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1

Chapter

Introduction

- 1.1] College Profile
- 1.2] Project Description
- 1.3] Project Profile

1.1. COLLEGE PROFILE

ABOUT COLLEGE

Prof. V. B. Shah institute of Management, R. V. Patel College of commerce (English Medium), V. L. Shah College of commerce (Gujarati Medium) & **Sutex Bank College Of Computer Applications & Science** are self – financed colleges affiliated to the Veer Narmad South Gujarat University, Surat. Prof. V. B. Shah Institute Was started in the year 1998 with a view of management professionals. A progressive academic record has been maintained in this regard. The R. V. Patel College of Commerce which was started in the year 2001 offers the B.Com. degree program in English Medium where as the V. L. Shah College of commerce started in the year 2006 offers the B.Com. degree programme in Gujarati Medium.

Sutex Bank College Of Computer Applications & Science started in the year 2000 offers the B.C.A. degree programme, with the onset of the 21st century, there has been tremendous advancements in science and technology.

The entire academic year is replete with academic, extra & co – curricular activities, sporting events, guest lectures, Individual, Industrial Visit, Educational Tour, seminars and workshops. A significant good will has been created by the institute among its stakeholders.

The teaching – learning process is totally student center; there by interactive and experiential learning.

The institute is proud to have a qualified, competent and an industrious staff. They assist the students in unleashing their talents and exhibiting their skills.



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The perspective institutional plan collectively chalked out by the le Principal, members of the managing trust (JivanJyot Trust, Amroli), The faculty members as well as the administrative staff. Industrial visit sand practical tasks help the students agreat deal in supplementing their learning. Students are also given ample of scope to sharpen their entrepreneurial skills. Scope to sharpen their entrepreneurial skills. The institute takes pride in stating that it focuses on the optimal use of resources available and takes all the measures for quality enhancement and quality sustenance.

1.2. PROJECT DESCRIPTION

- **Park Heaven** is an advanced **Car Parking Management System** designed to streamline parking operations for :
 - Users,
 - Vendors,
 - Admins.
- The system offers a user-friendly interface for booking, managing, and monitoring parking slots efficiently.
- It aims to reduce parking congestion, ensure smooth reservations, and provide real-time availability updates.

1.3. PROJECT PROFILE

Project Title	Park Heaven (Car Parking Management System)
Project Type	Web-Based Application
Language	HTML, CSS, JavaScript, PHP, BootStrap
Developing Tools	Visual Studio Code & Cursor AI Code Editor
Operating System	Windows 11
Front - End	HTML, CSS, Bootstrap, JavaScript, Font Awasome
Back - End	PHP, Phpmyadmin(Database)
Internal Project Guide	Ms. Sanskruti A. Ramani
Submitted To	SUTEX BANK COLLEGE OF COMPUTER APPLICATIONS AND SCIENCE
Developed By	<ol style="list-style-type: none"> 1. Preet A. Kachhadiya, 2. Happy D. Satasiya, 3. Purvil M. Dhameliya, 4. Harsh R. Kothiya, 5. Tarang K. Sojitra, 6. Kishan M. Lathiya.

2

Chapter

Environment Description

2.1] Hardware And Software Requirements

2.2] Technologies Used

2.1. HARDWARE AND SOFTWARE REQUIREMENTS

Software Requirements :

For Developing the Website:

- Operating System: Windows 10/11
- Language: HTML, CSS, JavaScript, PHP
- Database: PhpMyAdmin
- Technologies Used: PHP, Bootstrap, JavaScript, Font Awesome
- Debugger: Google Chrome, Mozilla Firefox

For Running the Website:

- Operating System: Windows
- Network: Wi-Fi, Internet, LAN
- Browser: Google Chrome, Microsoft Edge, Mozilla Firefox.

Hardware Requirements:

For Developing the Website :

- Processor: Microsoft
- RAM: 4GB Minimum, 8GB recommended
- Space on disk: Minimum 2GB

For Running the Website:

- Device: Google Chrome
- Minimum space to execute: 30.0 MB

2.2. TECHNOLOGIES USED

- **Bootstrap :**

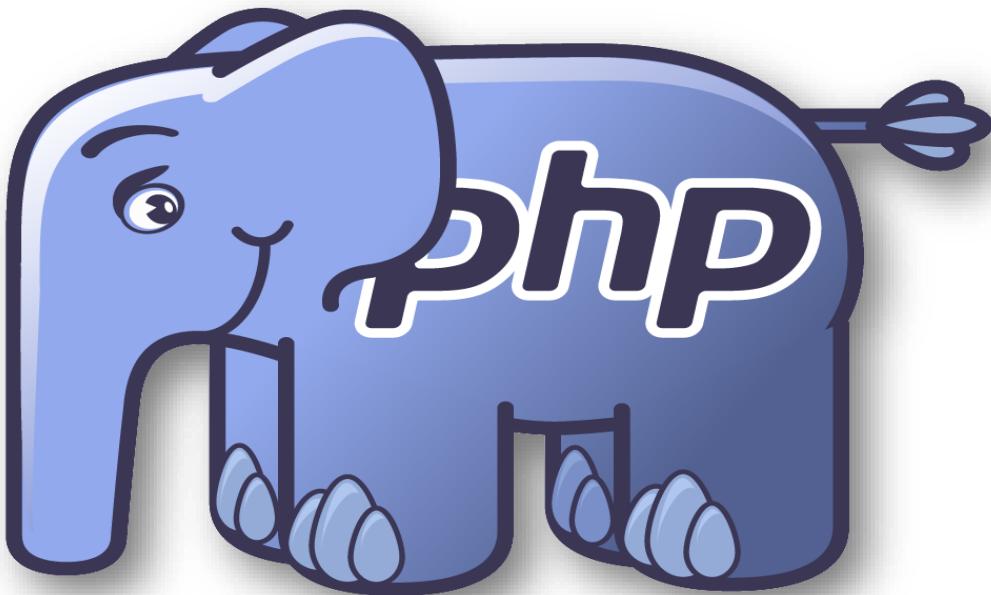


Bootstrap is a **free and open-source** front-end framework for designing responsive and mobile-first websites. It includes a collection of **CSS and JavaScript components** that help developers quickly create web pages with a professional design.

Features:

- **Responsive grid system** that ensures your site looks great on all screen sizes (desktop, tablet, mobile).
- **Pre-built components** like navigation bars, forms, buttons, and modals that speed up the design process.
- **Customizable** with variables and themes.
- **Cross-browser compatibility** for a consistent experience on all web browsers.

- **PHP :**

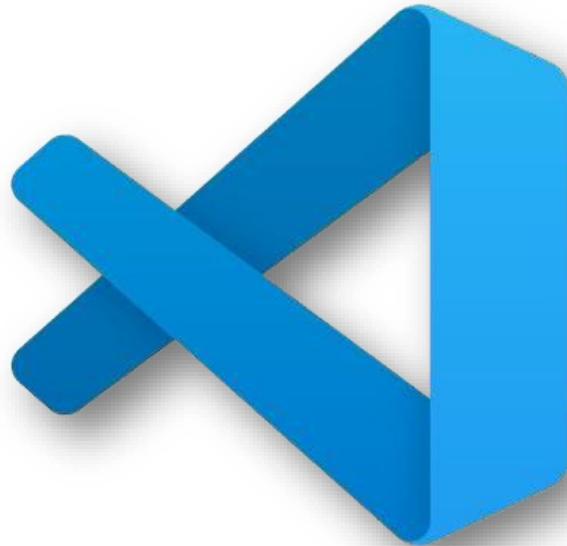


PHP (Hypertext Preprocessor) is a **server-side scripting language** used for web development. It is especially suited for creating dynamic and interactive web pages. PHP runs on the server and generates HTML, which is sent to the client browser.

Features:

- **Server-side scripting:** Executes code on the server before sending the HTML to the browser.
- **Database integration:** PHP works well with databases like MySQL for storing and retrieving data.
- **Sessions and cookies:** PHP can handle user sessions and store user information across multiple pages.
- **Security features:** PHP provides multiple ways to secure data, including encryption and protection from SQL injection.

- **VS Code:**



Visual Studio Code is a free, open-source, lightweight, and powerful code editor developed by Microsoft. It supports multiple programming languages and provides advanced features to enhance productivity in software development.

Features :

- **Cross-Platform:** Available for Windows, macOS, and Linux.
- **Extensive Language Support:** Built-in support for JavaScript, Python, HTML, CSS, and many more.
- **Customizable:** Themes, keyboard shortcuts, and settings can be customized.
- **Extensions Marketplace:** Add functionality with extensions like Prettier, ESLint, GitLens, and Live Server.

- **PhpMyAdmin (Database) :**



PhpMyAdmin is a **free and open-source** tool written in PHP, used for managing MySQL databases via a web interface. It simplifies the process of interacting with databases by providing a graphical user interface (GUI).

Features:

- **Database management:** Create, edit, and delete databases, tables, and rows.
- **SQL query execution:** Easily execute SQL queries without needing to use the command line.
- **Backup and restore:** Export and import database files for backup or migration.
- **User management:** Manage MySQL users and their permissions directly from the interface.
- **Visual representation:** It provides a user-friendly interface for visualizing database structure and relationships.

3

Chapter

System Analysis and Planning

- 3.1] Existing systems and Its
drawback
- 3.2] Feasibility study
- 3.3] Requirement gathering and analysis

3.1. EXISTING SYSTEM AND ITS DRAWBACKS

Existing System:

Traditional car parking management systems are often **manual** or **semi-automated**, relying on physical ticketing, registers, or outdated software for booking and managing parking slots. Some systems may use basic **offline software** that lacks real-time updates and user-friendly features.

Drawbacks:

1. Manual Booking Process:

- Users need to physically visit the parking area to book a slot.
- Long waiting times during peak hours.

2. Lack of Real-Time Availability:

- No real-time updates on available or booked slots.
- Users may reach a parking lot only to find it full.

3. Inefficient Slot Management:

- No proper tracking of booked and vacant slots.
- Possibility of double booking or underutilization of spaces.

4. Payment Issues:

- Many existing systems still rely on **cash payments**, leading to inconvenience.
- No support for **online payments** or digital receipts.

3.2. FEASIBILITY STUDY

1. Technical Feasibility :

- **Technology Availability:** The system uses widely available technologies like **PHP, MySQL, Bootstrap, JavaScript, and Razorpay API**, which are well-supported and easy to implement.
- **Database Management:** MySQL efficiently handles user, vendor, and booking data..

2. Operational Feasibility :

- **User-Friendly Interface:** Simple dashboard for users, vendors, and admins to manage parking slots and bookings.
- **Efficiency Improvement:** Reduces manual effort by automating slot booking, payments, and confirmations.

3. Economic Feasibility (Cost-Benefit Analysis) :

- **Low Development Cost:** Since **open-source technologies** (PHP, MySQL, Bootstrap) are used, the development cost is minimized.
- **Revenue Generation:**
 - Parking vendors can charge users for booking slots.
 - The platform can implement a **commission-based** revenue model.

4. Legal Feasibility :

- **Compliance with Data Protection Laws:** Ensures secure handling of **user information and payment details**.
- **Online Payment Regulations:** Integrates **Razorpay**, which complies with online transaction security standards.

3.3 REQUIREMENT GATHERING AND ANALYSIS

Functional Requirements :

Functional requirements define the specific features and operations that the **Park Heaven – Car Parking Management System** must perform. These requirements ensure that the system meets user needs effectively.

Parking Slot Management:

- Users can select a location from a dropdown to view available parking slots.
- Parking slots categorized as Available, Booked, or Reserved.

Booking Management:

- Users can book a parking slot by selecting a start and end date/time.
- Option to extend booking duration after initial booking.
- Admins and vendors can view all booking details in real time.
- Users can cancel bookings, subject to cancellation policies.

Admin & Vendor Dashboard:

- Admin Dashboard: Displays total users, total bookings, revenue, and parking availability.
- Vendor Dashboard: Shows their parking slots, bookings, and revenue reports.
- Admins can manage users, vendors, and bookings.

Requirement Analysis :

Feasibility Analysis:

- Technical Feasibility: The system will use PHP, MySQL, JavaScript, Bootstrap, and APIs for smooth parking management.
- Operational Feasibility: A user-friendly UI makes it easy for users, vendors, and admins to navigate and manage the system.
- Economic Feasibility: The system reduces manual parking operations, leading to long-term cost savings for vendors.

Risk Analysis:

- Data Loss Risk: Automated database backups to prevent loss of booking and payment records.
- Security Risks: Implement secure authentication, encryption, and fraud detection in payments.
- Performance Risks: Optimize database queries and caching to handle high traffic efficiently.

4

Chapter

Proposed System

4.1] Scope

4.2] Project Modules

4.3] Expected Advantages

4.1. Scope

1. Scope for Users (Customers) :

- Online **slot booking** with the option to select **start and end date/time**.
- Ability to **extend booking duration** if needed.
- Secure **online payments** via **Razorpay** with multiple payment options.
- **Email confirmations** for successful bookings and payments.

2. Scope for Vendors :

- Ability to **add, update, or remove** parking slots in their assigned locations.
- View **real-time booking details and slot availability**.
- Access **revenue reports and analytics** to track earnings.
- Manage **user bookings and slot reservations** for their parking areas.

3. Scope for Admins :

- Dashboard overview with total **users, bookings, revenue, and parking availability**.
- **Manage users and vendors** (add, update, or remove accounts).
- **Monitor all bookings** and manage any disputes or cancellations.
- **Control parking slot availability** across all locations.

4.2. PROJECT MODULES (MODULE-WISE OBJECTIVES/FUNCTIONALITIES CONSTRAINTS)

1. User Module (Customers) :

Objectives/Functionalities:

- User Registration & Login: Users can create an account and log in securely to the system.
- View Available Parking Slots: Users can check available parking slots in different locations.
- Slot Booking (Start & End Date/Time): Users can book parking slots by specifying the start and end date/time.
- Extend Booking Duration: Users can extend their booking if they need more time.
- Booking History: Users can view their previous bookings and check upcoming reservations.
- Download Receipt (PDF): After booking, users can download a PDF receipt for their records.
- Email Notifications (Booking & Payment): Users will receive email notifications for booking confirmations and payment updates.

Constraints:

- Users must have internet access to use the platform and book parking slots.
- Booking errors may occur if slots are double-booked due to real-time availability issues.
- The system may restrict bookings based on the user's location or time limitations.

2. Vendor Module :

Objectives/Functionalities:

- Vendor Login: Vendors can securely log in to manage their parking areas.
- Manage Parking Slots (Add, Update, Remove) As Per His/Her Location: Vendors can add, update, or remove parking slots in their assigned locations.
- View Real-Time Bookings: Vendors can monitor live booking data and track the status of available slots.
- Revenue Reports & History: Vendors can view revenue reports and analyze historical data of their parking slots.

