UNIVERSITI TEKNOLOGI MALAYSIA
Department of Computer Science
Faculty of Computing

Individual Project

Vehicle Booking System

Programme	:	Bachelor of Computer Science (Data Engineering)
Subject Code	:	SECP3723
Subject Name	:	System Development Technology
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Date : 27 January 2024

Link : Link Project

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1. System introduction

1.1 System overview

The Vehicle Booking System is designed to simplify vehicle reservations for customers while also ensuring that administrators manage the vehicle inventory efficiently. It is organized around two primary user roles: customers and administrators. Customers can quickly book vehicles, view their reservation history, search for bookings, modify or cancel reservations, and keep their profiles up to date. Admins, on the other hand, have a toolkit for efficiently managing vehicle inventory, processing bookings, and diving into a dashboard packed with helpful information.

1.2 System Users

a) Customer

Customers are the primary users of the system who interact with the reservation functionalities, view their booking history, and manage their profiles.

b) Admin

Admins have access to functions that involve vehicle management, booking approval, and a dashboard providing an overview of the vehicle inventory and booking information.

2. System Design (ERD, Use Case)

2.1 Use Case diagram

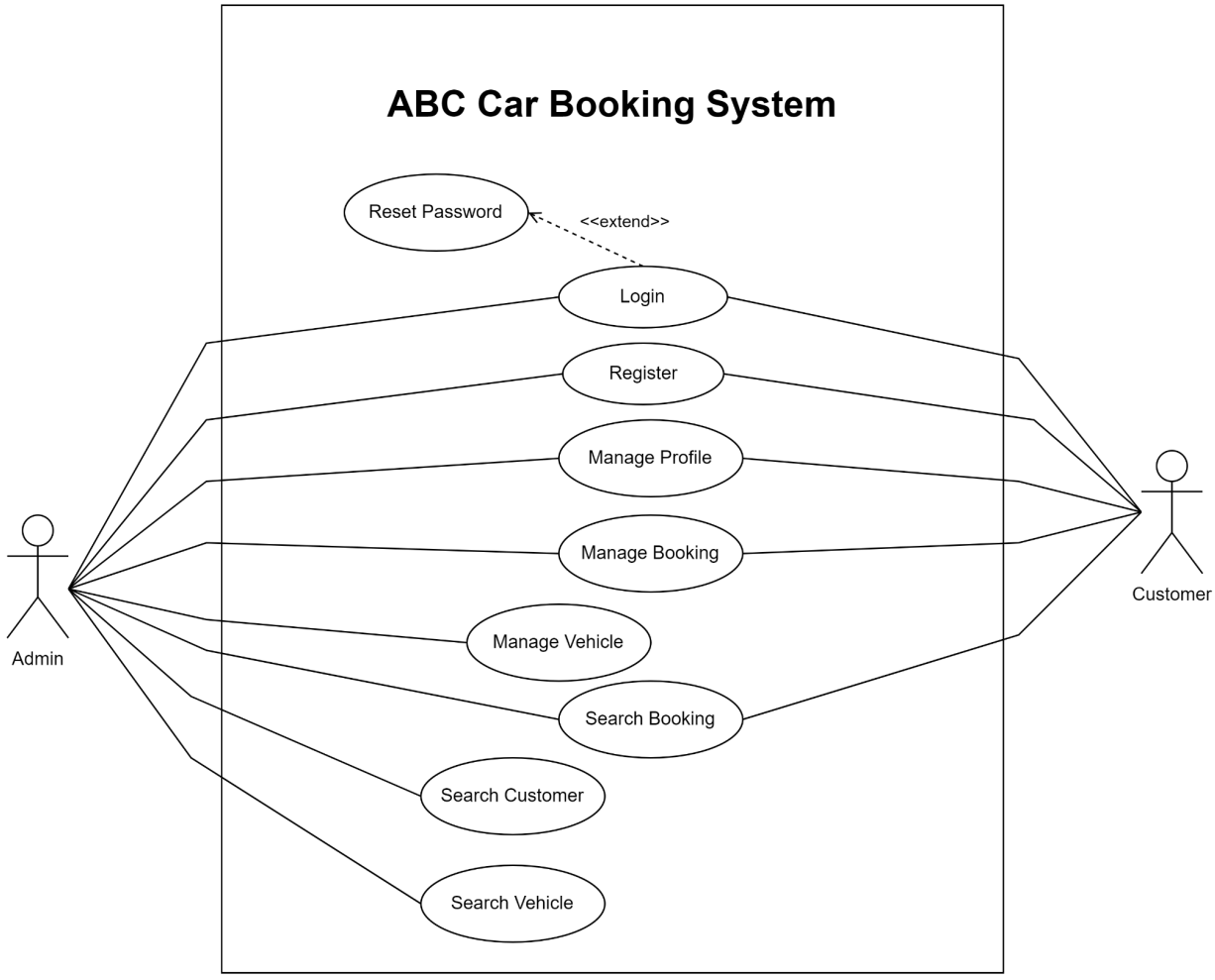


Figure 2.1 Use Case Diagram

2.2 Conceptual ERD

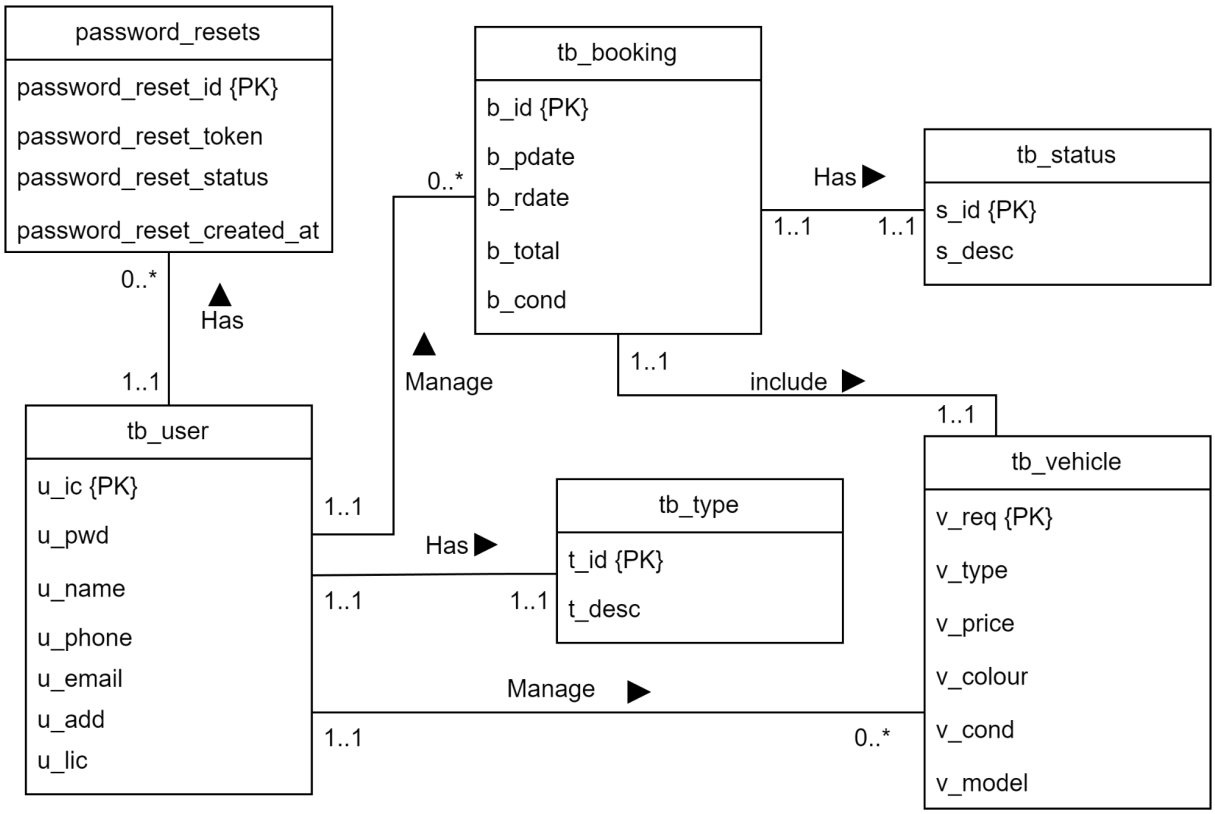


Figure 2.2 Conceptual ERD

3. Development Software, Language, Technology, and Tools (provide URL)

Aspect	Technology	Description
UML Diagrams	draw.io	draw.io, an adaptable online tool, facilitates the crafting of Unified Modeling Language (UML) diagrams. With support for various diagram types like class and use case diagrams, it serves as an excellent platform for visualizing and planning the architectural components of the Vehicle Booking System.
Database	MySQL (phpMyAdmin)	MySQL, a widely used relational database management system, teams up with phpMyAdmin, a web-based management tool. This duo offers a robust and user-friendly environment for designing, organizing, and manipulating database structures and data within the AK Maju Xpress System.
