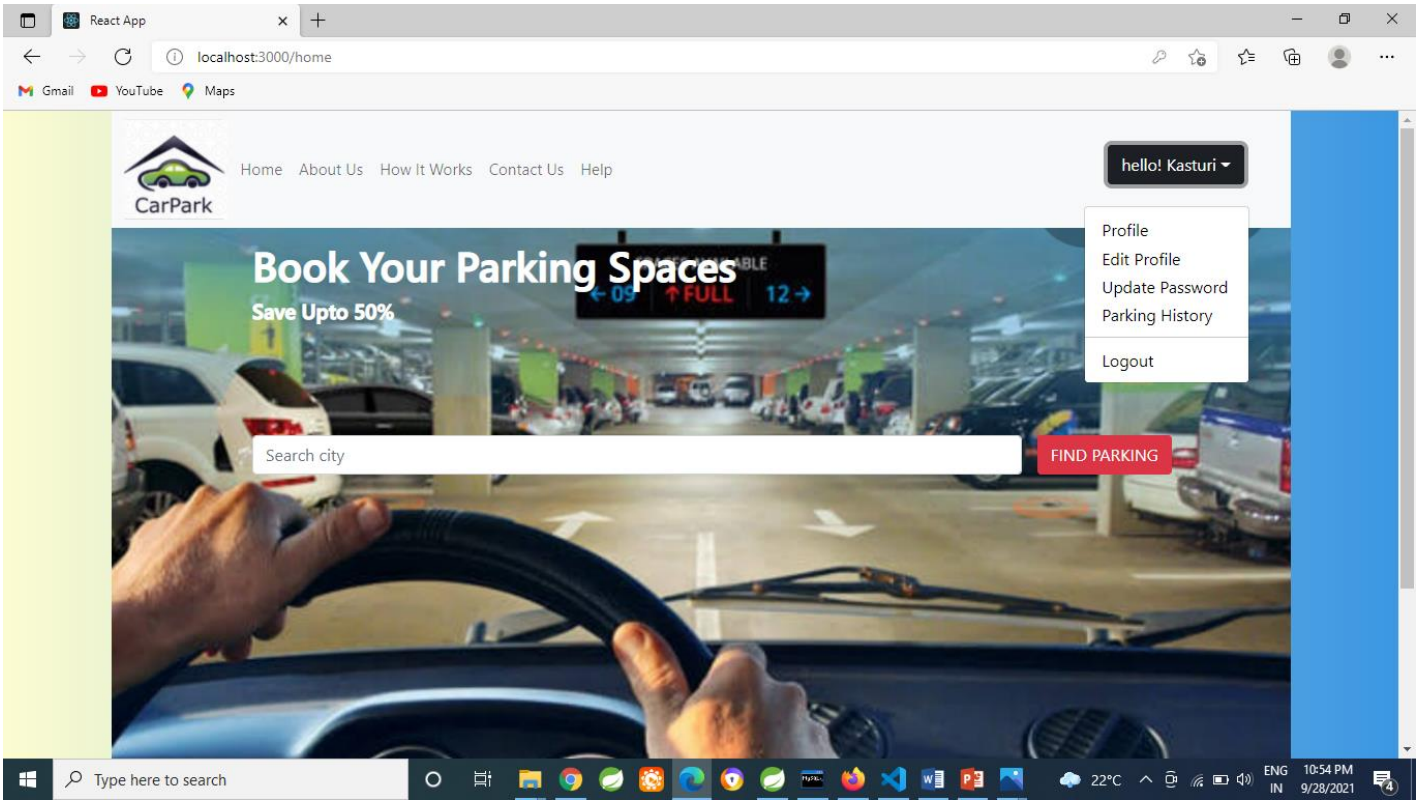
Fields	Type	Null	Key	Default	Extra
Park_id	Int	NO	PRI	NULL	Auto_increment
Area	Varchar(255)	YES		NULL	
Avail_parking	Int	NO		NULL	
City	Varchar(255)	YES		NULL	
Location	Varchar(255)	YES		NULL	
Rate	Double	NO		NULL	
Total_parking	int	NO		NULL	

Booking Details:

Fields	Type	Null	Key	Default	Extra
Booking_id	Int	NO	PRI	NULL	Auto_increment
Date	Date	YES		NULL	
Duration	Int	YES		NULL	
Intime	Time	YES		NULL	
Parkingid	Int	YES		NULL	
Payment	Int	YES		NULL	
Rate	Int	YES		NULL	
Status	Int	YES		NULL	
Userid	Int	YES		NULL	




Login As a User
CarPark
Home
About Us
How It Works
Contact Us
Help
Login
Sign Up
Login
Email
kasturi@gmail.com
Password
Login
New User? Create Account here
Terms & Conditions
Contact Us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CarPark
Home
About Us
How It Works
Contact Us
Help
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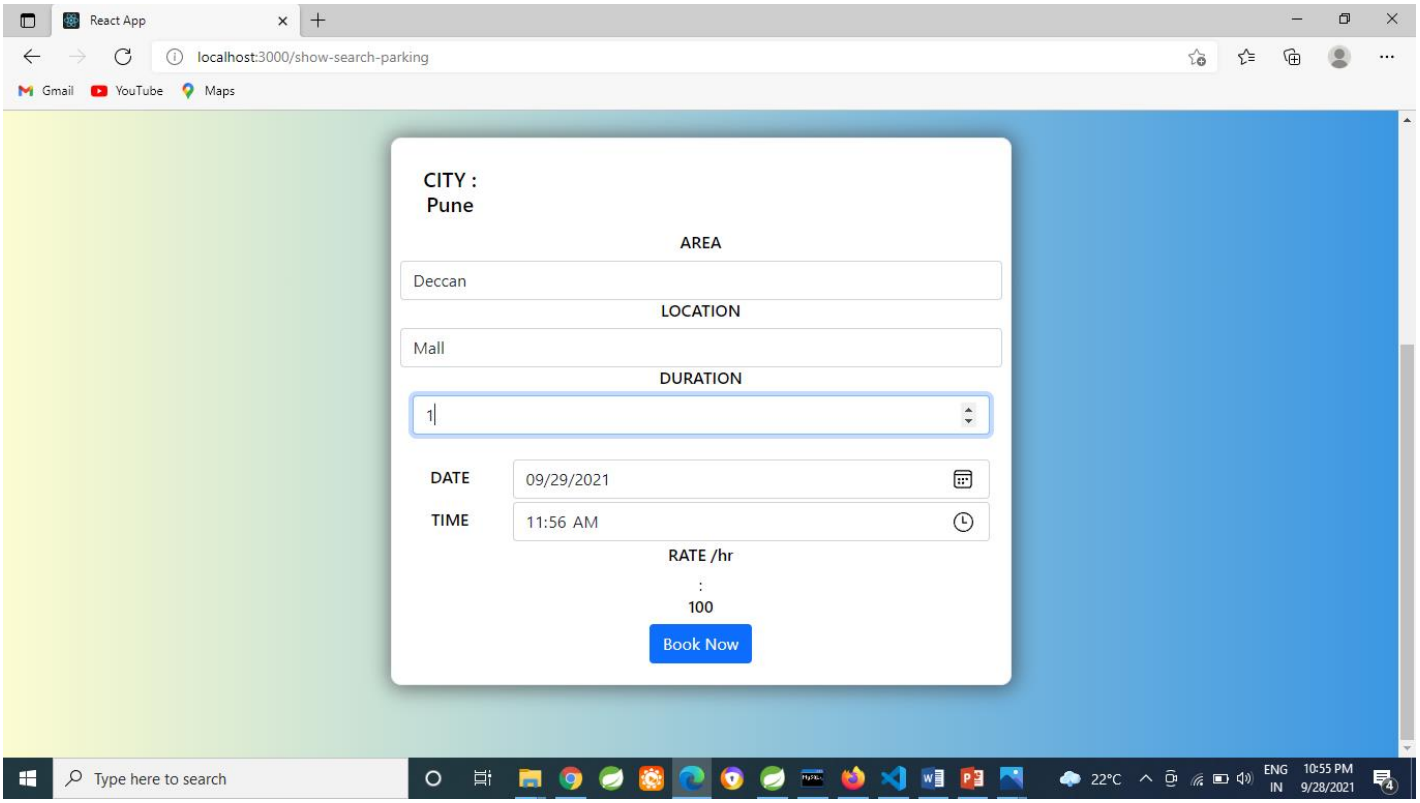
Profile
Edit Profile
Update Password
Parking History
Logout
Book Your Parking Spaces
Save Upto 50%
Search city