Constraints:

- Vendors must have correct information about parking slots to prevent errors.
- Limited access to certain features, such as editing admin-specific details.
- Vendors must ensure their parking slots are updated in real-time for availability accuracy.

3. Admin Module :

Objectives/Functionalities:

- Admin Dashboard (Total Users, Bookings, Revenue, Slots, etc): Admin can view an overview of total users, total bookings, revenue, and slot availability across all locations.
- Manage Vendors: Admins can add, update, or remove vendor accounts.
- Manage Bookings (View): Admins can view, manage, and modify all user bookings.
- Parking Slot Management: Admins can add, update, or remove parking slots across all locations.

- Generate Reports (Usage, Revenue, Peak Hours): Admins can generate reports to track parking usage, revenue, and peak booking times.
- Show History Of Users Bookings: Admins can view the complete history of user bookings for tracking purposes.

Constraints:

- Admins must be careful when handling sensitive user and vendor data.
- Admins have access to all data, so data privacy and security must be prioritized.
- Real-time synchronization of data is essential for accurate slot availability and booking management.

4.3. Expected Advantages

1. Convenience for Users

- **Easy Parking Slot Booking:** Users can book parking slots from anywhere, anytime, based on real-time availability.
- **Instant Booking Confirmation:** Automated email notifications ensure that users are instantly informed about booking confirmations and payments.
- **Easy Payment Methods:** Multiple payment options (UPI, Cards, Net Banking, Wallets) for users to choose from.
- **Downloadable Receipts:** Users can easily download PDF receipts for their bookings, making the system more transparent and user-friendly.

2. Real-Time Availability

- **Accurate Slot Management:** Parking slots are updated in real-time, preventing double bookings and ensuring accurate availability for users.
- **Instant Notifications:** Users receive booking reminders and alerts about the expiration of their parking time.

3. Efficiency for Vendors

- **Simplified Parking Slot Management:** Vendors can easily manage their parking slots, including adding, updating, or removing slots, directly from the platform.
- **Real-Time Bookings Monitoring:** Vendors can view bookings as they happen, helping them track parking availability and earnings.
- **Revenue Tracking:** Vendors can access revenue reports and historical data, helping them optimize pricing and parking management.

4. Streamlined Admin Operations

- **Centralized Dashboard:** Admins have access to a centralized dashboard where they can view total users, bookings, revenue, and parking slot availability across all locations.

- **User & Vendor Management:** Admins can easily manage users and vendors, including adding, updating, or deleting accounts, ensuring smooth system operations.

5. Reduced Manual Workload

- **Automated Processes:** Booking confirmations, payment receipts, and reminders are automatically sent to users, reducing the need for manual intervention.
- **Paperless Transactions:** With the ability to download receipts and make online payments, the system minimizes the use of paper, promoting environmental sustainability.

5

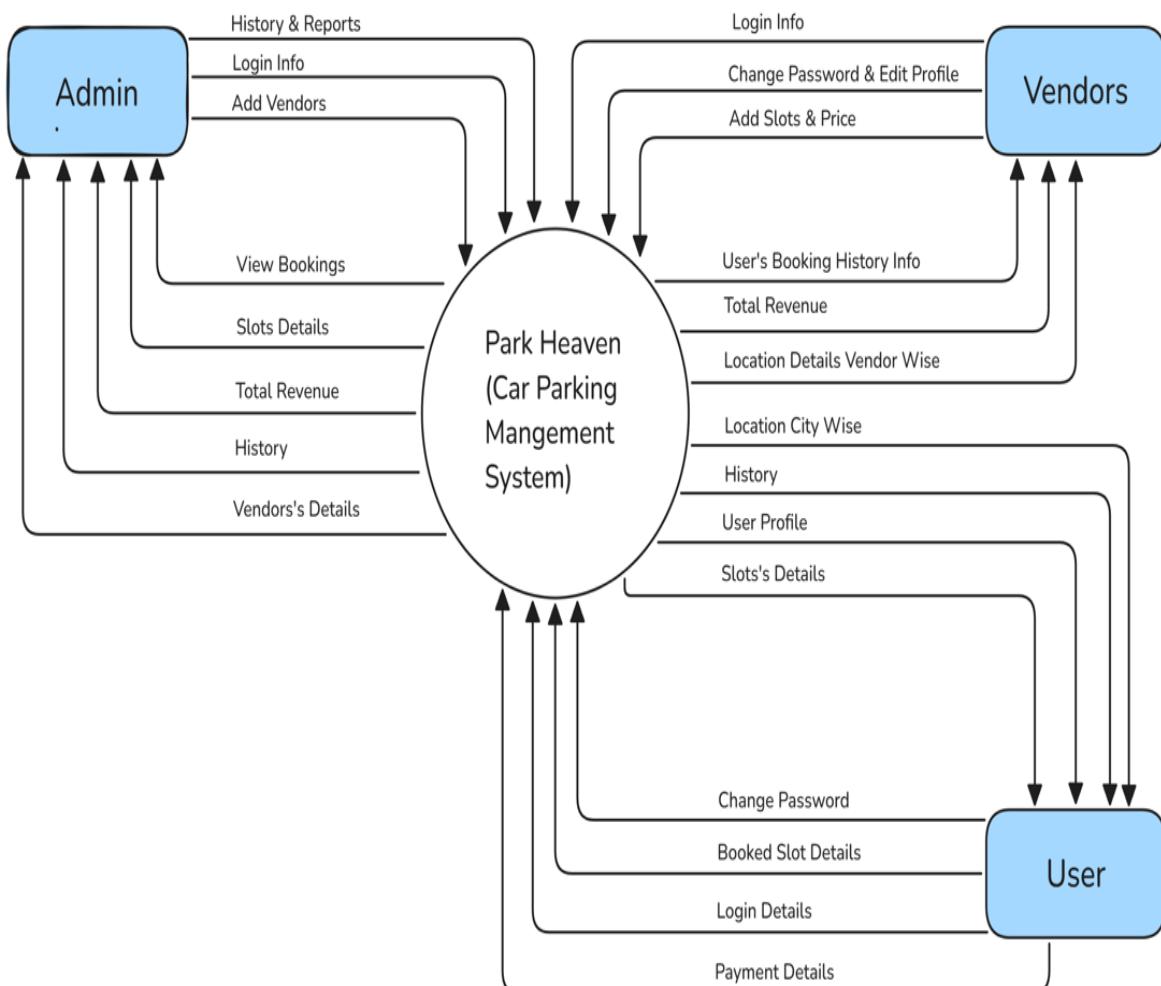
Chapter

Detail Planning

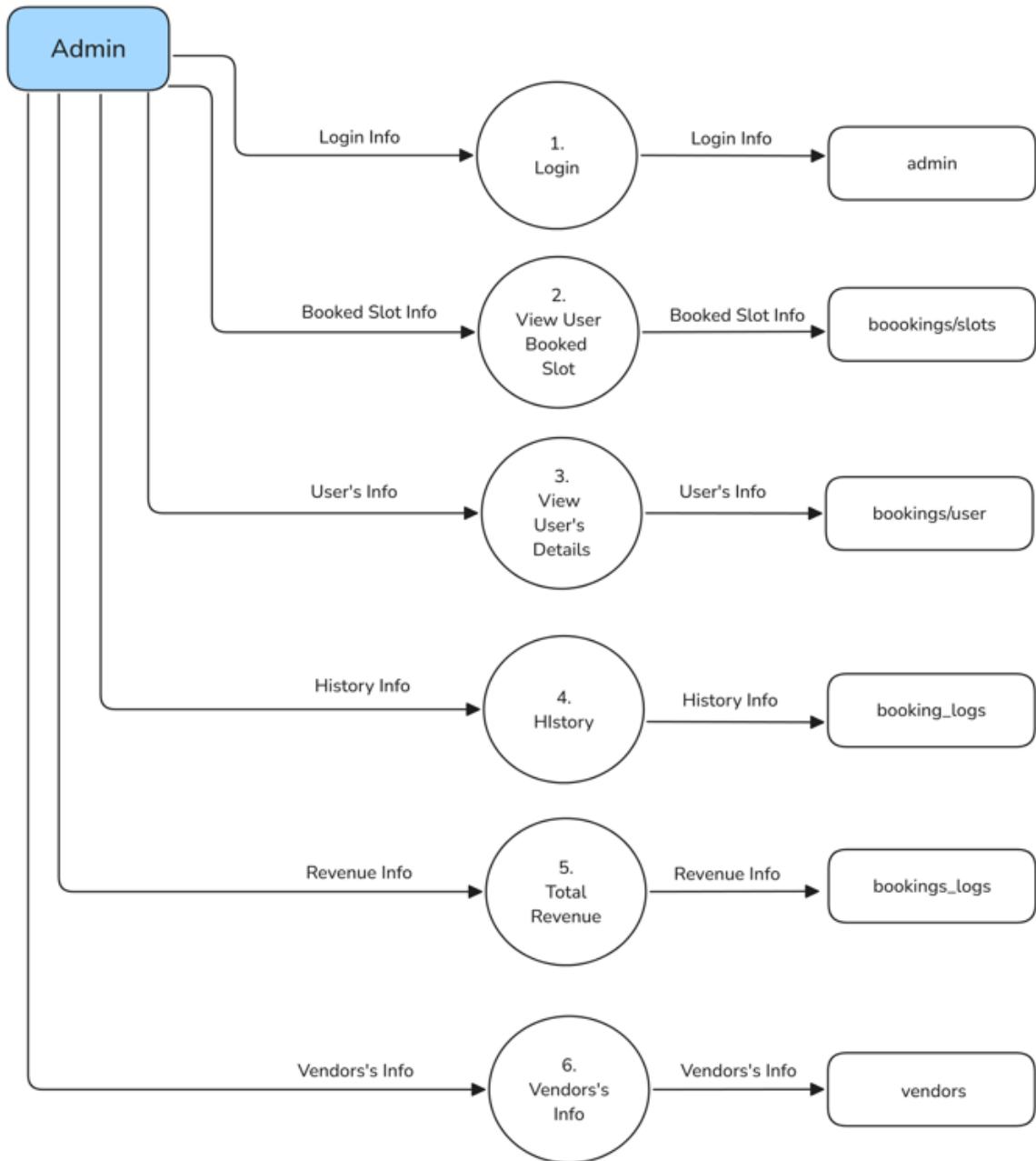
- 5.1] Dataflow diagram
- 5.2] Process Specification
- 5.3] Data dictionary
- 5.4] Entity-relationship diagram

5.1 DATAFLOW DIAGRAM

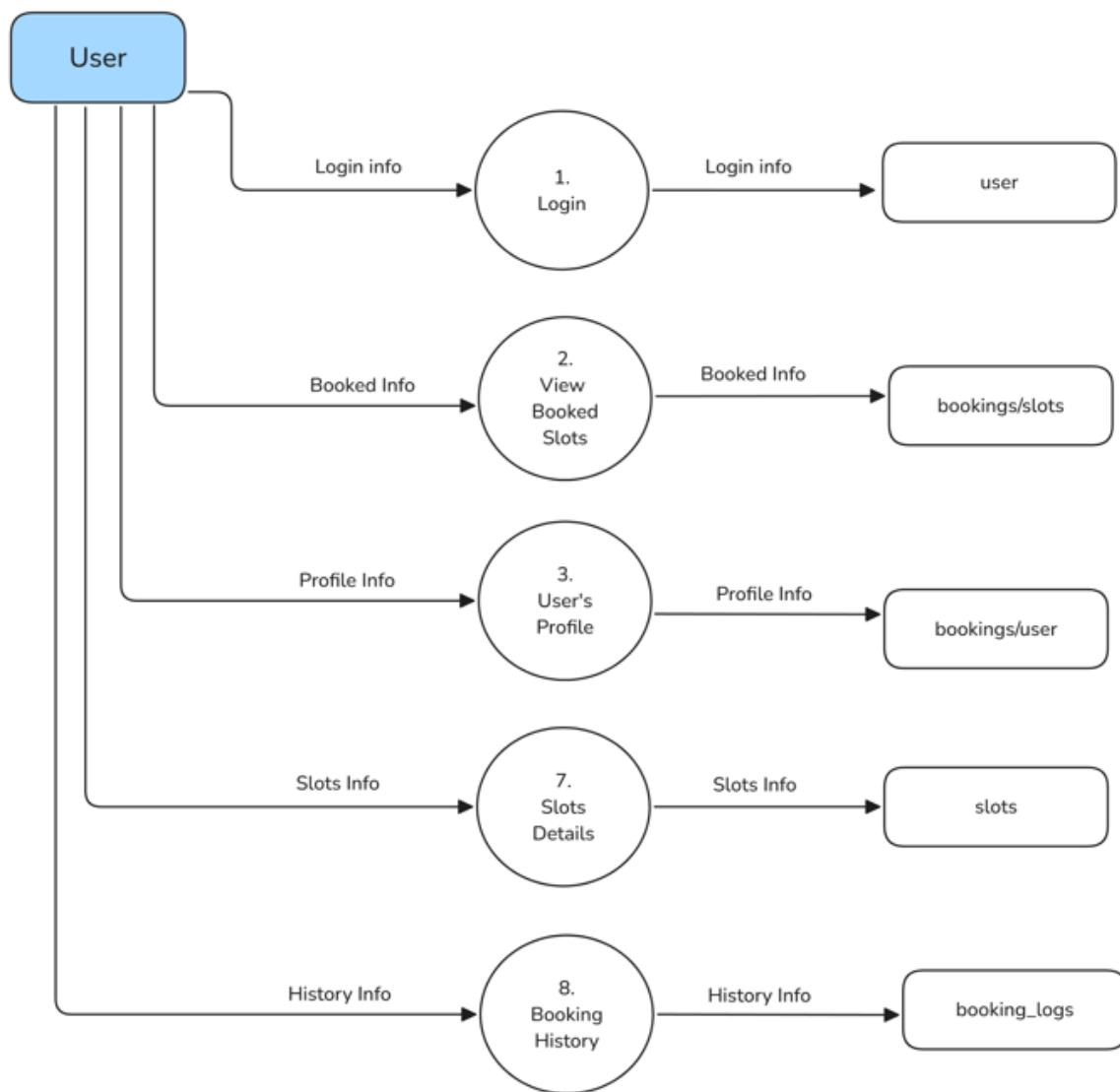
Context Level :