System Template	Bootstrap https://startbootstrap.com/template/sb-admin#google_vignette	Leveraging the power of Bootstrap, a dynamic front-end framework, simplifies the creation of responsive and mobile-friendly web interfaces. With its pre-designed components like grids, forms, and navigation bars, Bootstrap ensures the development of visually appealing and consistent user interfaces.
Programming Languages	PHP, HTML, CSS, JavaScript, JSON	The combination of PHP for server-side scripting and HTML, CSS, JavaScript, and JSON for front-end development forms the backbone of the Vehicle Booking System. This ensemble enables the creation of dynamic and interactive web applications, fostering seamless communication between the server and the user's browser.
Hosting Provider	Jimat Hosting	As a dependable web hosting provider, Jimat Hosting offers a variety of hosting services. It provides the essential infrastructure for deploying and running web applications, ensuring their accessibility to users across the internet.

4. Database design (phpMyAdmin screenshot)

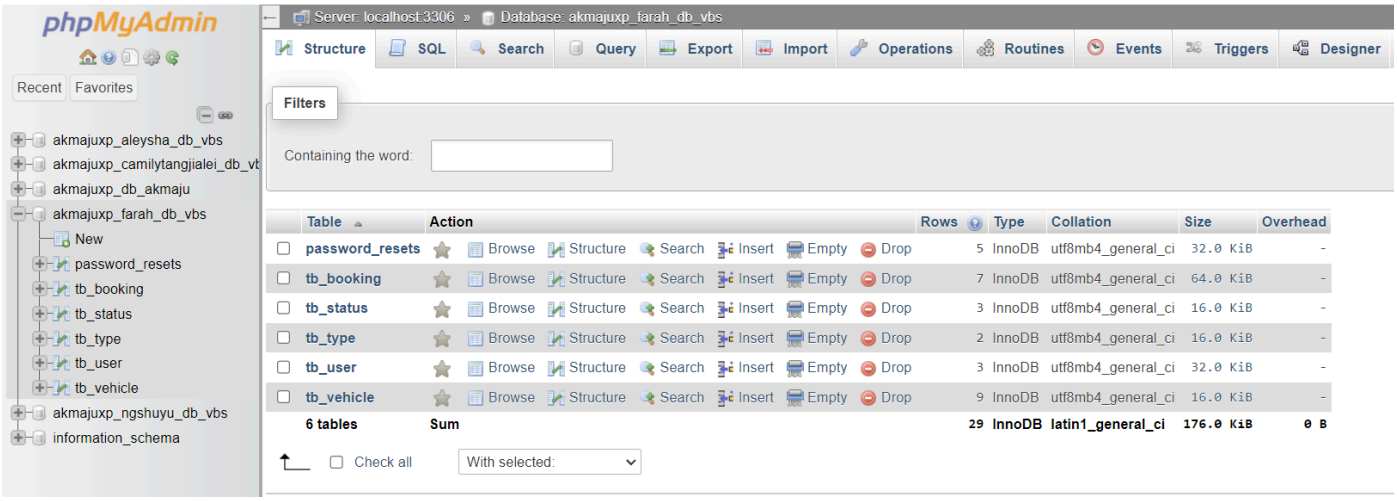


Figure 4.1 phpMyAdmin screenshot

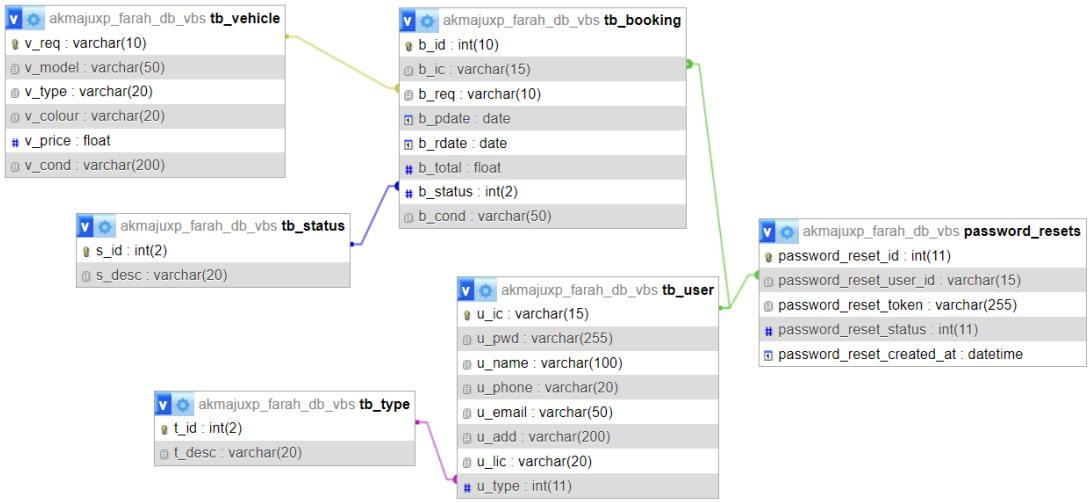


Figure 4.2 Screenshot of the designer in phpMyAdmin

5. Development Steps

Step	Phase	Description
1	Requirements Gathering	Identify specific requirements of customers and administrators. Define core functionalities, such as reservation processes and user roles.
2	System Design	Create Entity Relationship Diagram (ERD) for database structure. Design user interfaces with user-friendly navigation.
3	Database Setup	Implement tables for customers, vehicles, and reservations. Establish relationships between tables.
4	User Authentication and Authorization	Define user roles and set up authorization mechanisms.
5	Reservation Functionality	Develop a reservation process, considering availability and pricing. Implement modification and cancellation features.
6	Vehicle inventory	Create functionalities for managing vehicle inventory where the admin can make a vehicle inactive or active.
7	User Profiles	Design edit user profile pages with security measures.
8	Develop admin features	Implement an admin dashboard with key metrics.
	Confirmation and Verification	Implement confirmation and verification messages when customers cancel a booking and when staff delete a vehicle.
9	Security Measures	Implement measures to prevent SQL injection.
10	UI Enhancements	Refine UI based on the HCI principle. Ensure responsiveness on different devices.