FIND PARKING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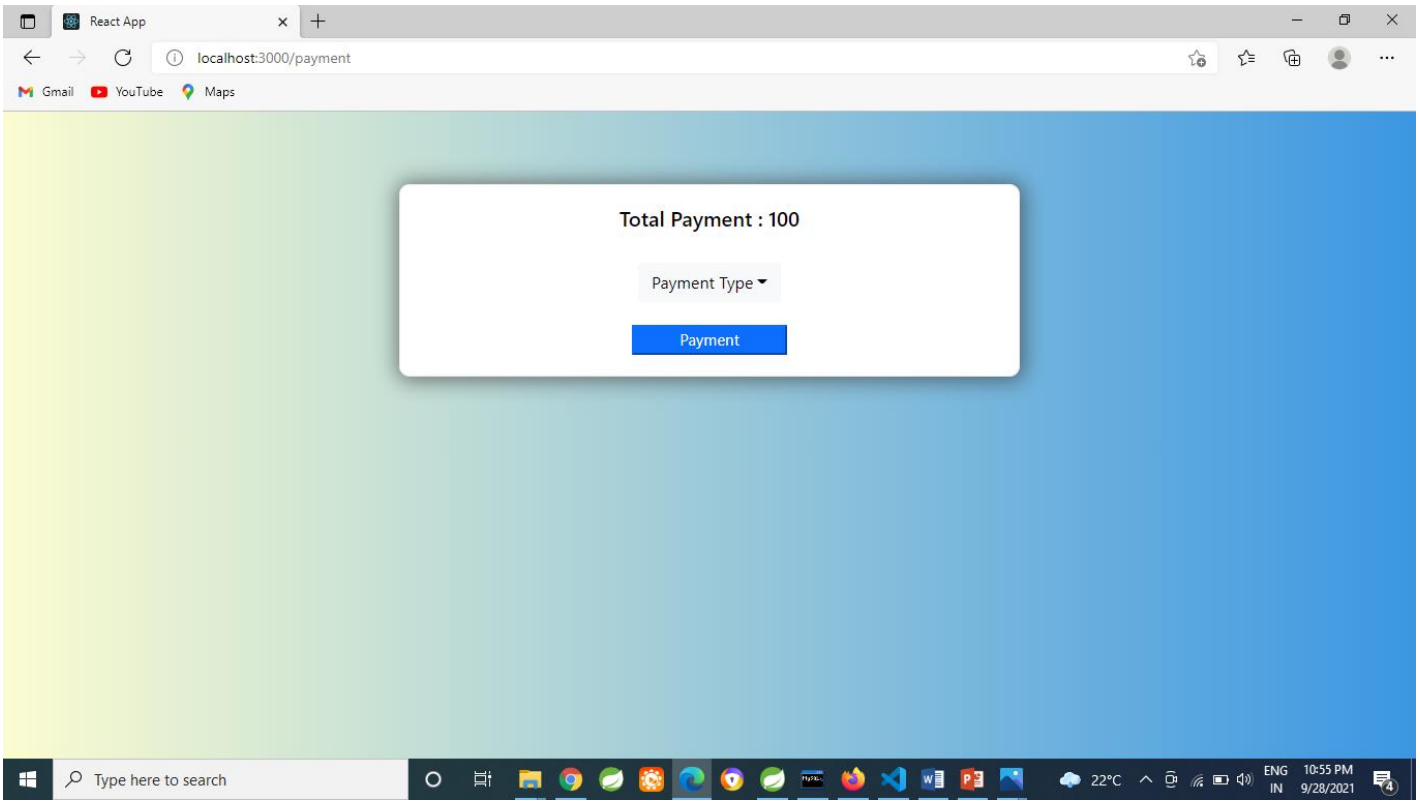
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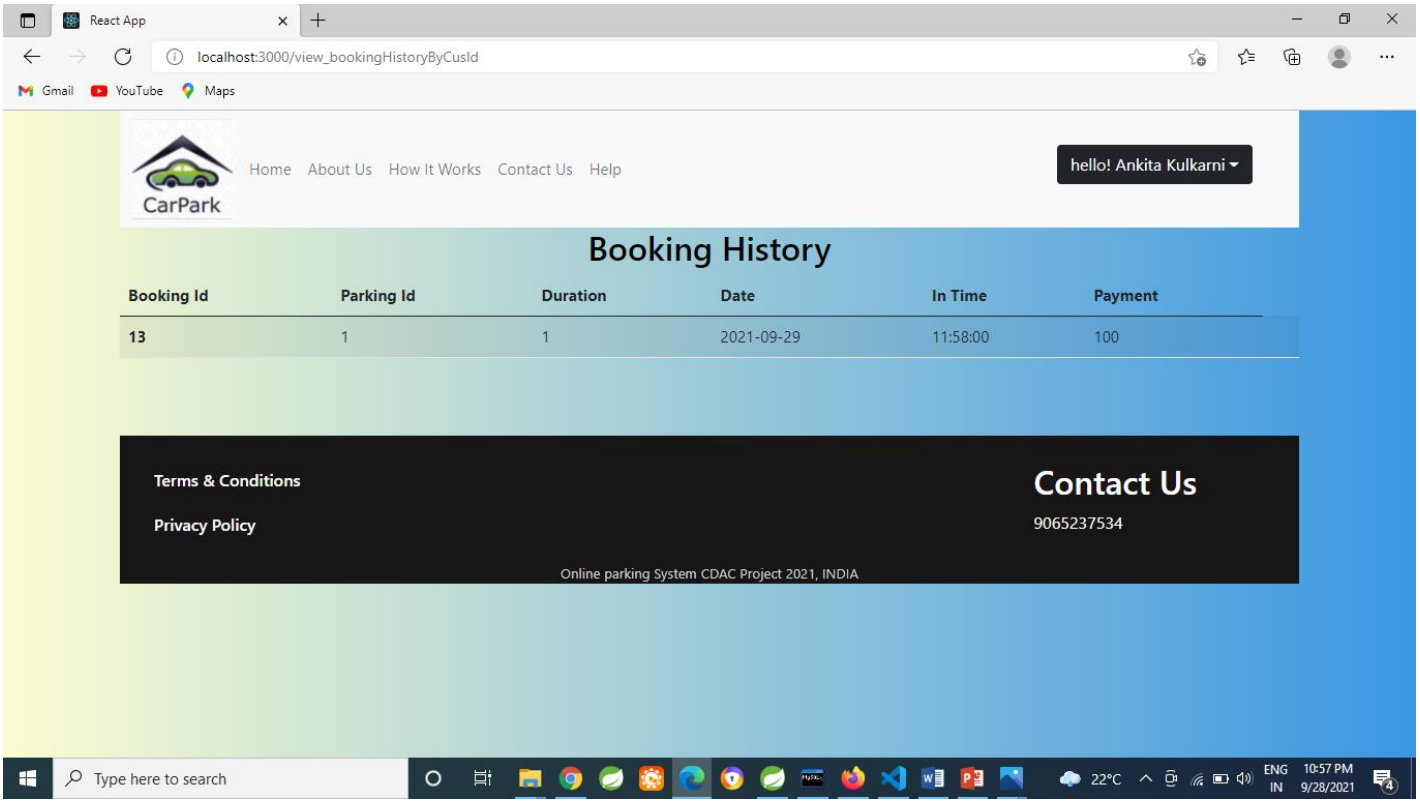
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Maps
CarPark
Home
About Us
How It Works
Contact Us
Help
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Booking History
Booking Id
Parking Id
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Terms & Conditions