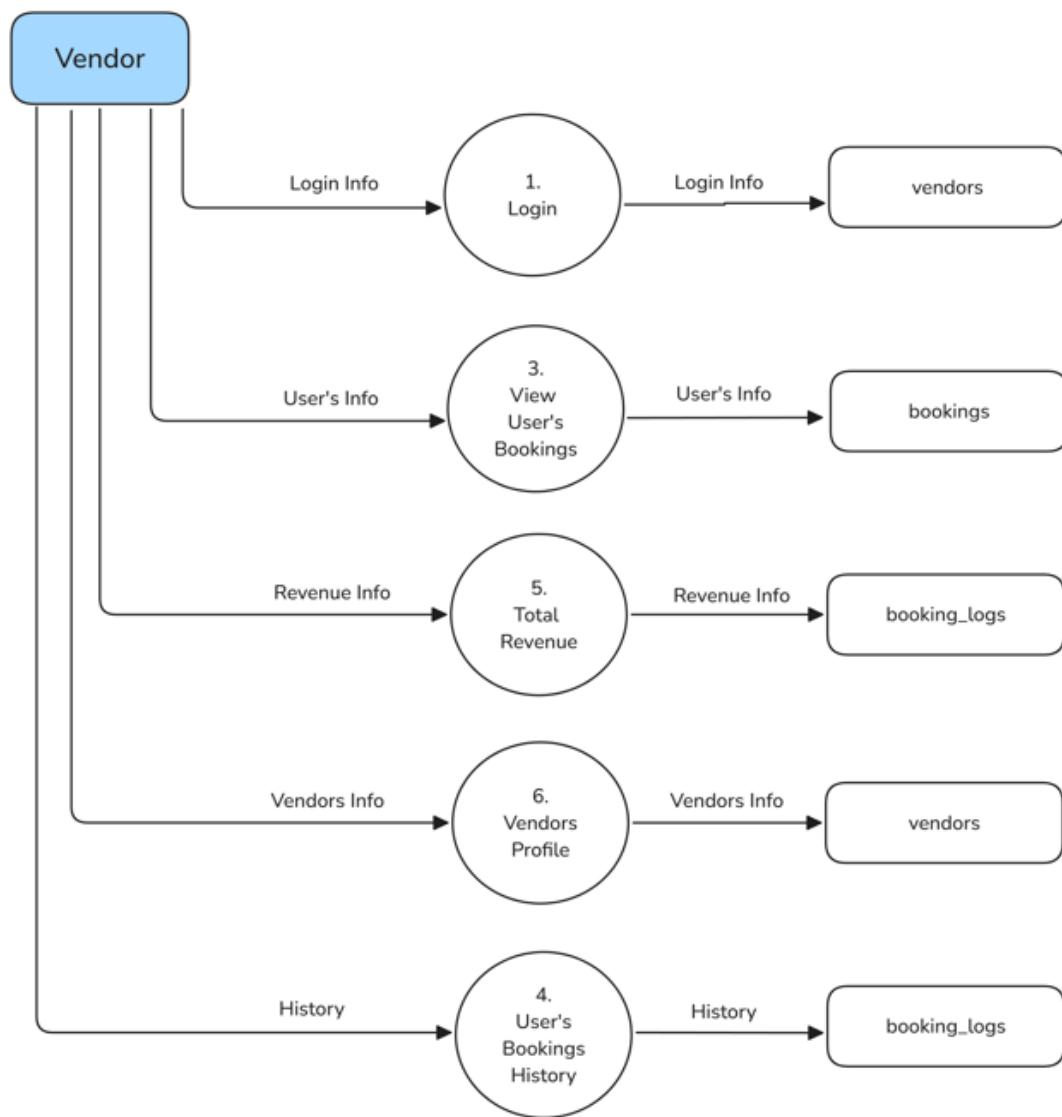
1 – Level Admin :



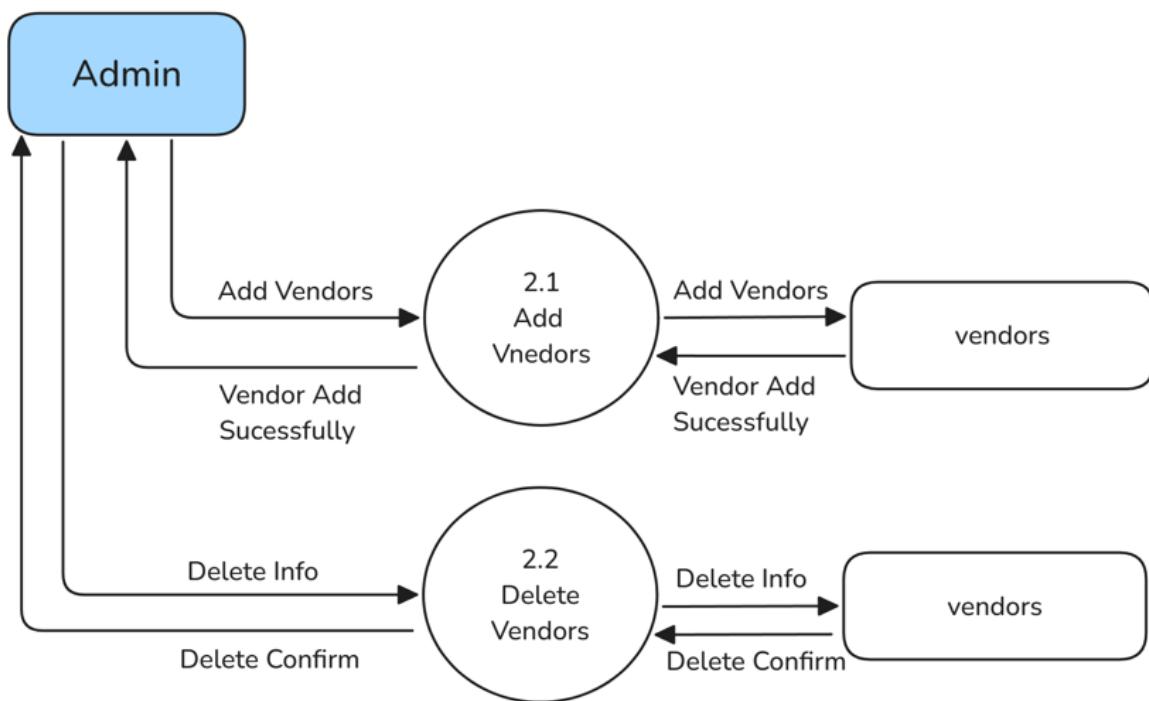
1 – Level User :



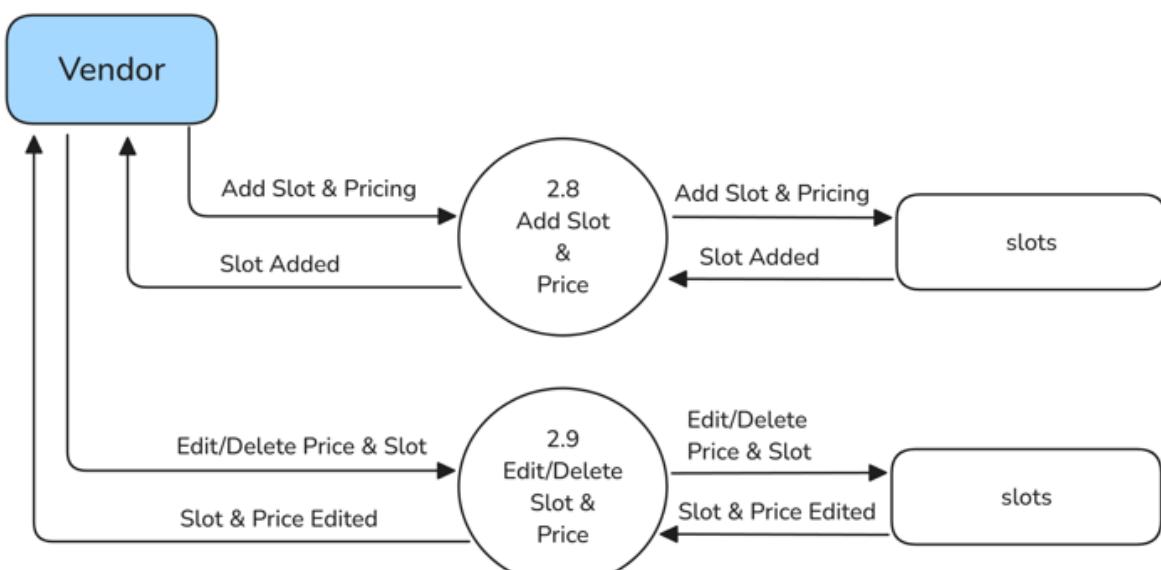
1 – Level Vendor:



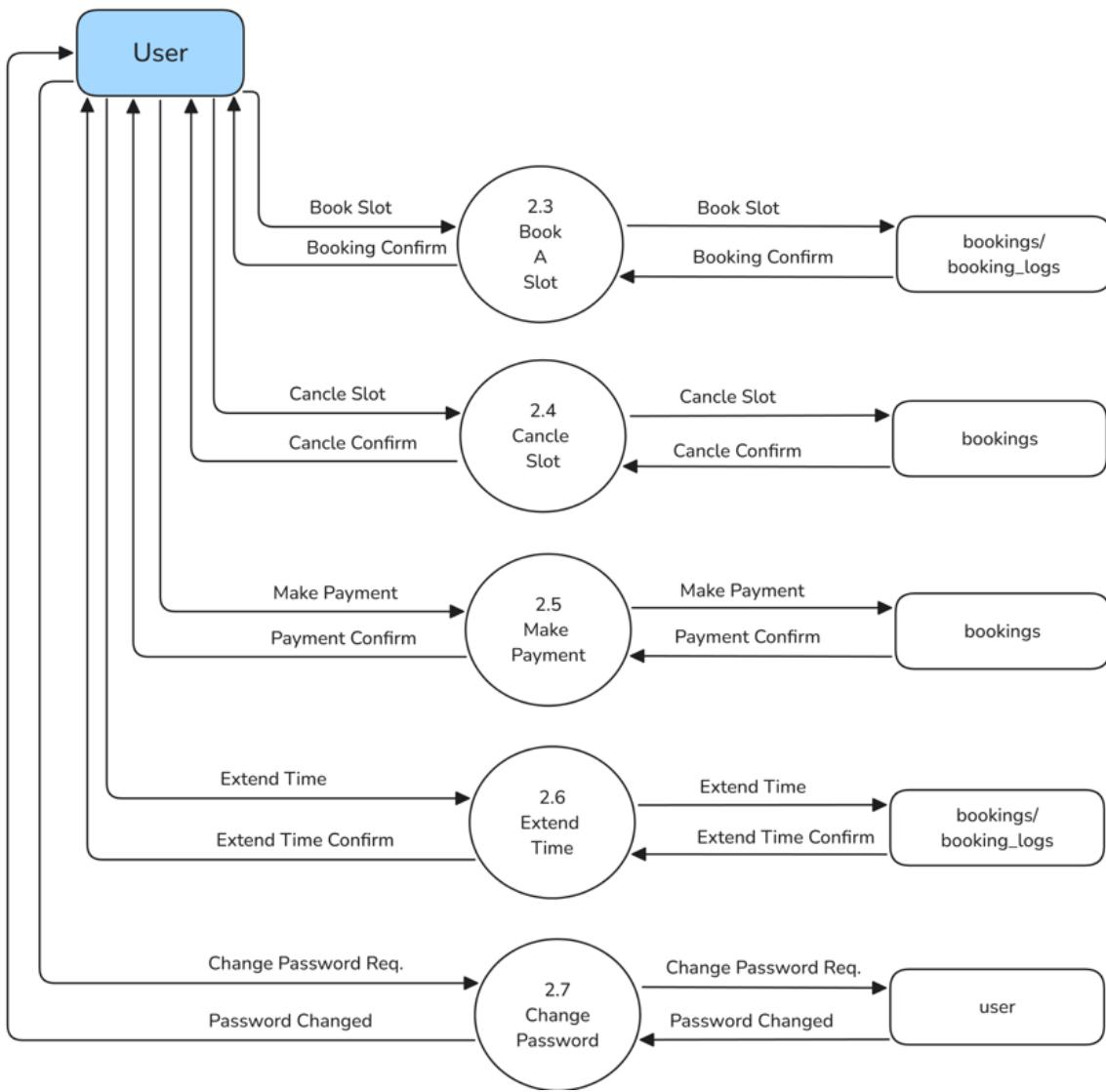
2 – Level Admin :



2 – Level Vendor :



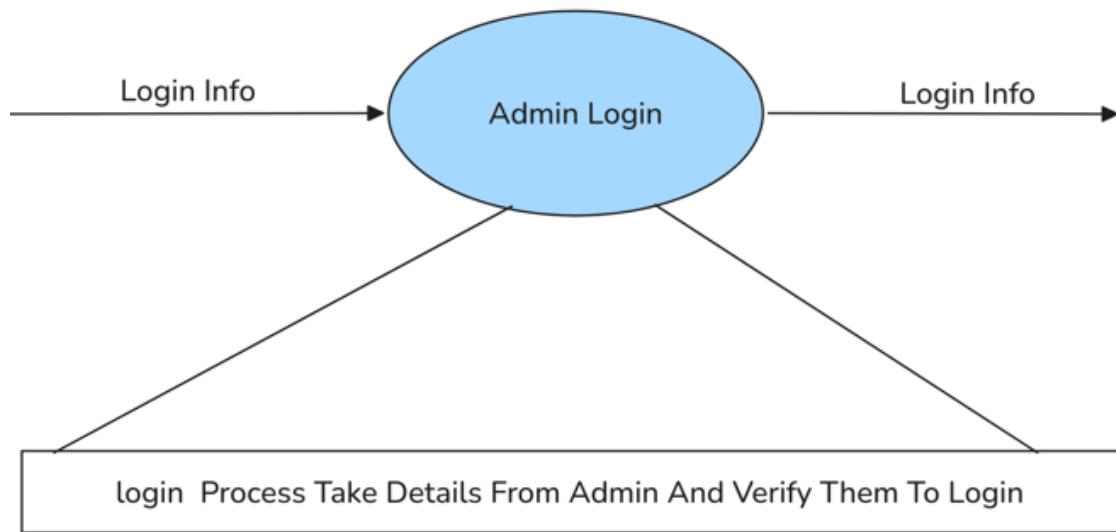
2 – Level User :



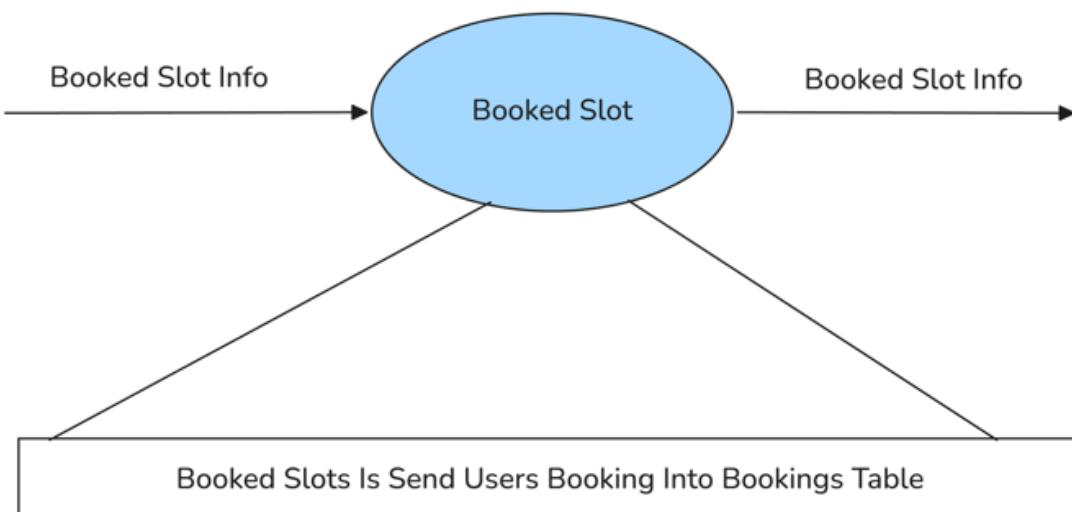
5.2. PROCESS SPECIFICATION

Process Specification Of Park Heaven :

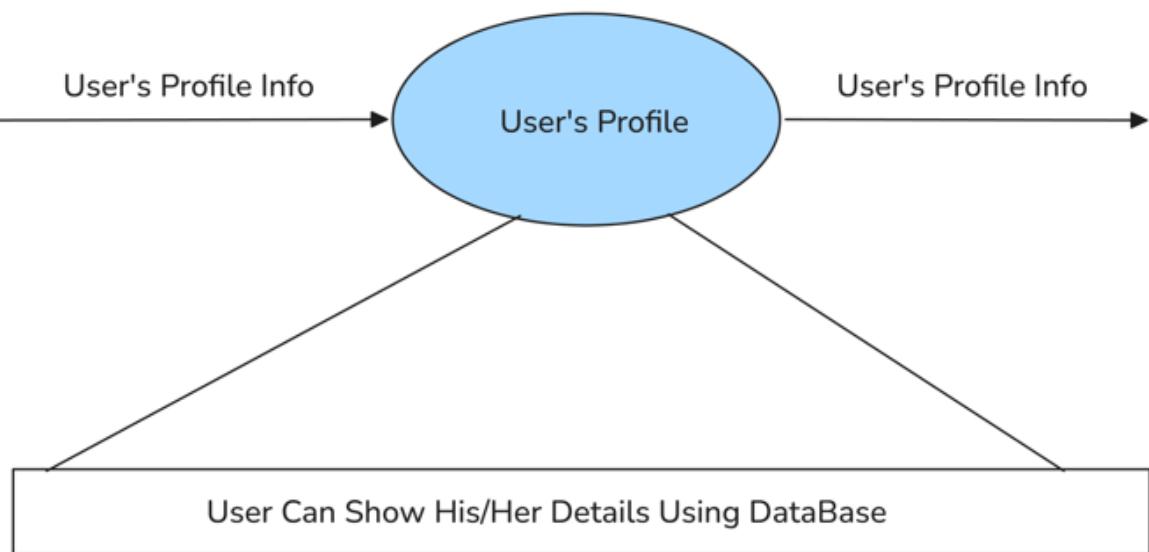
1) Admin Login :



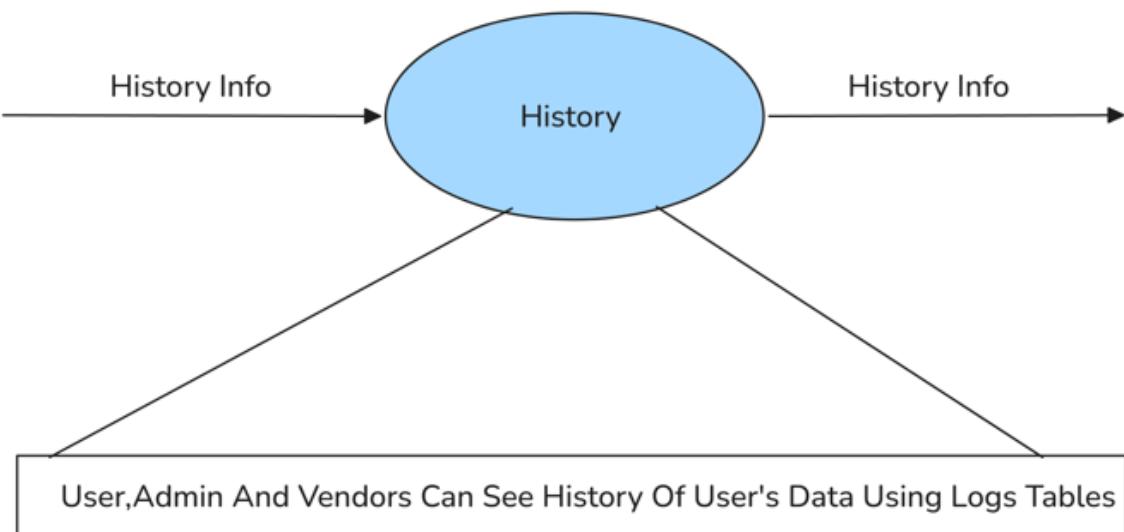
2) Booked Slot :



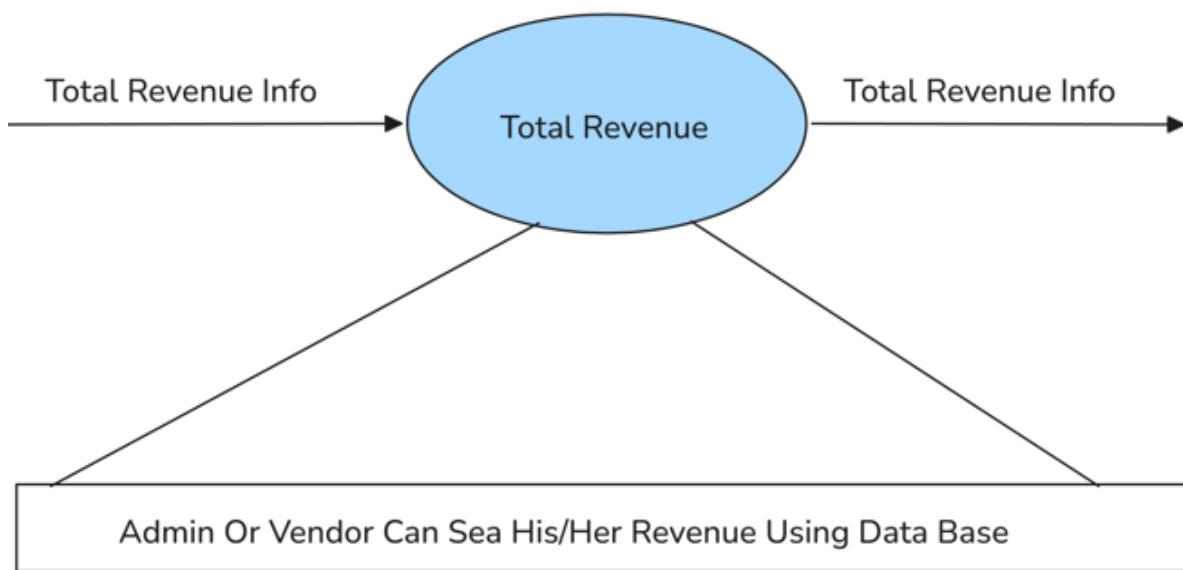
3) User Info :



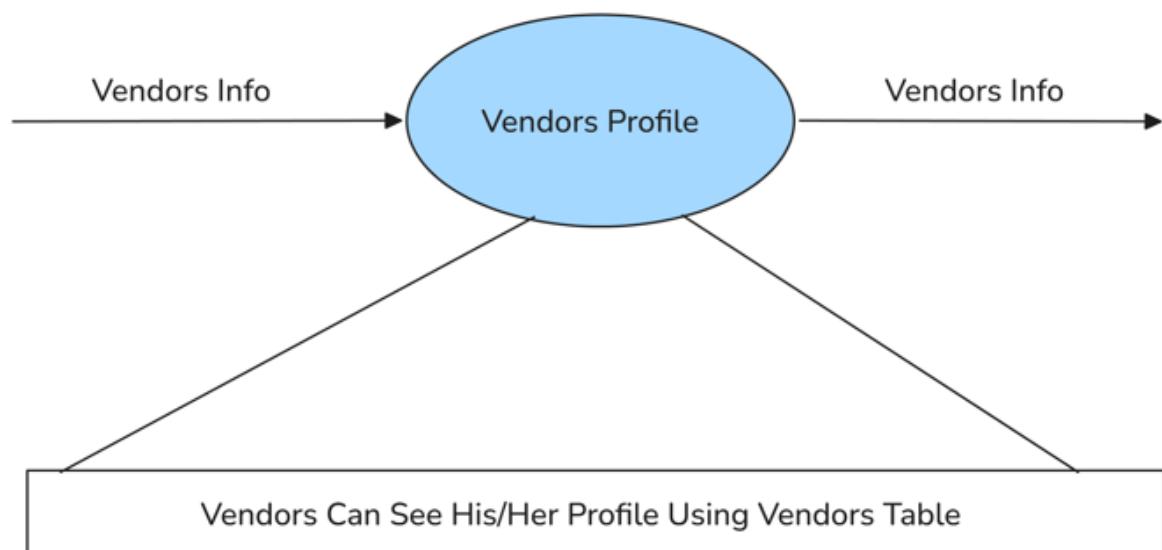
4) History :



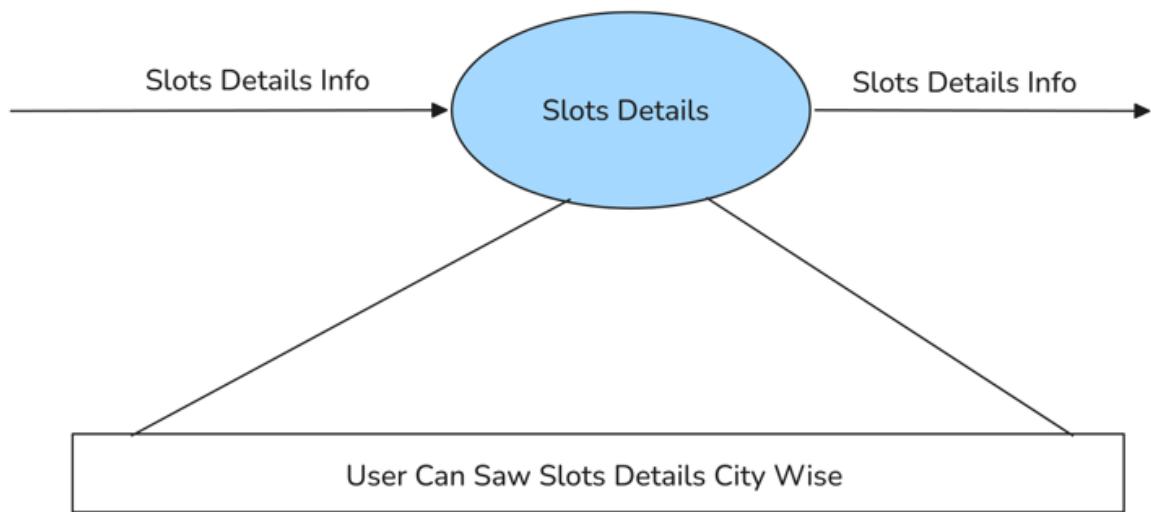
5) Total Revenue :



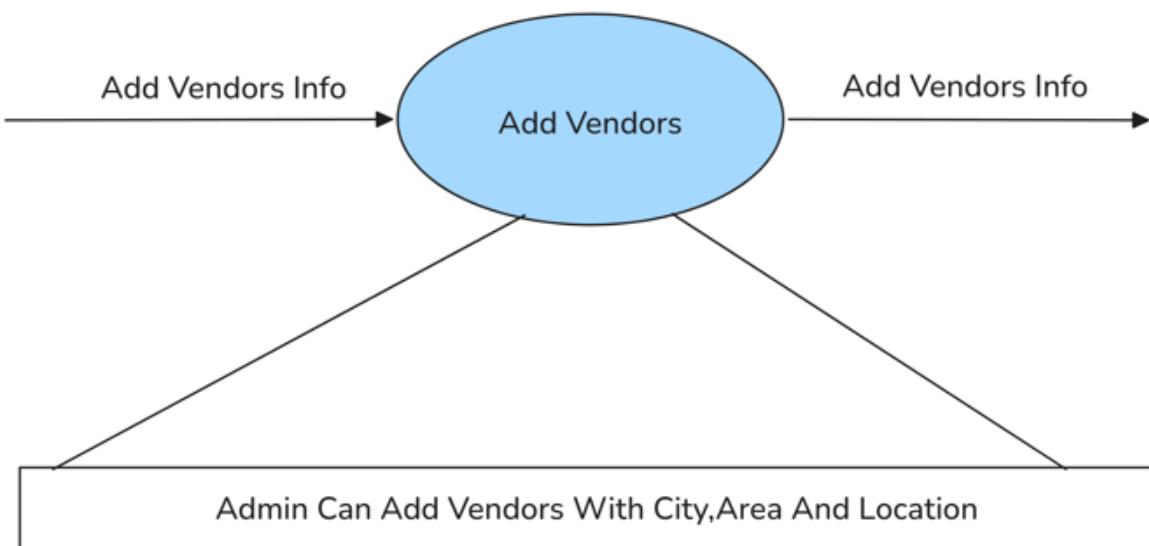
6) Vendor Profile :



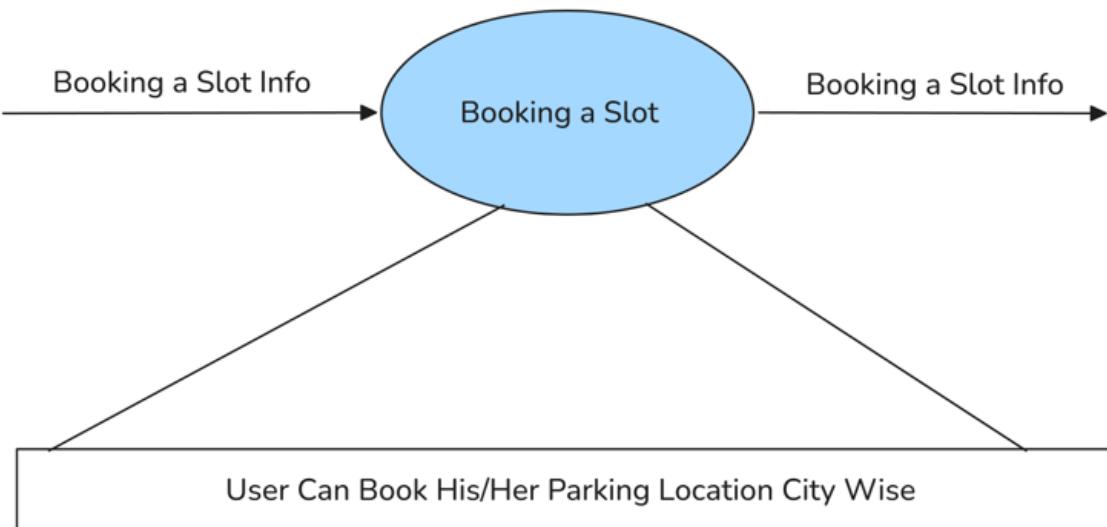
7) Slots Details :