Privacy Policy
Contact Us
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Login As a Admin
CarPark
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About Us
How It Works
Contact Us
Help
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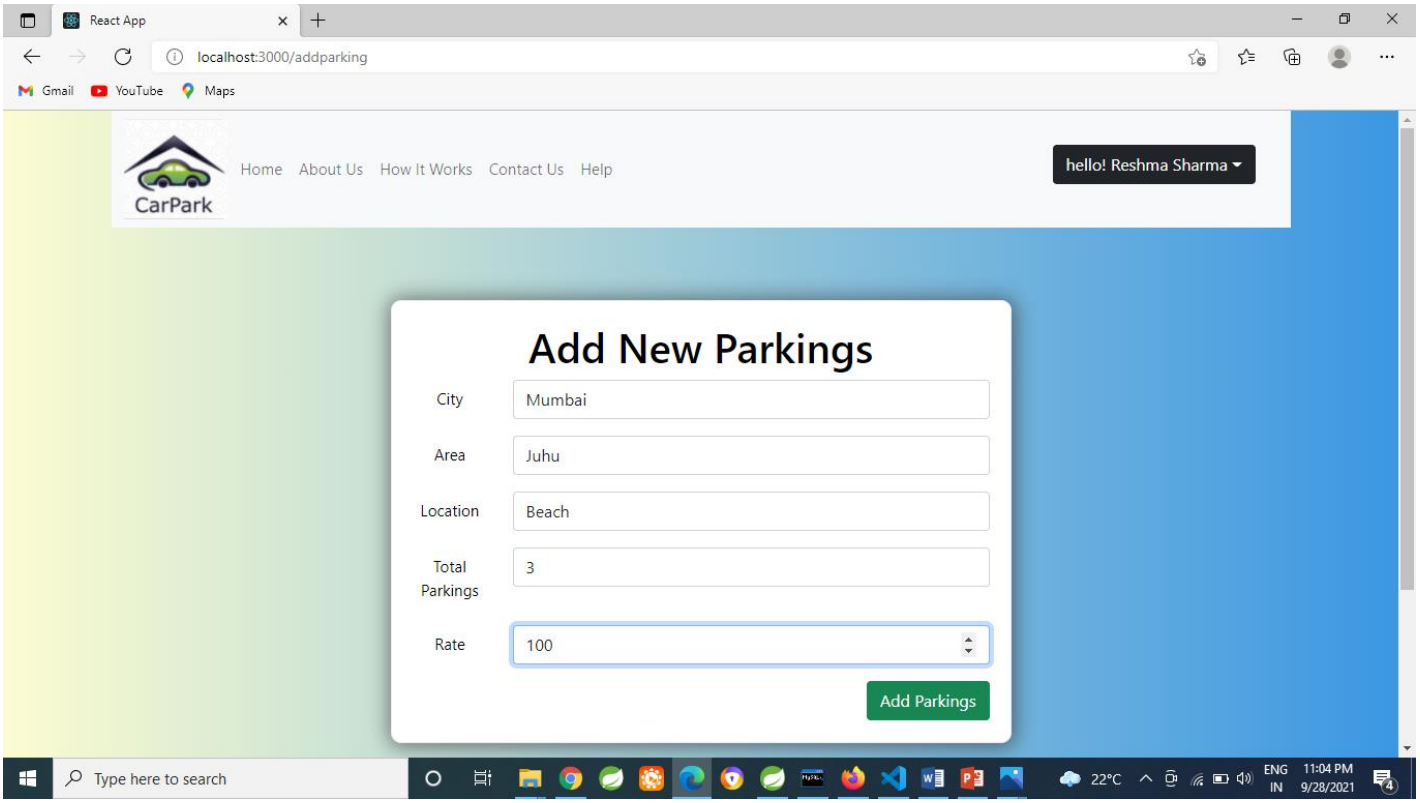
Customer Details
View Bookings
View Parking
Add Parking
Reports
Terms & Conditions
Contact Us