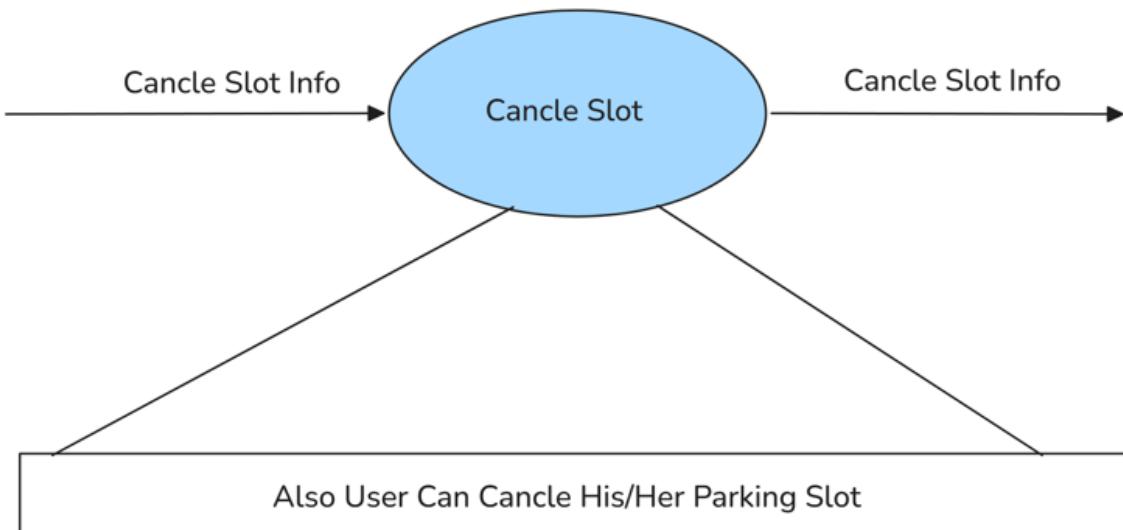
8) Add Vendors :



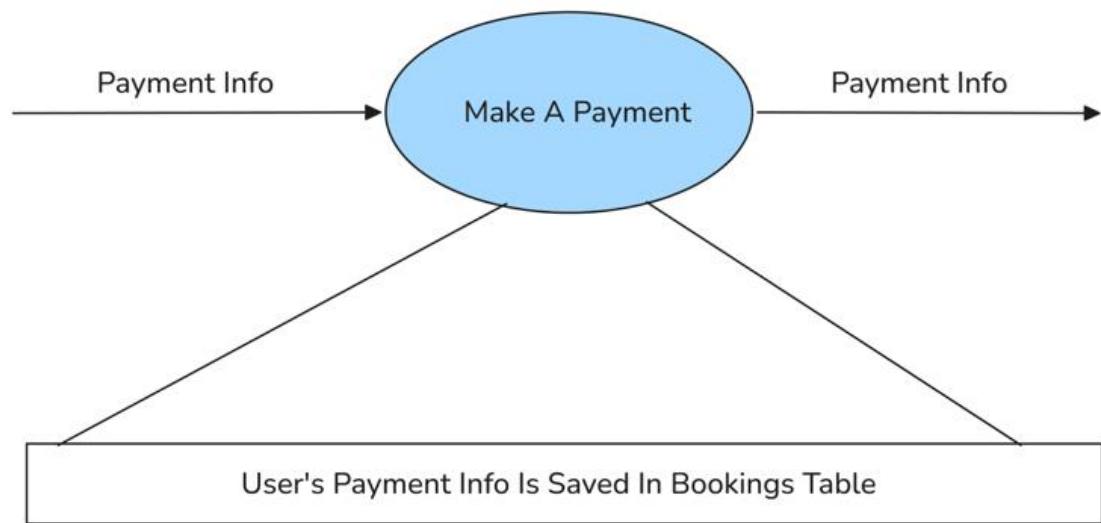
9) Book A Slot :



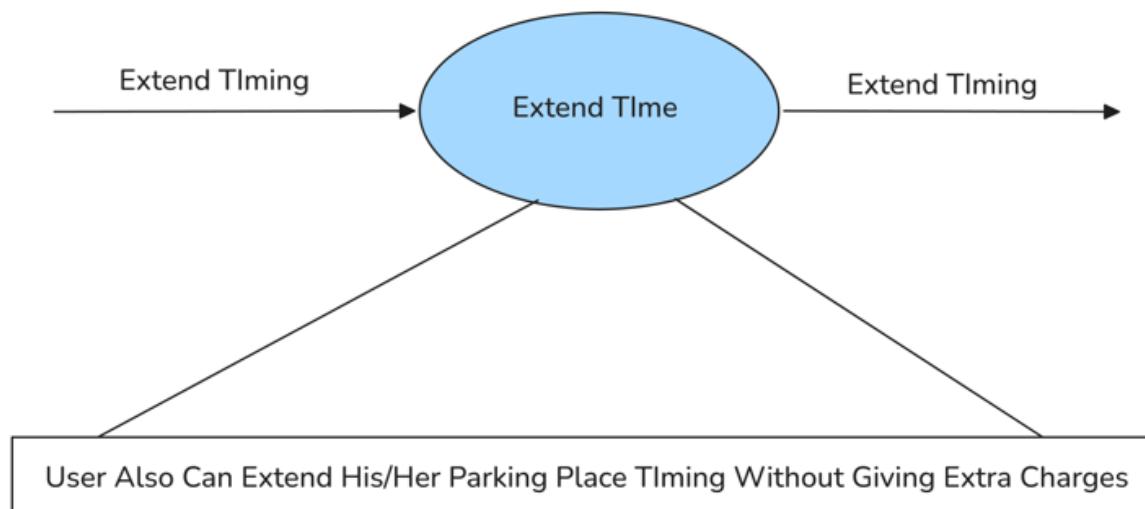
10) Cancel Slot :



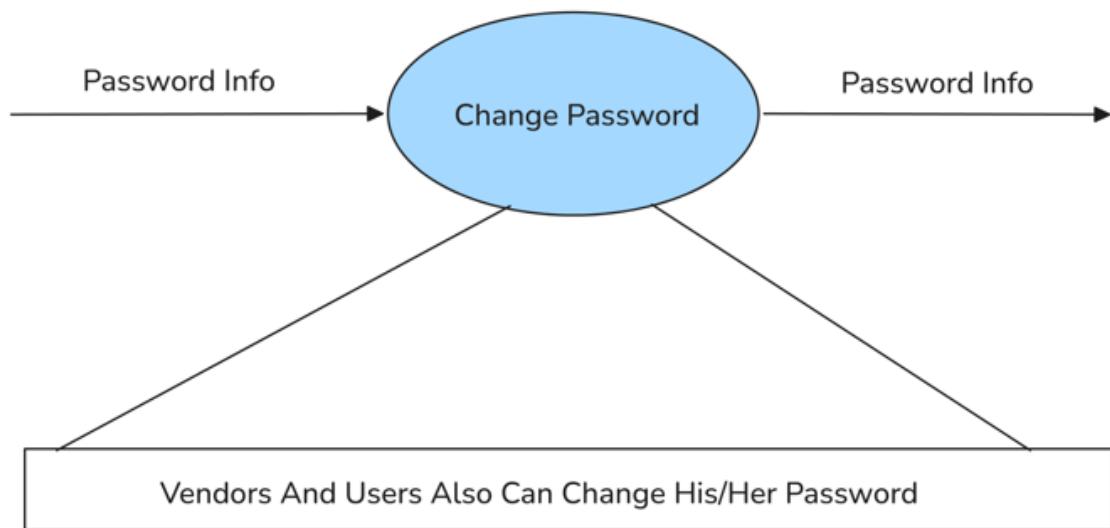
11) Make A Payment :



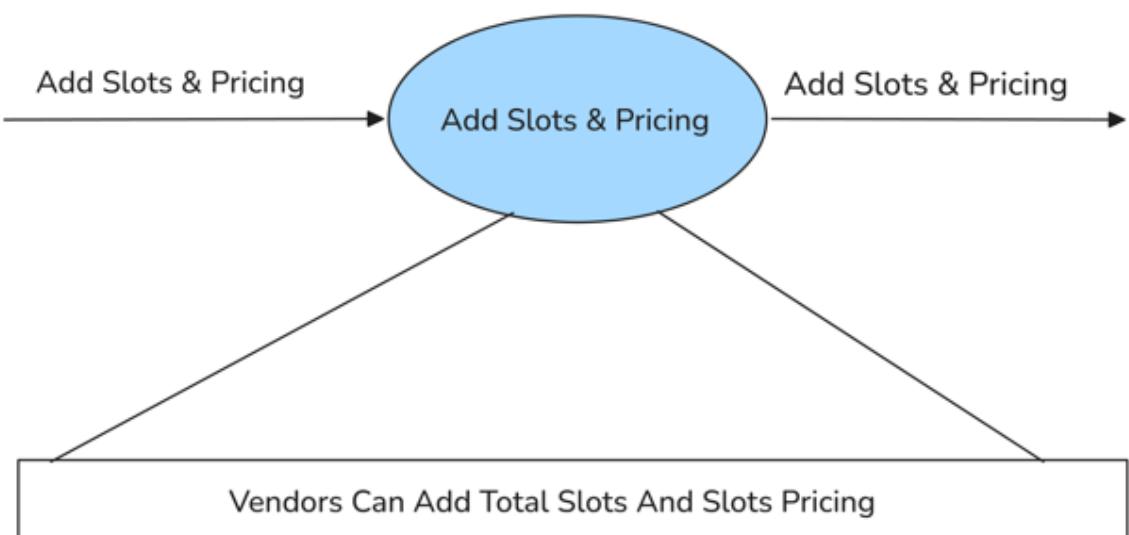
12) Extend Time :



13) Change Password :



14) Add Slots & Pricing :



5.3. DATA DICTIONARY

1) Users :

Name :	Users Login Details
Alias :	Null
Where used ? / How used ?	Users Login (Input/Output)
Content Description :	Id,U_Name,U_Email,Password,Phone_No
Supplementary Info :	Login process takes information from users and verify in users table.

2) Admins :

Name :	Admins Login Details
Alias :	Null
Where used ? / How used ?	Admins Login (Output)
Content Description :	Id, A_Email,A_Password
Supplementary Info :	Login process takes information from Admin and verify in Admins table.

3) Vendors :

Name :	Vendors Login Details
Alias :	Null
Where used ? / How used ?	Vendors Login (Input/Output)
Content Description :	Id,name,email,password,phone,city,area,location
Supplementary Info :	Admin Can Add Vendors Info In This Table And Vendors Can Login Using Valid Creaditionals.

4) Slots :

Name :	Slots Details
Alias :	Null
Where used ? / How used ?	For Add,Show Slots Info(Input/Output)
Content Description :	Id,city,area,location,price,total_slots,available_slots
Supplementary Info :	Add And Show Slots Releted Info To Vendors,Admins,Users.

5) Bookings :

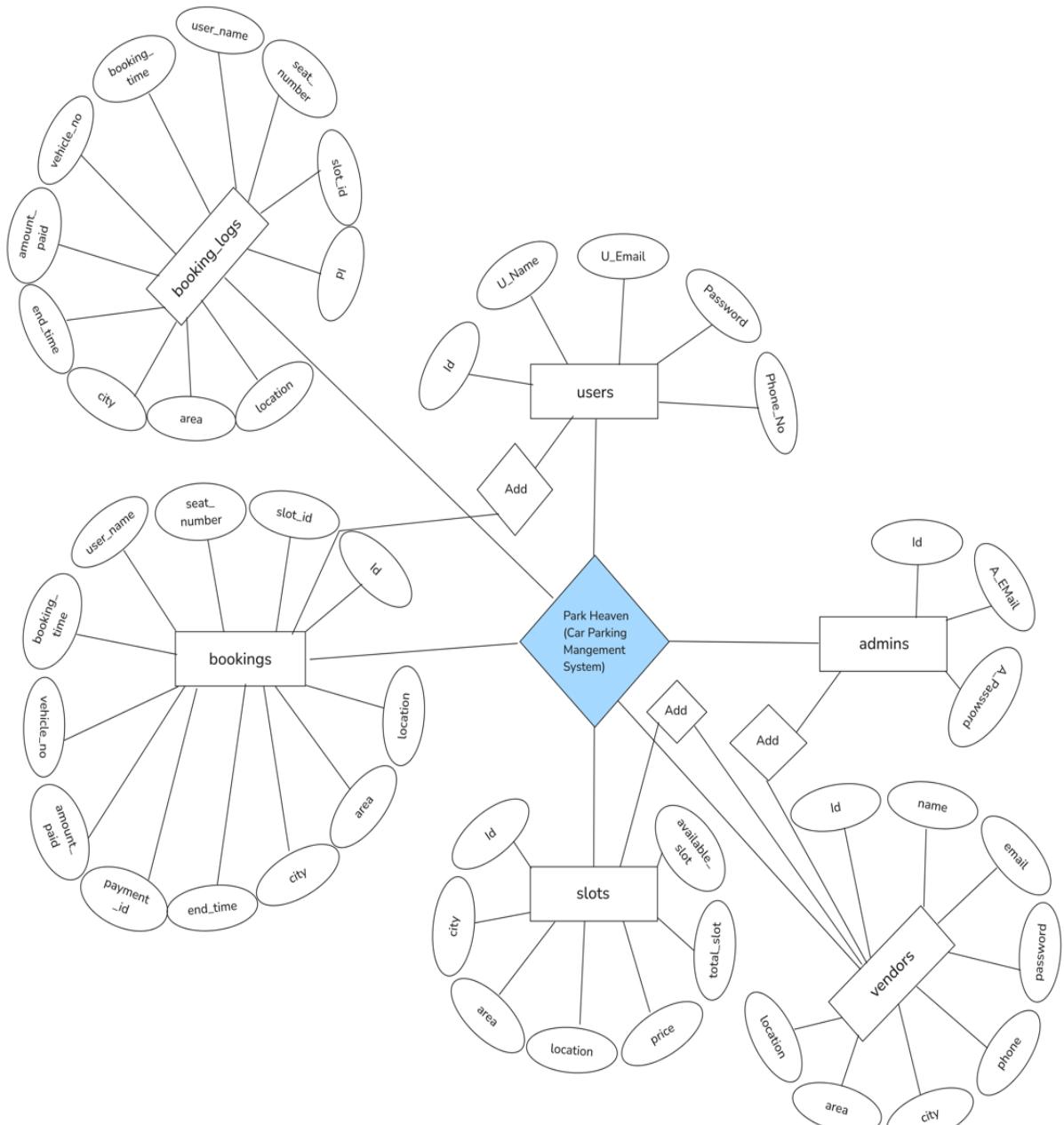
Name :	Bookings Details
Alias :	Null
Where used ? / How used ?	For Add,Edit,Delete,Show Bookings Related Data (Input/Output)
Content Description :	Id,slot_id,slot_number,user_name,booking_time, Vehicle_no,amount_paid,payment_id,end_time, City,area,location.

6) Booking_logs

Name :	History Details
Alias :	Null
Where used ? / How used ?	For Add And Show Booking History (Input/Output)
Content Description :	Id,slot_id,slot_number,user_name,booking_time, Vehicle_no,amount_paid, end_time, City,area,location.

Supplementary Info :	User Can Book His/Her Slots And All Bookings Related Data Is Show In This Table And Also Make Reports Using These Data.
-----------------------------	---

5.4 Entity-Relationship Diagram



6

Chapter

System Design

6.1] Database Design

6.2] Directory Structure

6.3] Input / Output Design

6.1 Database Design

- Table : Users

Column Name	Data Type	Constraints	Description
_id	ObjectId	Primary Key	Unique identifier for the users
U_name	String	Not Null	Users name
U_email	String	Not Null	User's email (must be unique)
Password	String	Not Null	Hashed password
Phone_no	String	Not Null	User's Contact No

Table : Admins

Column Name	Data Type	Constraints	Description
_id	ObjectId	Primary Key	Unique identifier for the Admin
A_email	String	Not Null	Admins email (must be unique)
A_password	String	Not Null	Admin Password Must Be Unique

- Table : Vendors

Column Name	Data Type	Constraints	Description
_id	ObjectId	Primary Key	Unique identifier for the Vendors
name	String	Not Null	Vendors name (must be unique)
email	String	Not Null	Vendrs Email (must be Unipue)
password	String	Not Null	Password Required
phone_no	Number	Not Null	Must Be Numbers
city	String	Not Null	City Name
area	String	Not Null	Area Of City
location	String	Not Null	Location Of that Area

- Table : Slots

Column Name	Data Type	Constraints	Description
_id	ObjectId	Primary Key	Unique identifier for the Vendors
city	String	Not Null	City Name
area	String	Not Null	Area Of City
location	String	Not Null	Location Of that Area
price	Number	Not Null	Price Of That Location's Slot
total_slots	Number	Not Null	Total Slots Of That Location
available_slots	Number	Not Null	Available Slots Of That Location

- Table : Bookings

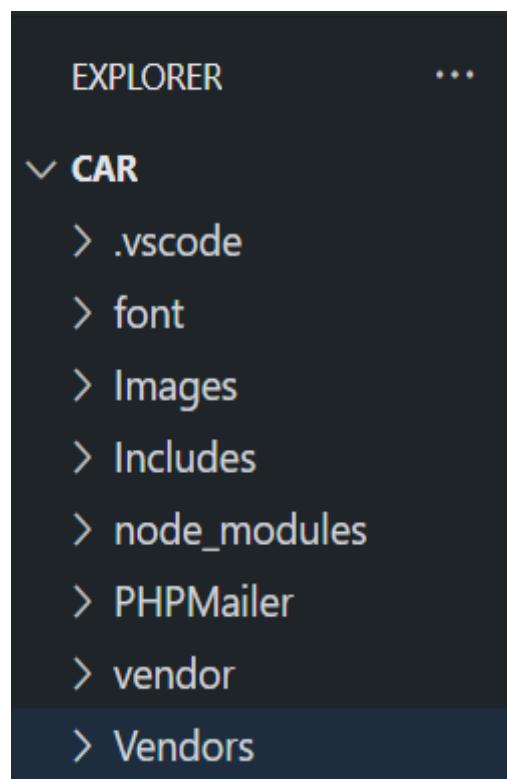
Column Name	Data Type	Constraints	Description
_id	ObjectId	Primary Key	Unique identifier for the bookings
slot_id	Number	Not Null	Booking Slot Id
slot_number	Number	Not Null	Slot Number Of That Location
user_name	String	Not Null	User Name
booking_time	Timestamp	Current_timestamp()	Current Time Of Bookings
vehicle_no	Number	Not Null	User's Car Vehicle No
amount_paid	Number	Not Null	Amount Paid By User
payment_id	NUmber	Not Null	Payment Id Of Receipt
end_time	Timestamp	Current_timestamp() + 2hr	End Time Of That Parking Slot
city	String	Not Null	City Name
area	String	Not Null	Area Of City
location	String	Not Null	Location Of that Area

- Table : Booking_Logs

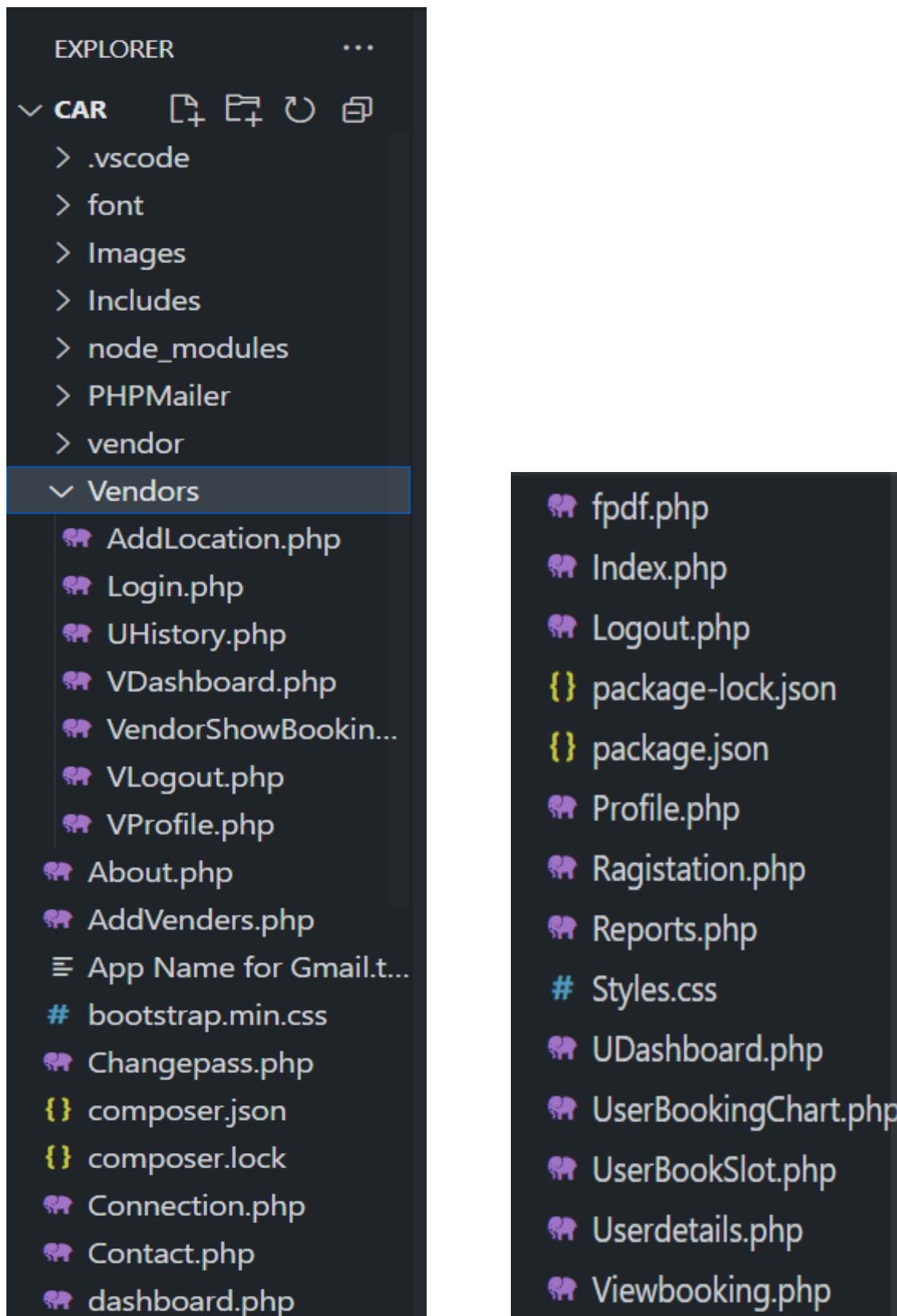
Column Name	Data Type	Constraints	Description
_id	ObjectId	Primary Key	Unique identifier for the bookings
slot_id	Number	Not Null	Booking Slot Id
slot_number	Number	Not Null	Slot Number Of That Location
user_name	String	Not Null	User Name
booking_time	Timestamp	Current_timestamp()	Currtent Time Of Bookings
vehicle_no	Number	Not Null	User's Car Vehicle No
amount_paid	Number	Not Null	Amount Paid By User
end_time	Timestamp	Current_timestamp() + 2hr	End Time Of That Parking Slot
city	String	Not Null	City Name
area	String	Not Null	Area Of City
location	String	Not Null	Location Of that Area

6.2. DIRECTORY STRUCTURE

- **Root Directory :**

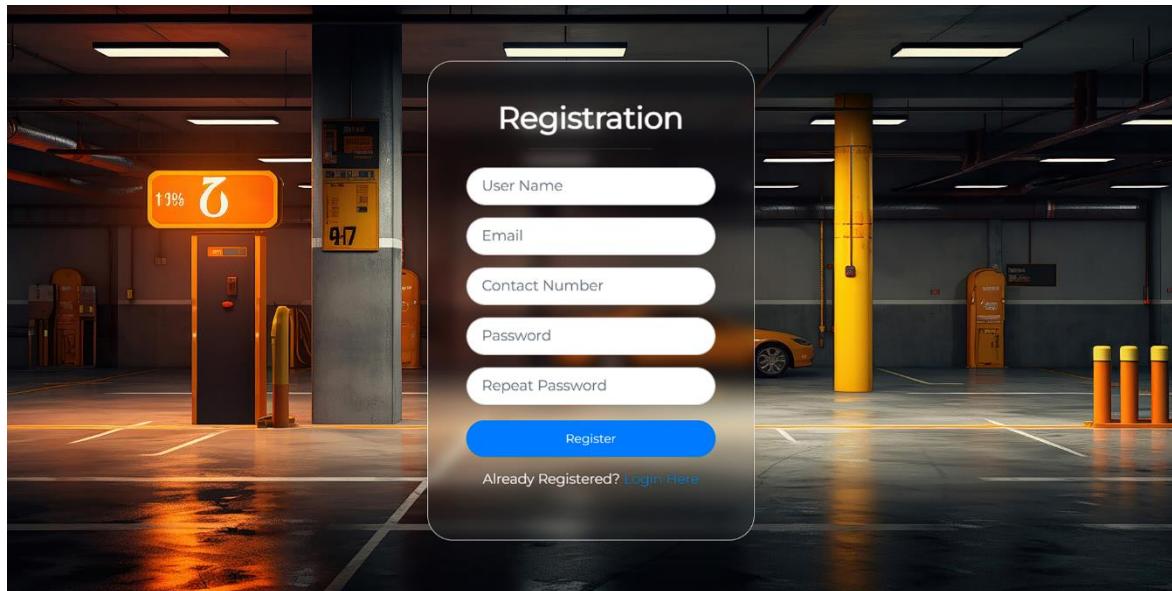
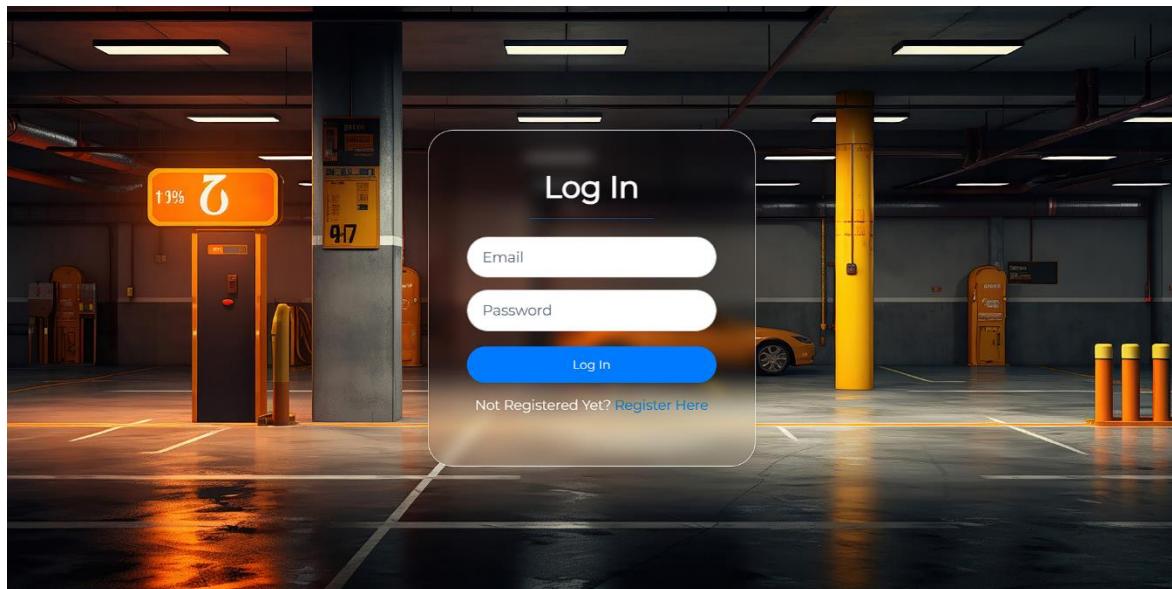


- Front – End & Back – End Directory :