localhost:3000/addparking
CarPark
Home
About Us
How It Works
Contact Us
Help
hello! Reshma Sharma
Add New Parkings
City
Mumbai
Area
Juhu
Location
Beach
Total Parkings
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Rate
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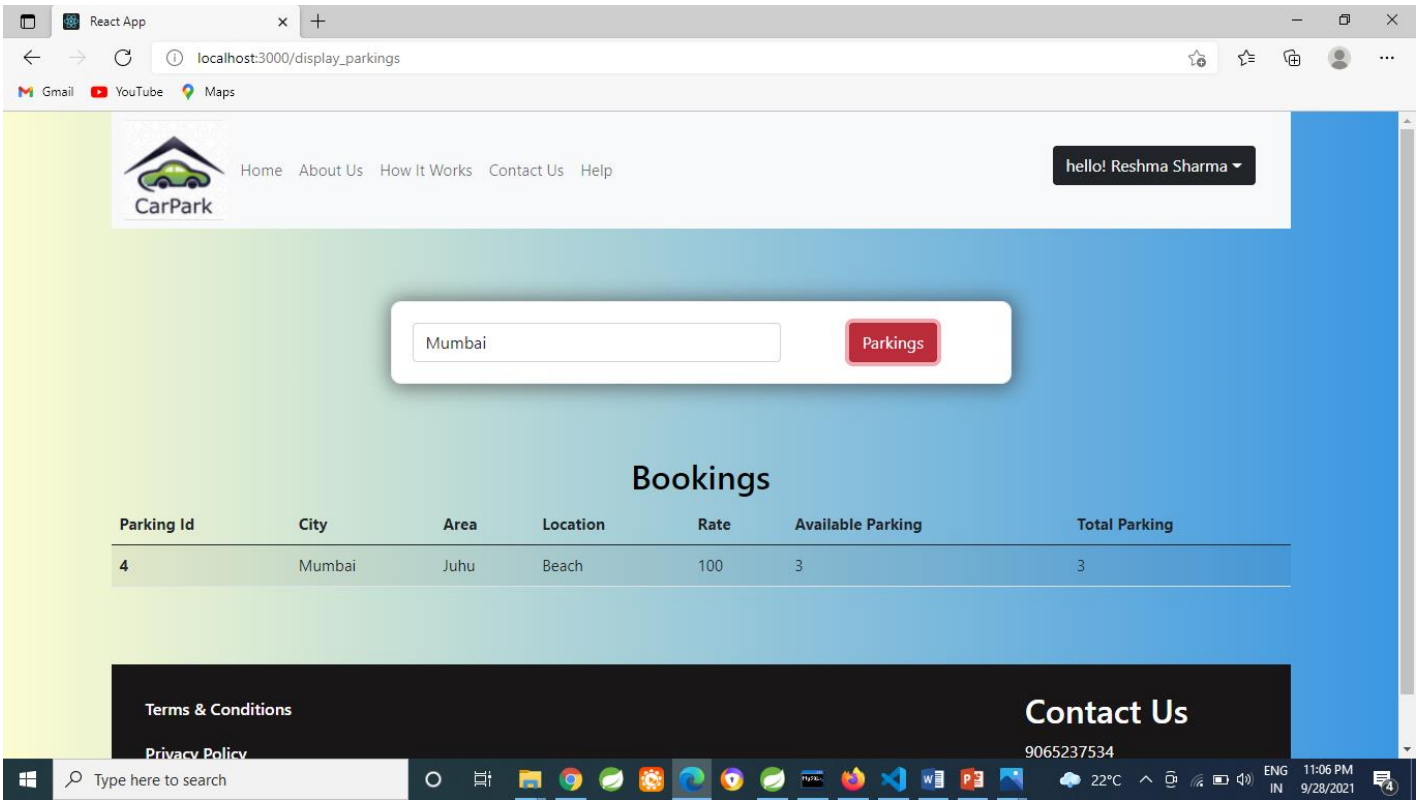
Add Parkings


React App
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Maps
CarPark
Home
About Us
How It Works
Contact Us
Help
hello! Reshma Sharma
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Parkings
Bookings
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Area
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Logout of Admin
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About Us
How It Works
Contact Us
Help
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Book Your Parking Spaces
Save Upto 50%
Search city
FIND PARKING
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Conclusion

- The difficulty of searching available parking spaces has been completely eliminated by reserving Parking spaces via proposed system

Future Scope

This project can be enhanced further by adding notify available spaces, online payment options.

The software is flexible enough to be modified and implemented as per future requirements.

ONLINE REFERENCE

[1] https://w3schools.com/
[2] https://stackoverflow.com/questions/43665090