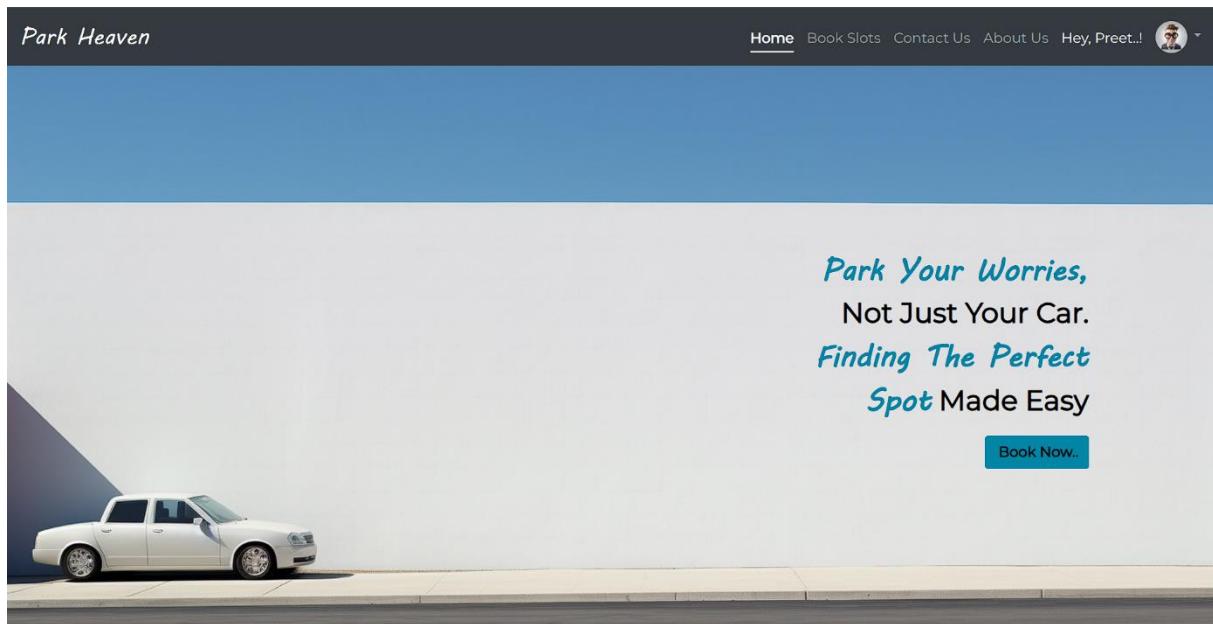


6.3 INPUT/OUTPUT LAYOUTS

- **Users Panel :**



Park Heaven

The image shows a modal window titled "Book a New Parking Slot". Inside, there's a "Slot# Map" grid showing 30 numbered slots (1-30) arranged in five rows of six. A legend at the bottom indicates: a white square for "Available", a green square for "Selected", and a red square for "Booked". To the right of the map are four input fields: "Select City" (set to Ahmedabad), "Select Area" (set to Thaltej Road), "Select Location" (set to Palladium Mall), and "Your Name" (set to Preet). Below these are fields for "Vehicle Number" (with placeholder "Format: AB12CD1234") and "Selected Slot#:" (a text input field). At the bottom, it says "Price: ₹20.00 (Booking duration: 2 hours)" and features a blue "Pay & Book Slot" button.

Parking Slots									
+ Book New Slot									
No.	City	Area	Location	Slot #	User Name	Vehicle Number	Booking Time	End Time	Action
1	Surat	Mota Varachha	AR Mall	10	Preet	GJ05MH2222	17-03-2025 02:26 PM	04:26 PM	Extend Time
2	Surat	Mota Varachha	AR Mall	1	Preet	MH03LK5454	17-03-2025 02:27 PM	04:27 PM	Extend Time



Park Heaven

Parking Management System

Golden Empire, Surat

Phone: 07226000522

Invoice

Bill No: 163
 Date: 17/03/2025 09:58:10
 User Name: Preet
 Vehicle No: GJ05MH2222
 City: Surat
 Area: Mota Varachha
 Location: AR Mall
 Seat Number: 10
 Booking Time: 17/03/2025 14:26:41
 End Time: 17/03/2025 16:26:41

Description	Location	Amount
Parking Slot (Seat #10)	AR Mall	Rs. 20.00
Total:		Rs. 20.00

Payment ID: pay_Q7ncj4dpQFuak8

Payment Method: Razorpay

Thank you for Parking with us!

Park Heaven

Home Book Slots **Contact Us** About Us Hey, Preet..! 

Contact Us

If you need more information, please contact us, and we'll be glad to assist you as soon as possible.

Your Name

Your Email

Mobile No.

How Can We Help You?

Submit



Contact Details :

Park Heaven

Home Book Slots Contact Us **About Us** Hey, Preet..! 

About - Us



Team

We are a group of earnest and dedicated individuals from backgrounds as diverse as engineering and creative writing.

Our products have been well received since the initial stages by organisations across sectors. It's a feat that, we believe, would have been impossible without a fierce team spirit, a strong sense of purpose, and a deeply creative approach to problem solving.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ut quos quisquam odio?

Park Heaven

Home Book Slots Contact Us About Us Hey, Preet.!  ▾

Preet

Welcome to your profile!

Personal Information :

Username	Preet
Email	preetk02700270@gmail.com
Phone Number	6351581680
Slot Booked	Yes

Booked Slots :

No.	Location	Slot #	Vehicle No	Price
1	AR Mall	10	GJ05MH2222	Rs. 20.00
2	AR Mall	1	MH03LK5454	Rs. 20.00
				Total Cost Rs. 40

Change Password

Current Password:

New Password:

Confirm New Password:

Change Password **Cancel**

User's History

No.	Seat#	User Name	City	Area	Location	Vehicle Number	Amount	Booking Time
1	1	Preet	Surat	Mota Varachha	AR Mall	MH03LK5454	Rs.20	2025-03-17 14:27:24
2	10	Preet	Surat	Mota Varachha	AR Mall	GJ05MH2222	Rs.20	2025-03-17 14:26:41
3	3	Preet	Ahemdabad	Thaltej Road	Palladium Mall	GJ05MH224	Rs.20	2025-03-16 12:08:22
4	12	Preet	Surat	Mota Varachha	AR Mall	GJ05MH2	Rs.20	2025-03-16 12:07:05
5	2	Preet	Surat	Mota Varachha	AR Mall	GJ05MH2222	Rs.20	2025-03-15 10:07:03
6	9	Preet	Ahemdabad	Thaltej Road	Palladium Mall	GJ05MH2222	Rs.20	2025-03-13 11:26:02
7	16	Preet	Ahemdabad	Thaltej Road	Palladium Mall	GJ05MH2222	Rs.20	2025-03-13 11:08:28

History Statistics

Total Bookings

7

Total Amount Spent

₹140.00

Unique Locations

2

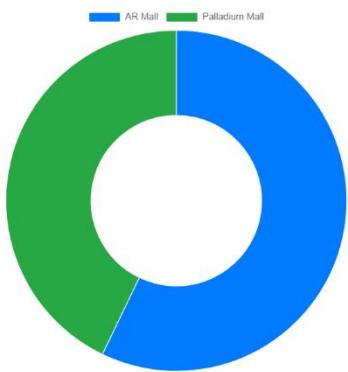
Monthly Booking Trends

Monthly Bookings

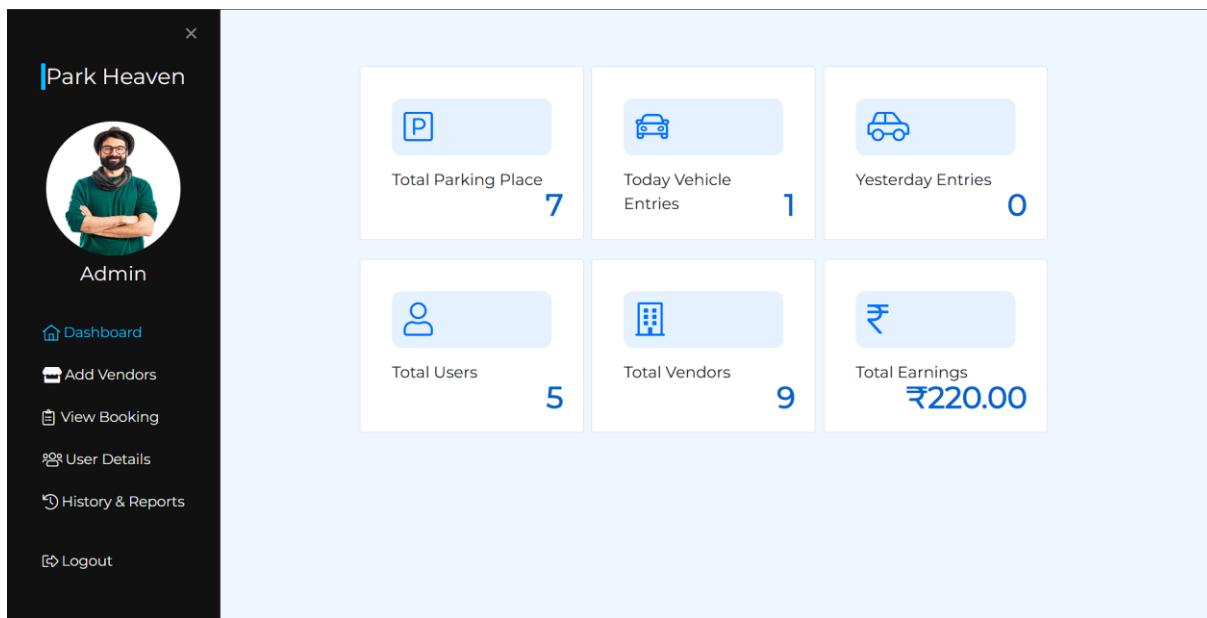


Bookings by Location

AR Mall Palladium Mall

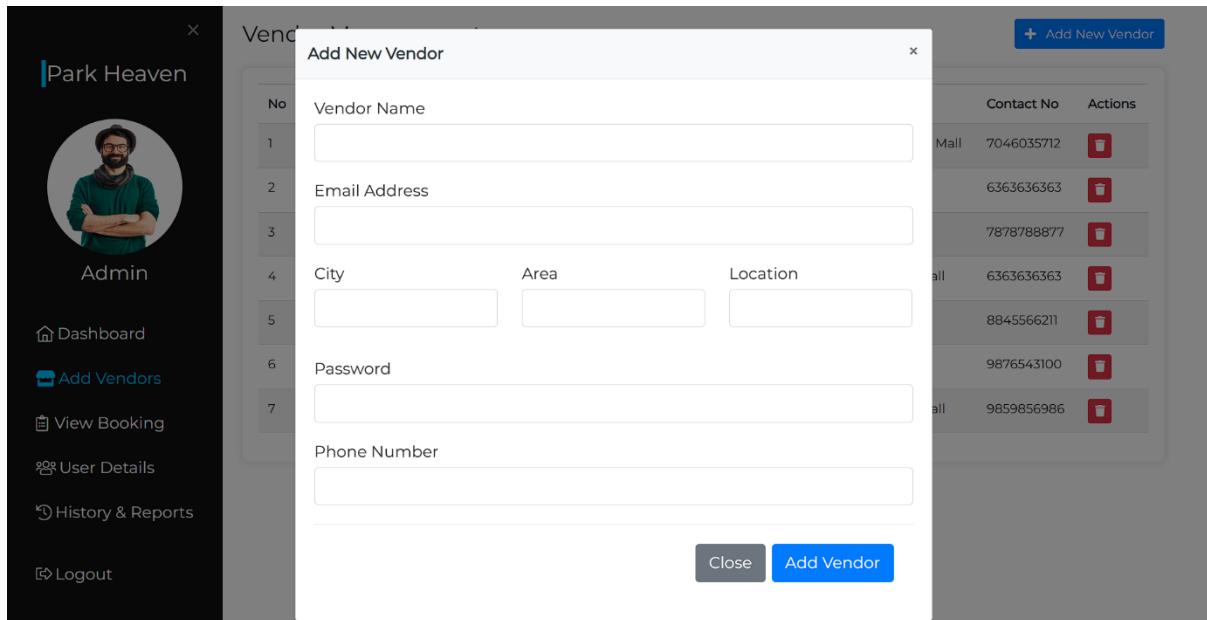


- Admin Panel :



The screenshot shows the Admin Dashboard for Park Heaven. On the left, there's a sidebar with a profile picture of an Admin and links for Dashboard, Add Vendors, View Booking, User Details, History & Reports, and Logout. The main area displays six key metrics in cards:

- Total Parking Place: 7
- Today Vehicle Entries: 1
- Yesterday Entries: 0
- Total Users: 5
- Total Vendors: 9
- Total Earnings: ₹220.00



The screenshot shows the Admin interface for adding a new vendor. A modal window titled "Add New Vendor" is open, containing fields for Vendor Name, Email Address, City, Area, Location, Password, and Phone Number. At the bottom of the modal are "Close" and "Add Vendor" buttons. In the background, a list of existing vendors is displayed with columns for Contact No and Actions (represented by small red icons). The sidebar on the left is identical to the one in the first screenshot.

Park Heaven

Vendor Management

+ Add New Vendor

No	Name	Email	City	Area	Location	Contact No	Actions
1	Chirag	kananichirag444@gmail.com	Banglore	Sampige Road	Mantri Square Mall	7046035712	
2	Karan	Karan@gmail.com	Surat	Vesu	VR Mall	6363636363	
3	Kishan	kishanlathiya029@gmail.com	Banglore	WhiteField Road	Phoenix Mall	7878788877	
4	Mehul	Mehul@gmail.com	Ahemdabad	Thaltej Road	Palladium Mall	6363636363	
5	Meji	mehij84329@egvoo.com	Banglore	Dr Rajkumar Road	Orion Mall	8845566211	
6	Preet	preetk02700270@gmail.com	Surat	Mota Varachha	AR Mall	9876543100	
7	Preetam	Preetum84329@egvoo.com	Kolkata	Anwar Raod	South City Mall	9859856986	



Admin

Dashboard

Add Vendors

View Booking

User Details

History & Reports

Logout

View Bookings

Search... 

No.	User Name	Vehicle Number	Location	Vender Name	Booking Date
1	Preet	GJ05MH2222	AR Mall	Preet	2025-03-17 14:26:41
2	Preet	MH03LK5454	AR Mall	Preet	2025-03-17 14:27:24

Park Heaven

User Details

Sort by Total Bookings: [Ascending](#) [Descending](#)

No.	User Name	Email	Contact No	Total Booked Slots
1	Kishan	kishanlathiya029@gmail.com	6363636363	0
2	sanskrti	sanskrutiramani@gmail.com	9016419482	0
3	Purvil	Purvil@gmail.com	9898989898	0
4	Gyani	gyanibaba534@gmail.com	9696969696	0
5	Preet	preetk02700270@gmail.com	6351581680	2

Booking History Reports

Start Date: 15-02-2025 End Date: 17-03-2025 [Filter](#) [Download PDF](#) [Print Report](#)

8 Total Bookings

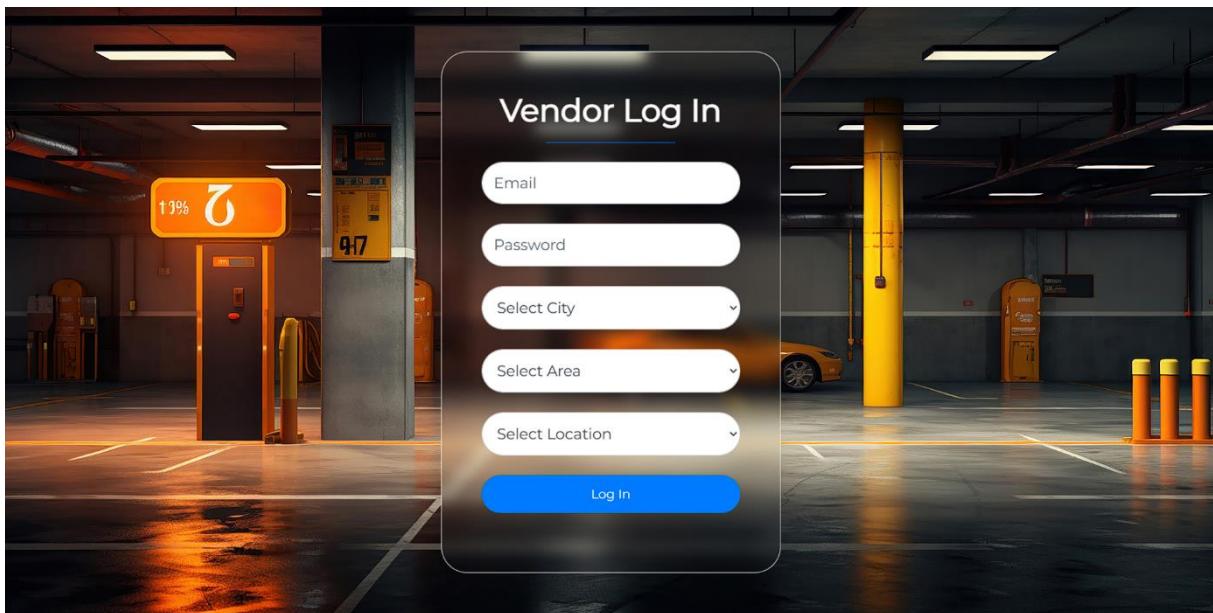
Rs. 160.00 Total Revenue

1 Total Active Users

Bookings History

No.	Booking ID	User Name	Vehicle Number	Location	Vendor Name	Slot#	Booking Time	End Time	Amount Paid
1	8	Preet	MH03LK5454	AR Mall	Preet	1	2025-03-17 02:27	2025-03-17 04:27	₹20.00
2	7	Preet	GJ05MH2222	AR Mall	Preet	10	2025-03-17 02:26	2025-03-17 04:26	₹20.00
3	6	Preet	GJ05MH224	Palladium Mall	Mehul	3	2025-03-16 12:08	2025-03-16 02:08	₹20.00

- **Vendors Panel :**



The dashboard provides a summary of the parking facility's performance:

- Total Revenue: ₹80.00
- Today's Revenue: ₹40.00
- Available Slots: 10/12
- Total Bookings: 4
- Today's Bookings: 2
- Occupancy Rate: 17%

Recent Bookings table:

Slot No.	Customer	Vehicle No.	Booking Time	Amount
1	John Doe	KA01XYZ	2023-10-01 10:00:00	₹100.00

Add Parking Slots

City: Surat
Area: Mota Varachha
Location: AR Mall

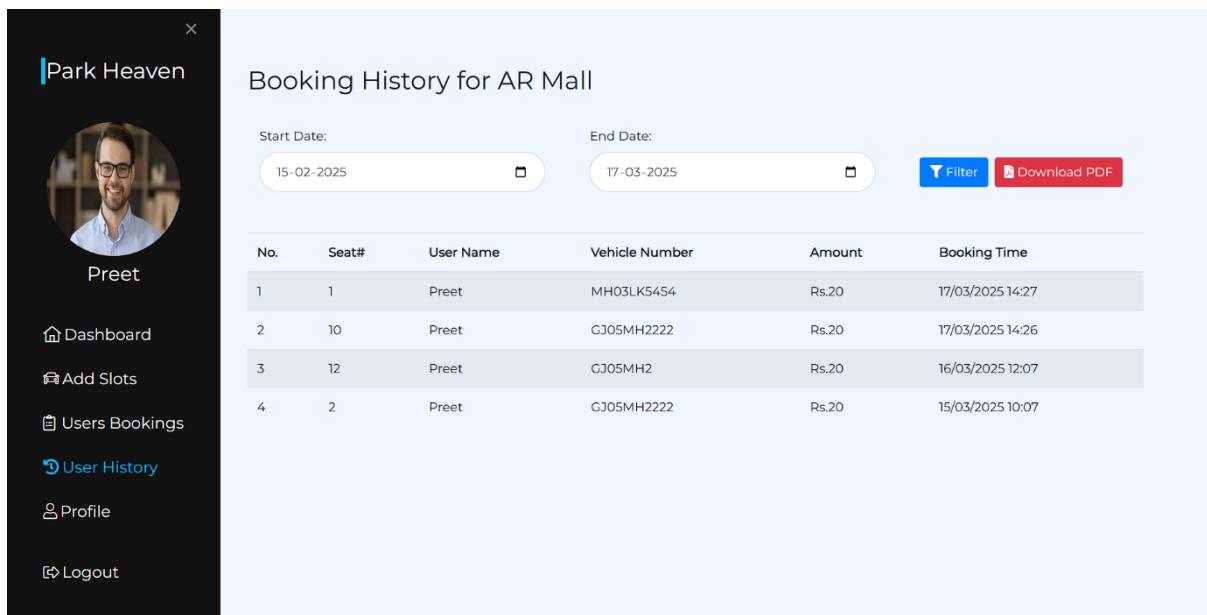
Your Slots

Price	Total Slots	Available Slots	Action
20.00	12	10	

View User's Bookings

Search bookings...

No.	User Name	Parking No.	Vehicle Number	Amount Paid	Booking Date
1	Preet	10	GJ05MH2222	₹20	2025-03-17 14:26:41
2	Preet	1	MH03LK5454	₹20	2025-03-17 14:27:24

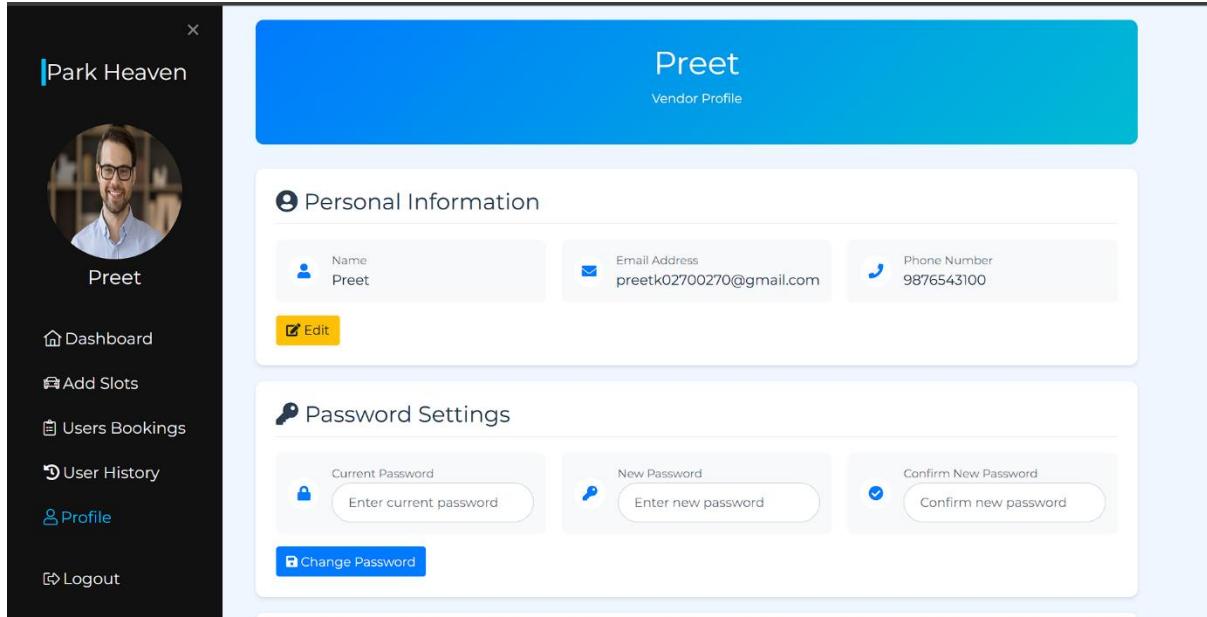


Booking History for AR Mall

Start Date: 15-02-2025 End Date: 17-03-2025

Filter **Download PDF**

No.	Seat#	User Name	Vehicle Number	Amount	Booking Time
1	1	Preet	MH03LK5454	Rs.20	17/03/2025 14:27
2	10	Preet	GJ05MH2222	Rs.20	17/03/2025 14:26
3	12	Preet	GJ05MH2	Rs.20	16/03/2025 12:07
4	2	Preet	GJ05MH2222	Rs.20	15/03/2025 10:07



Preet
Vendor Profile

Personal Information

Name: Preet Email Address: preetk02700270@gmail.com Phone Number: 9876543100

Edit

Password Settings

Current Password: Enter current password New Password: Enter new password Confirm New Password: Confirm new password

Change Password

7

Chapter

Software Testing

- Registration For User :

Test Field	Test Data	Valid / Invalid	Test Result
Username	Empty	Invalid	Name is required
	Raj	Valid	
Email	Empty	Invalid	Email is required
	Abc	Invalid	"email" must be a valid email
	abc@gamil.com	Valid	
Contact Number	Empty	Invalid	Mobile Number is required
	886656	Invalid	Mobile Number length must be 10 numbers
	8866655031	Valid	
Password	Empty	Invalid	Password is required
	123	Invalid	"password" length must be at least 8 characters long
	98767885	Valid	
Repeat Password	56485645	Invalid	Password Must Be Same
	98767885	Valid	

- Login For User/Admin :

Test Field	Test Data	Valid / Invalid	Test Result
Email	Empty	Invalid	Email is required
	Abc	Invalid	"email" must be a valid email
	abc@gamil.com	Valid	
Password	Empty	Invalid	Password is required
	123	Invalid	"password" length must be at least 8 characters long
	98767885	Valid	

- Login For Vendors :

Test Field	Test Data	Valid / Invalid	Test Result
Email	Empty	Invalid	Email is required
	Abc	Invalid	"email" must be a valid email
	abc@gamil.com	Valid	
Password	Empty	Invalid	Password is required
	123	Invalid	"password" length must be at least 8 characters long
	98767885	Valid	
City	Empty	Invalid	City Is Required
	Surat	vaild	
Area	Empty	Invalid	Area Is Required
	Motavarachha	vaild	
Location	Empty	Invalid	Location Is Required
	AR Mall	vaild	

- Book A Slot :

Test Field	Test Data	Valid / Invalid	Test Result
City	Empty	Invalid	City Is Required
	Surat	vaild	
Area	Empty	Invalid	Area Is Required
	Motavarachha	vaild	
Location	Empty	Invalid	Location Is Required
	AR Mall	vaild	
Vehicle No	Empty	Invalid	Vehicle No Is Required
	GJ053456	Invalid	Vehicle No Is In "GJ05MH1234" These Formate
	GJ05TH1234	Valid	
Slot No	Empty	Invalid	Select Slot No Is Required
	2	Valid	

- Change Passowd Vendor/User :

Test Field	Test Data	Valid / Invalid	Test Result
Current Password	Empty	Invalid	Password is required
	123	Invalid	"password" length must be at least 8 characters long
	98767885	Valid	
New Password	Empty	Invalid	Password is required
	123	Invalid	"password" length must be at least 8 characters long
	98767885	Valid	
Repeat New Password	56485645	Invalid	Password Must Be Same
	98767885	Valid	

- Add Vendors:

Test Field	Test Data	Valid / Invalid	Test Result
Username	Empty	Invalid	Name is required
	Raj	Valid	
Email	Empty	Invalid	Email is required
	Abc	Invalid	"email" must be a valid email
	abc@gamil.com	Valid	
City	Empty	Invalid	City Is Required
	Surat	vaild	
Area	Empty	Invalid	Area Is Required
	Motavarachha	vaild	
Location	Empty	Invalid	Location Is Required
	AR Mall	Valid	
Password	Empty	Invalid	Password is required
	123	Invalid	"password" length must be at least 8 characters long
	98767885	Valid	
	AR Mall	vaild	
Phone Number	Empty	Invalid	PhoneNumber is required
	886656	Invalid	Phone Number length must be 10 numbers
	8866655031	Valid	

- Add Slots & Price :

Test Field	Test Data	Valid / Invalid	Test Result
Total Slots	Empty	Invalid	Add Total Slots sls Required
	20	Valid	
Price	Empty	Invalid	Enter Price Of Slots
	20	Valid	

8

Chapter

Limitations and Future Scope of Enhancements

References

- Limitations of Park Heaven

1) Limited Location Coverage

- The system's effectiveness depends on the number of registered vendors and parking locations. Initially, the availability of parking slots will be limited to the vendors who join the platform. Expansion may take time.

2) Dependency on Internet Connectivity

- The entire system relies on internet access. Users and vendors without a stable internet connection might face issues while using the platform for booking or managing parking slots.

3) Real-Time Data Synchronization

- Although the system is designed for real-time availability, occasional delays in slot updates due to server load or network issues might lead to double bookings or inaccurate slot availability.

4) Payment Gateway Issues

- The system depends on third-party payment gateways (e.g., **Razorpay**), and any downtime or issues with the payment gateway could prevent users from completing bookings or payments.

- Future Scope of Enhancements

1) Mobile Application Development

- Developing a **mobile app** for both **Android and iOS** users to allow easier access to the parking booking system, notifications, and slot management on the go.

2) Dynamic Pricing

- Integrating **dynamic pricing** based on demand, time of day, or peak hours. This feature could help vendors optimize their pricing strategy to maximize revenue also we can divide Money for Vendors And Admins.

3) Integration with Smart Parking Systems

- Future upgrades can include integration with **smart parking systems**, such as sensors that detect available spaces in real-time and automatically update availability on the platform.

4) Advanced Analytics and AI

- Using **AI and machine learning** to predict parking demand, analyze user behavior, and recommend optimal parking slot availability based on historical data.

5) Integration with Navigation Apps

- Future enhancements could include integrating the system with **Google Maps** or other navigation apps to show users the **nearest available parking spots** along their route.

- References :

1) **Parking Management Systems:** A collection of resources and case studies for designing car parking systems.

- <https://www.parkingnetwork.com/>

2) **Smart Parking Solutions:** Articles and blog posts on smart parking technologies and innovations.

- <https://www.smartparking.com/>

3) **Razorpay Payment Gateway Documentation:** For integrating payment systems into the car parking platform.

- <https://razorpay.com/docs/>