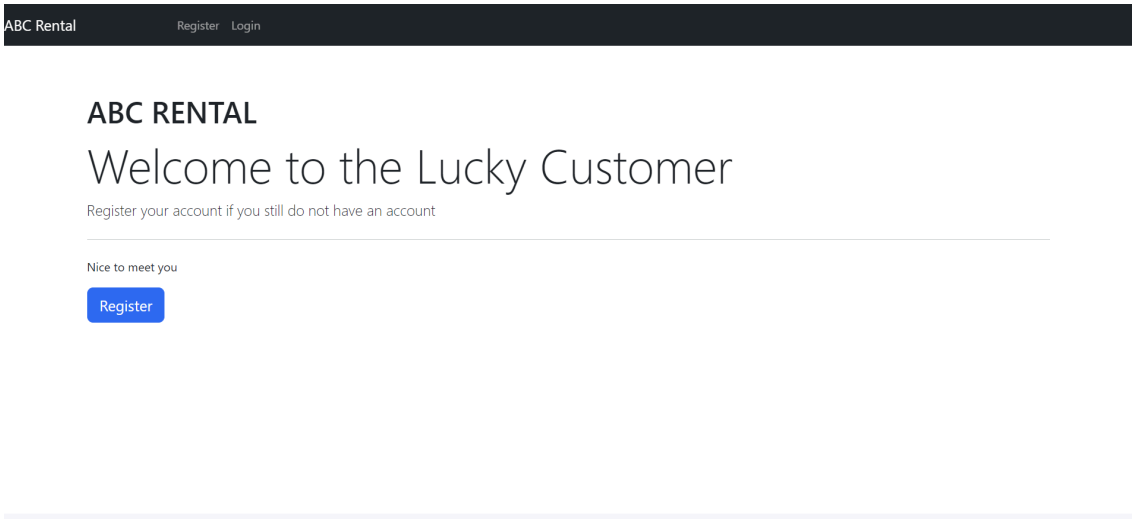
6. System Interface for All Users

6.1 Index page

Index page:

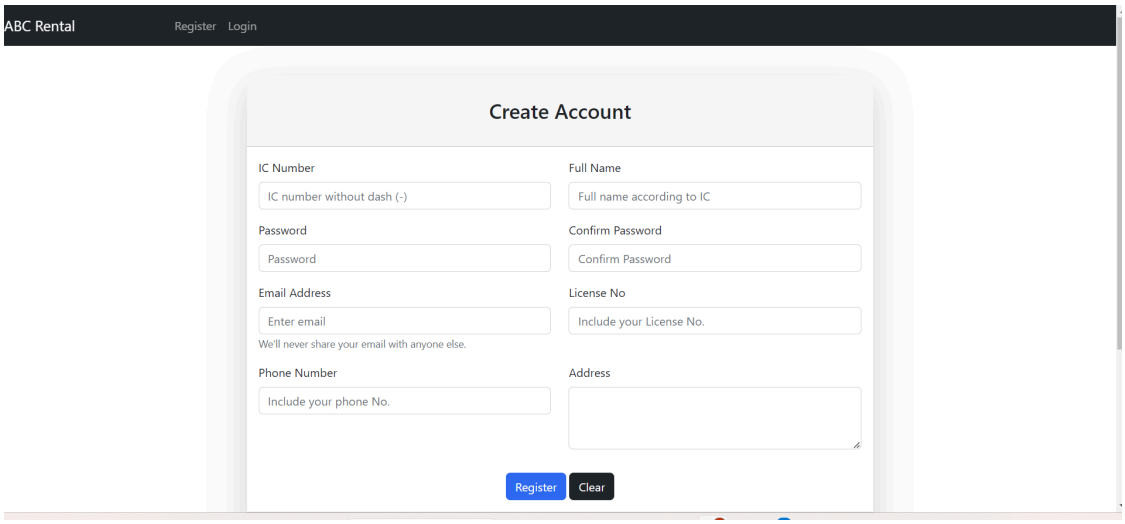
- If click on the “ABC Car Rental System” or “Final Test” on the upper nav bar will navigate to the Car booking system
- If click “Assignment 1” on the upper nav bar will navigate to the assignment 1

Car booking system:

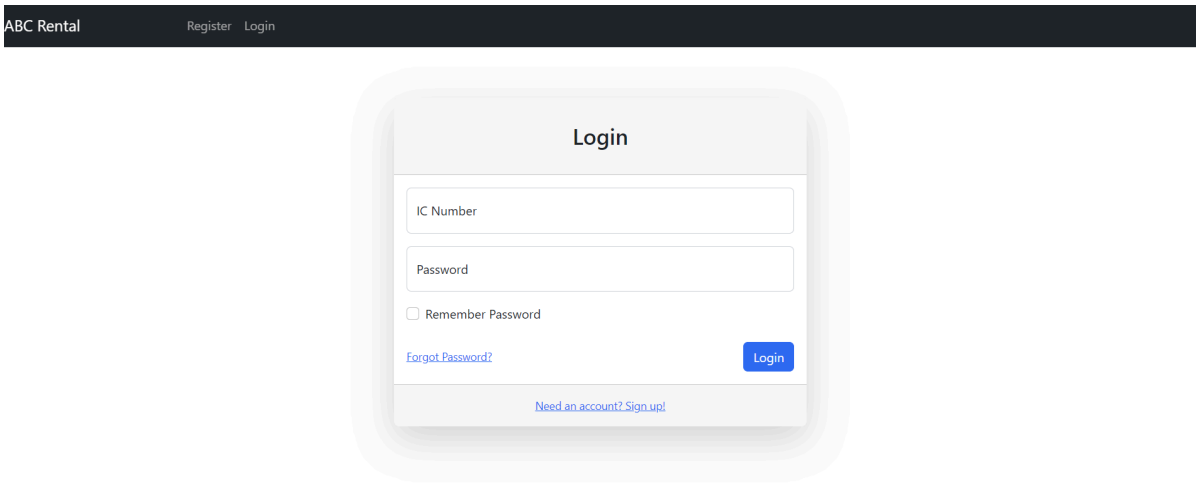


6.2 User Authentication

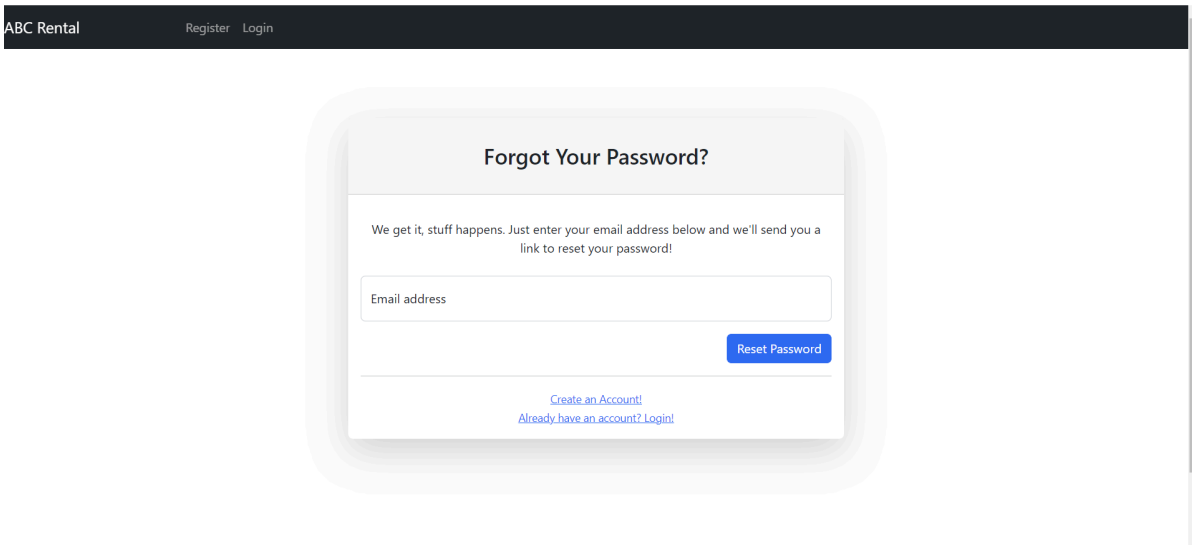
Register:

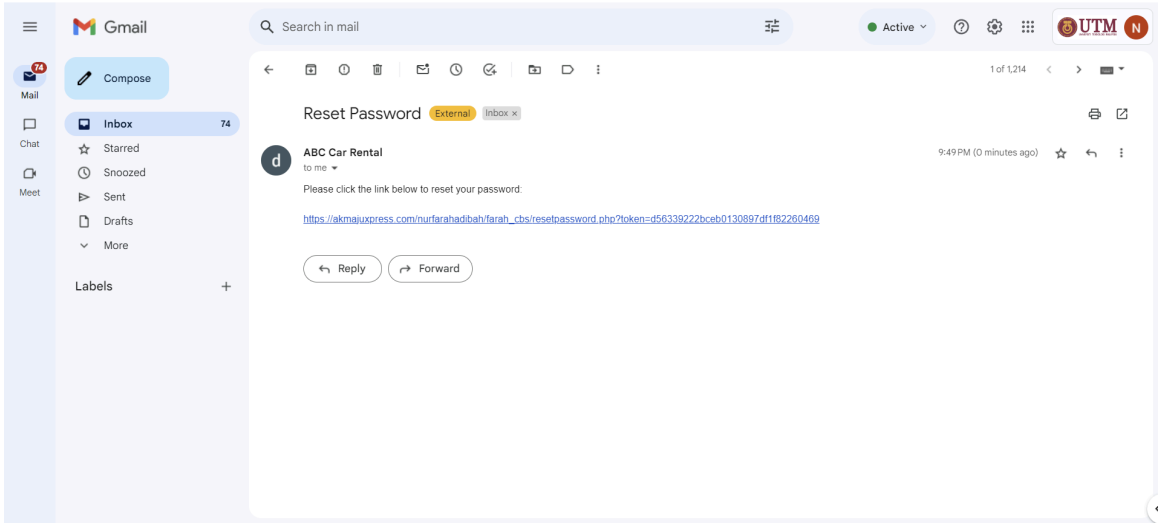


Login:

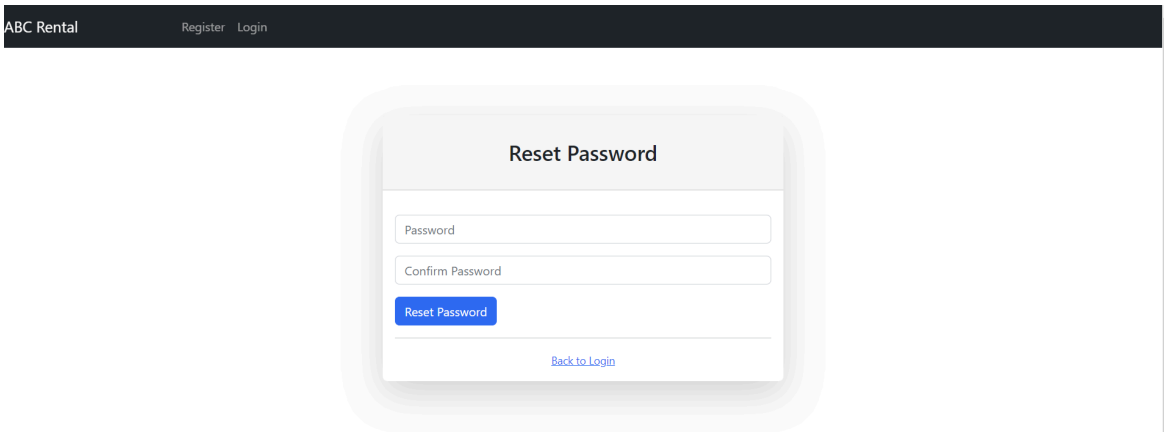


Forgot Password:



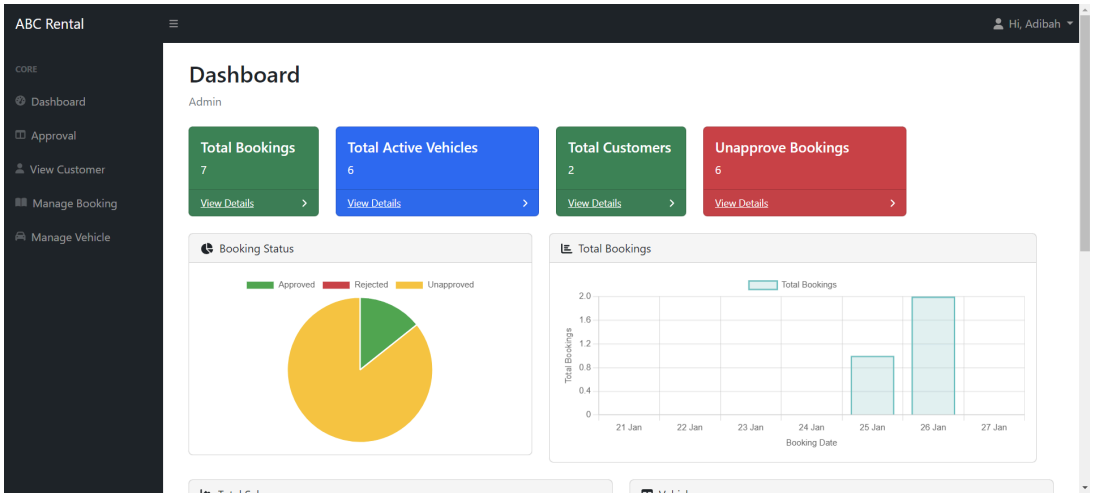


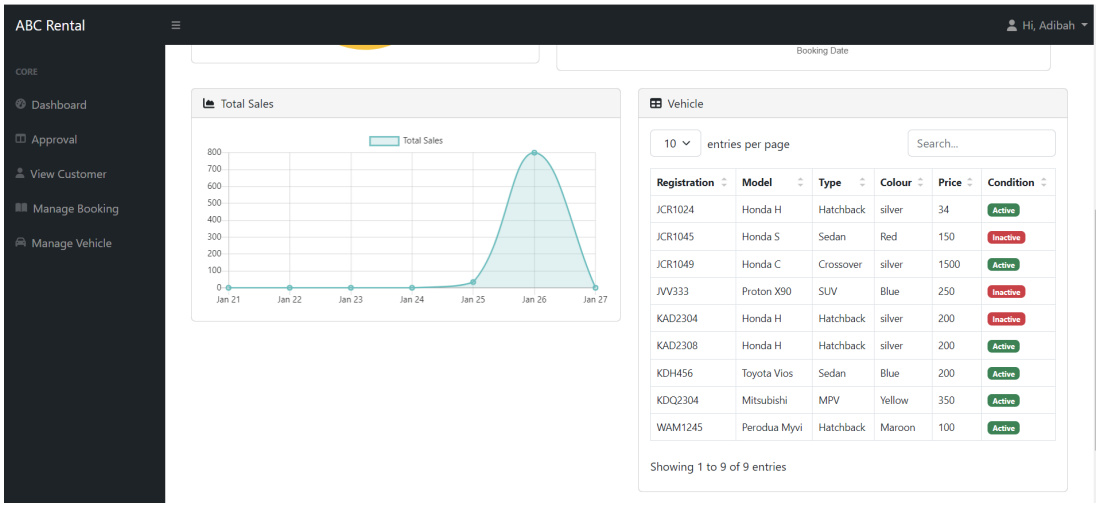
Reset Password:



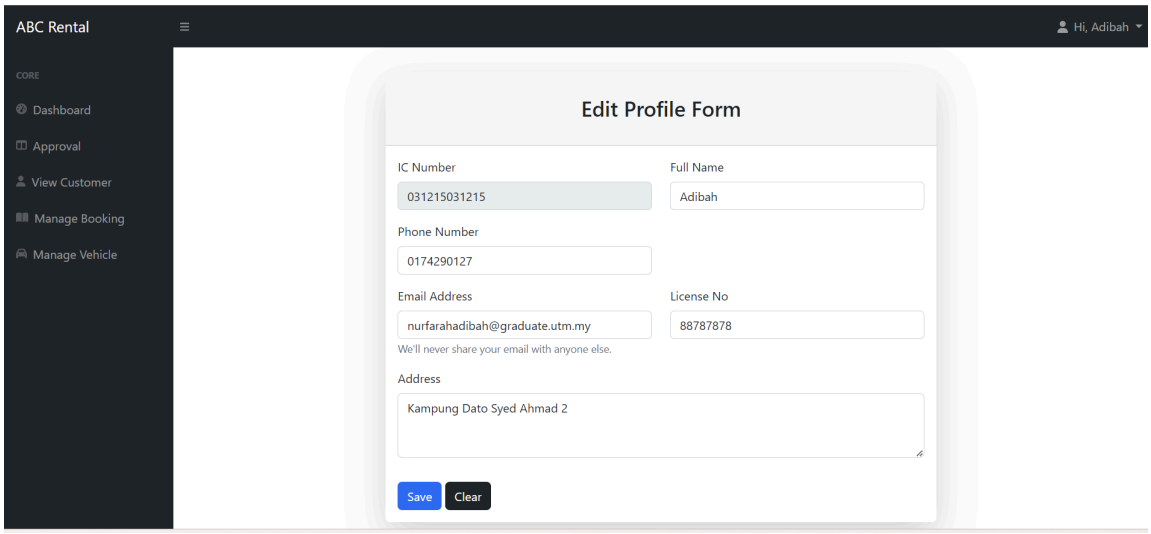
6.2 Admin

Admin Dashboard:

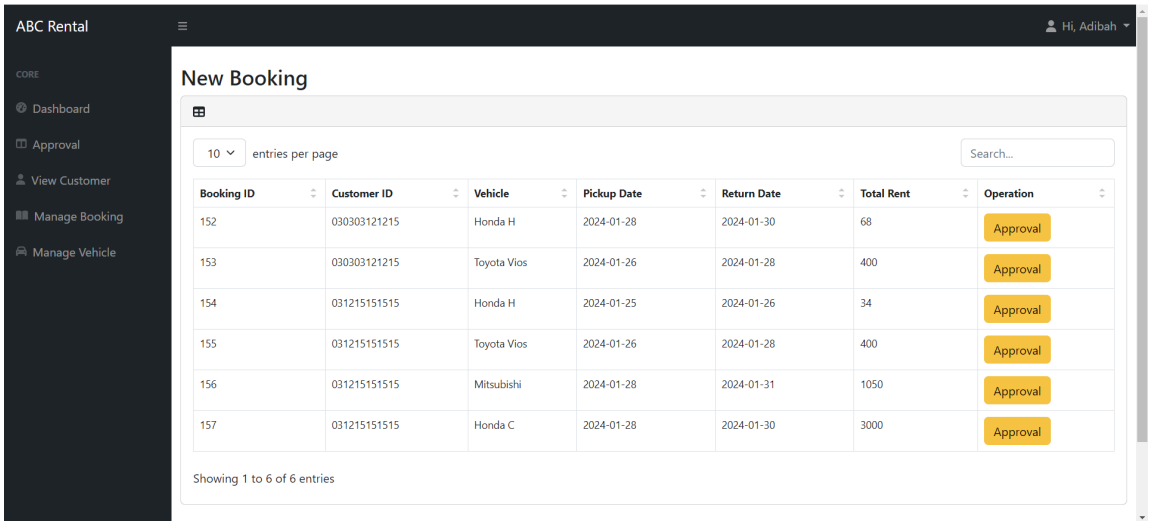


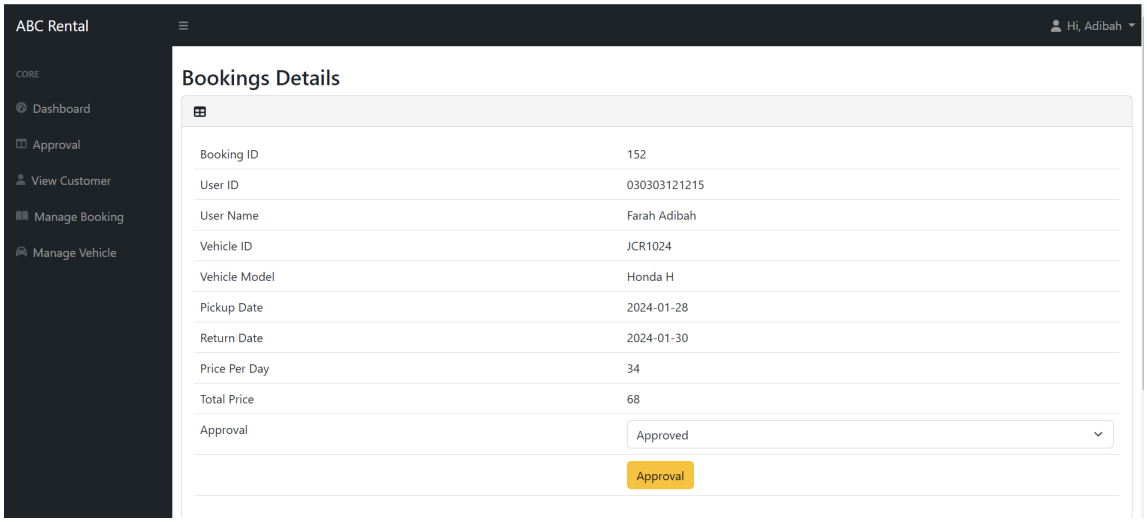


Edit Profile:

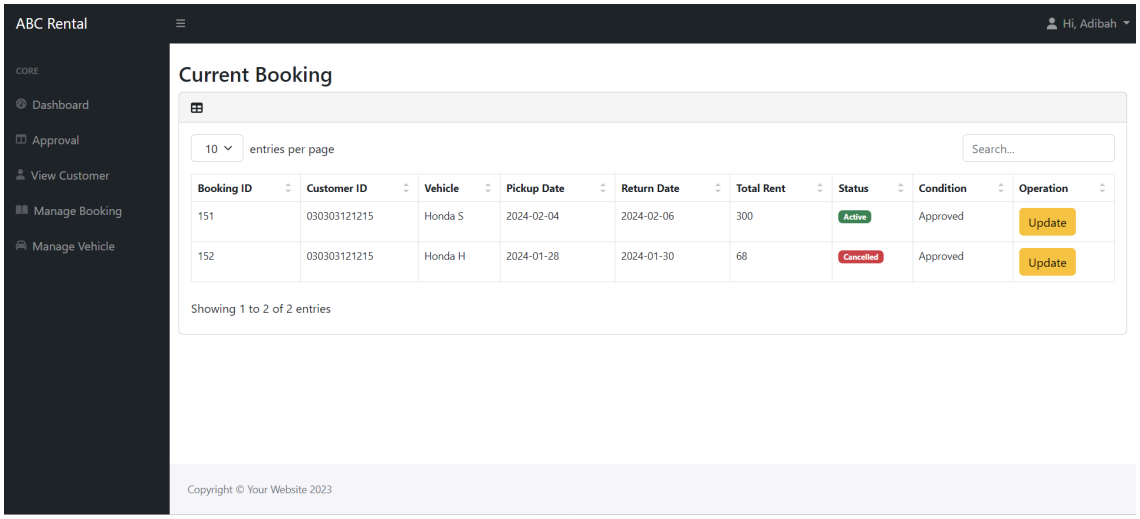


Approval:

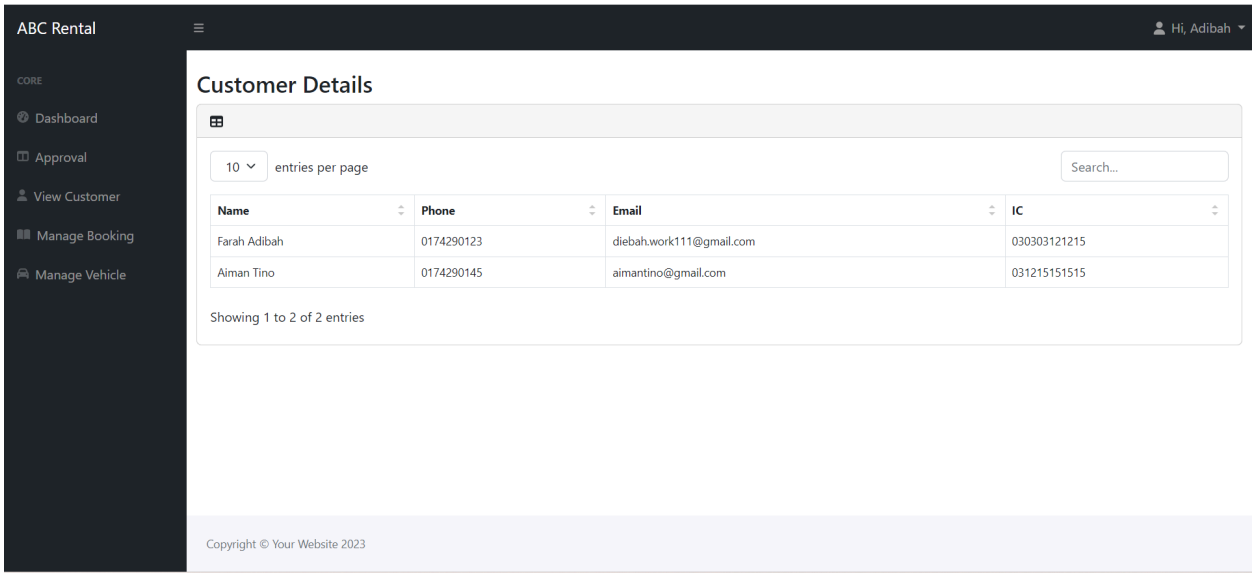

ABC Rental
Hi, Adibah
CORE
Dashboard
Approval
View Customer
Manage Booking
Manage Vehicle
New Booking
10 entries per page
Search...
Booking ID
Customer ID
Vehicle
Pickup Date
Return Date
Total Rent
Operation
152 030303121215 Honda H 2024-01-28 2024-01-30 68 Approval
153 030303121215 Toyota Vios 2024-01-26 2024-01-28 400 Approval
154 031215151515 Honda H 2024-01-25 2024-01-26 34 Approval
155 031215151515 Toyota Vios 2024-01-26 2024-01-28 400 Approval
156 031215151515 Mitsubishi 2024-01-28 2024-01-31 1050 Approval
157 031215151515 Honda C 2024-01-28 2024-01-30 3000 Approval
Showing 1 to 6 of 6 entries


ABC Rental
Hi, Adibah
CORE
Dashboard
Approval
View Customer
Manage Booking
Manage Vehicle
Bookings Details
Booking ID 152
User ID 030303121215
User Name Farah Adibah
Vehicle ID JCR1024
Vehicle Model Honda H
Pickup Date 2024-01-28
Return Date 2024-01-30
Price Per Day 34
Total Price 68
Approval
Approved
Approval

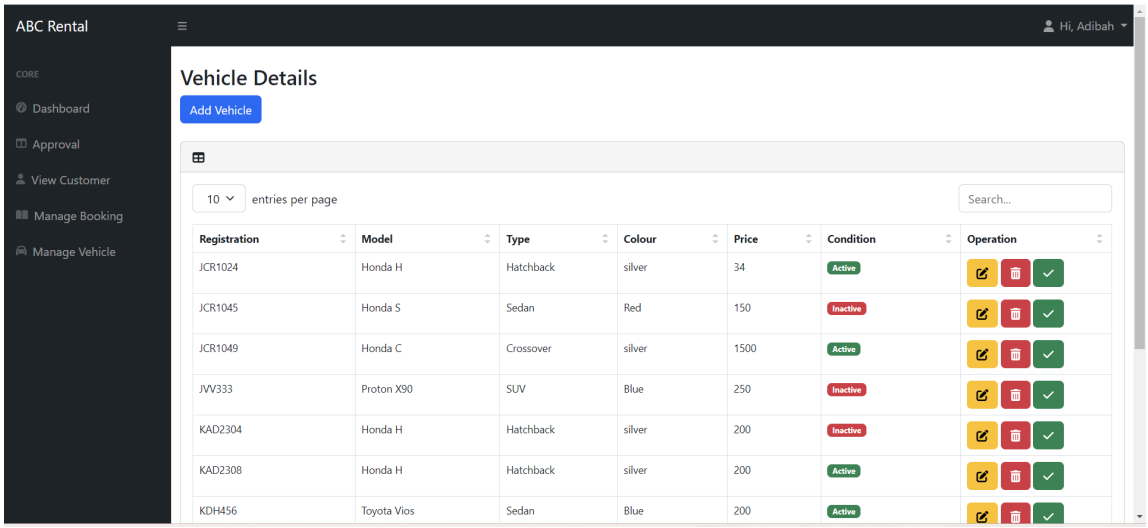
Manage Booking:



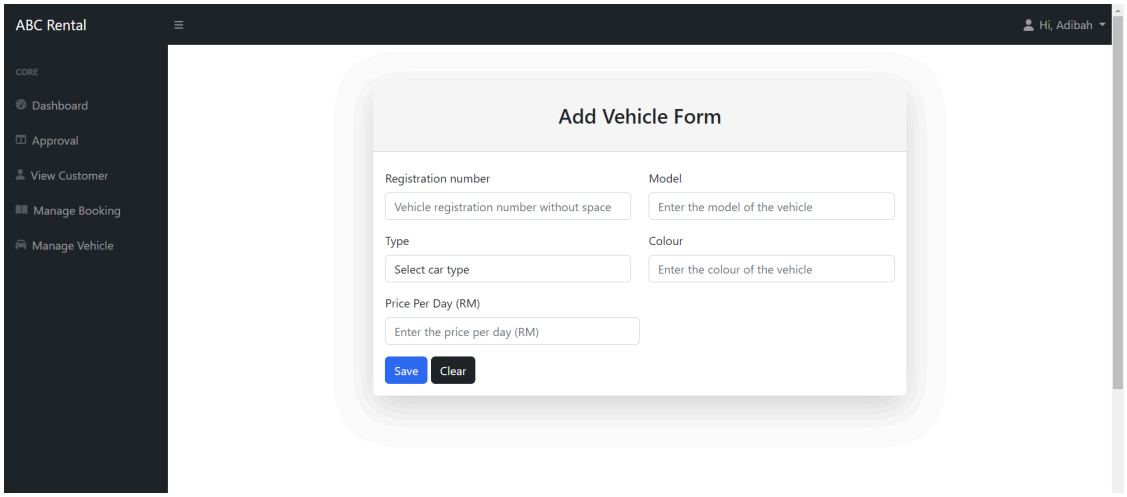
Customer Info:



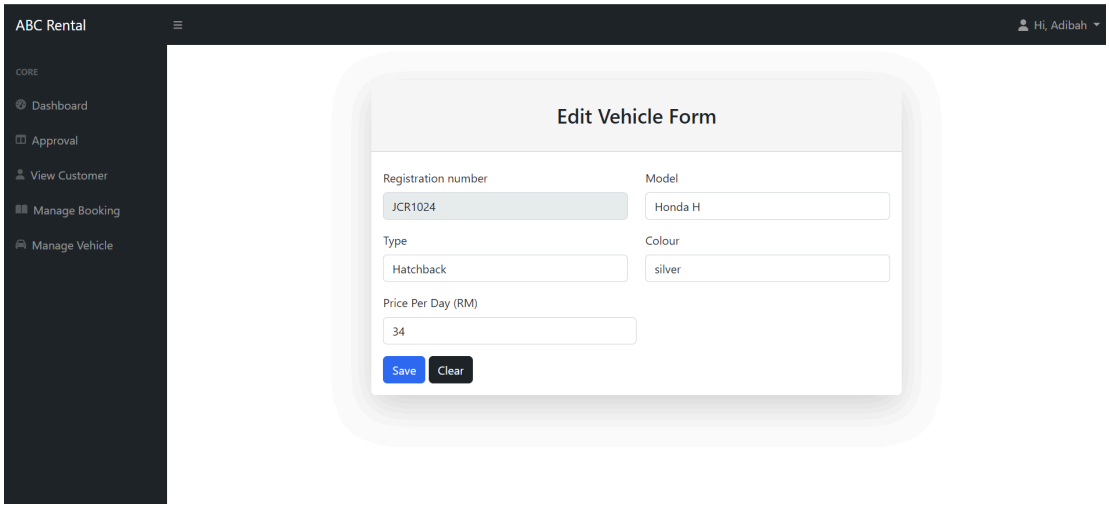
Manage Vehicle:



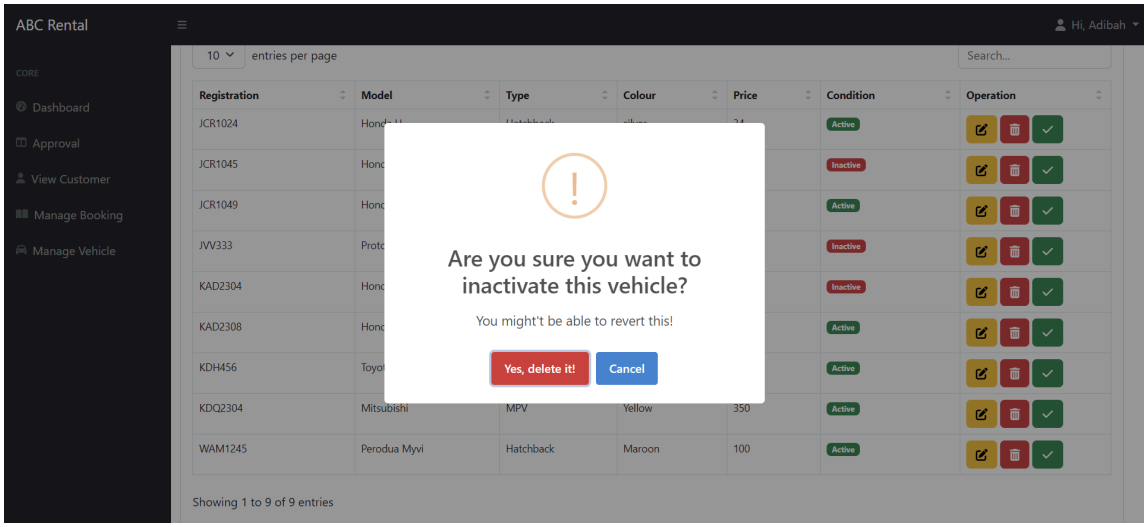
Add Vehicle:



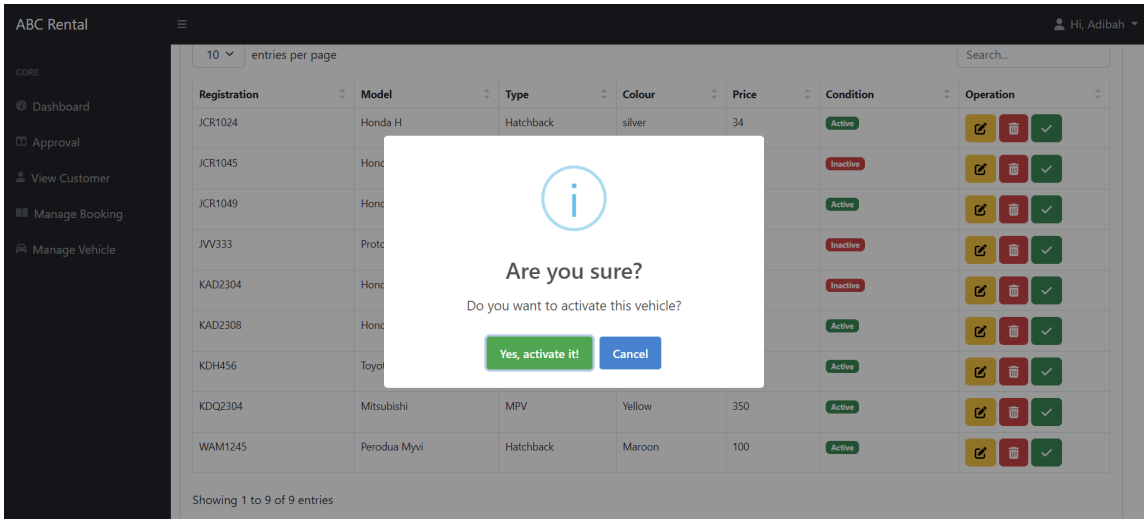
Edit Vehicle:



Delete Vehicle Confirmation:

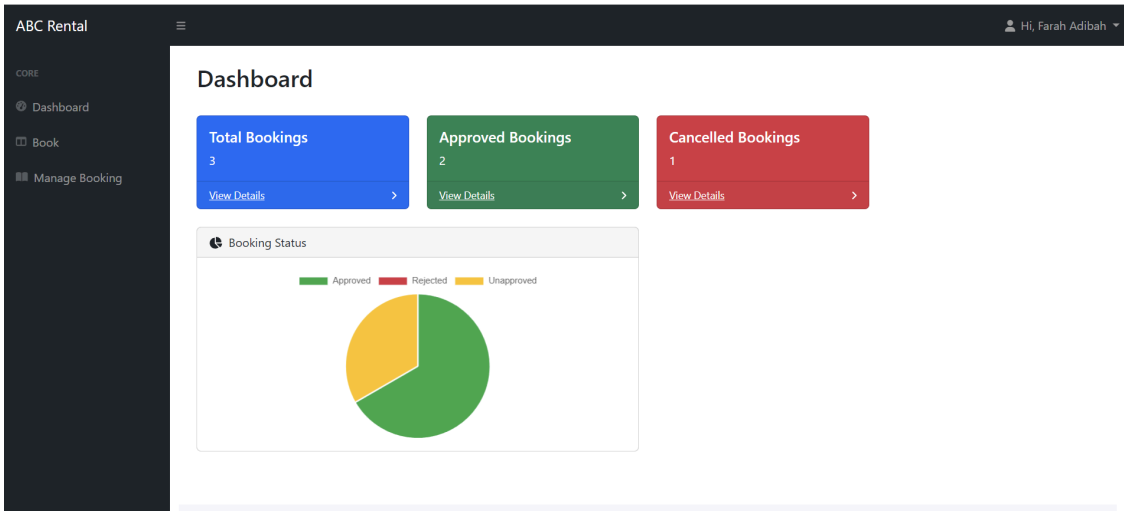


Activate Vehicle Confirmation:

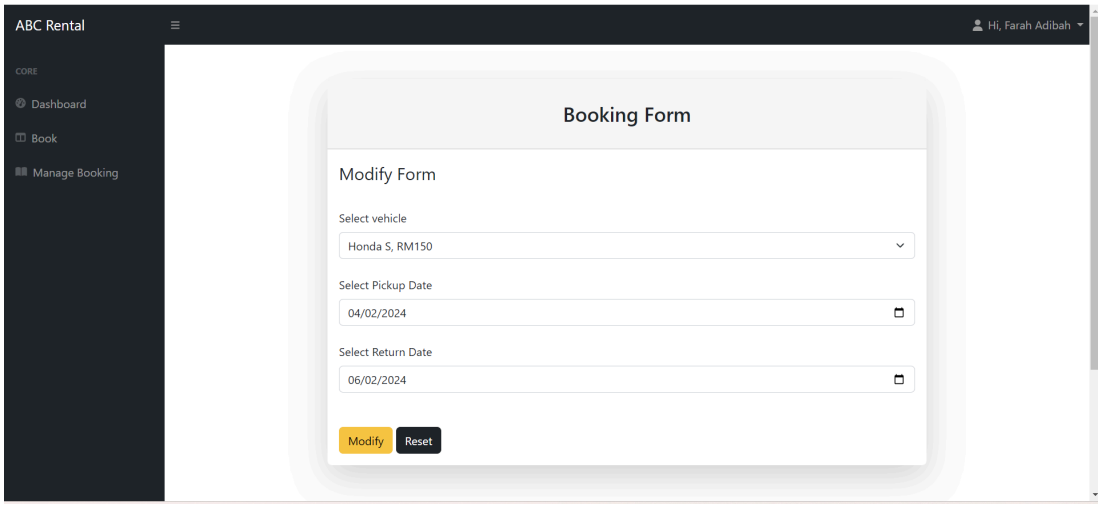


6.2 Customer

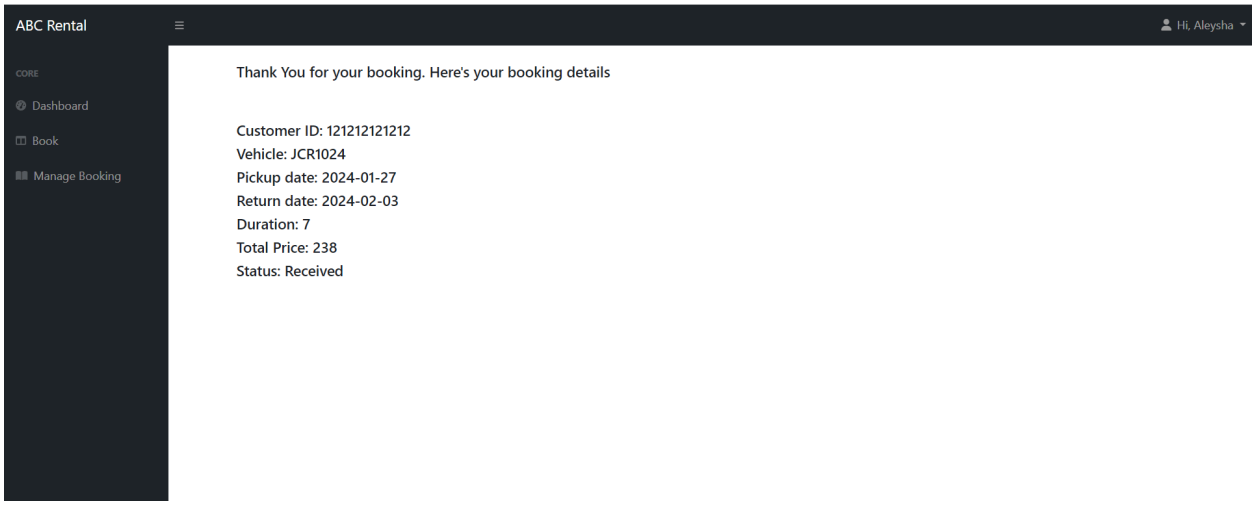
Dashboard:



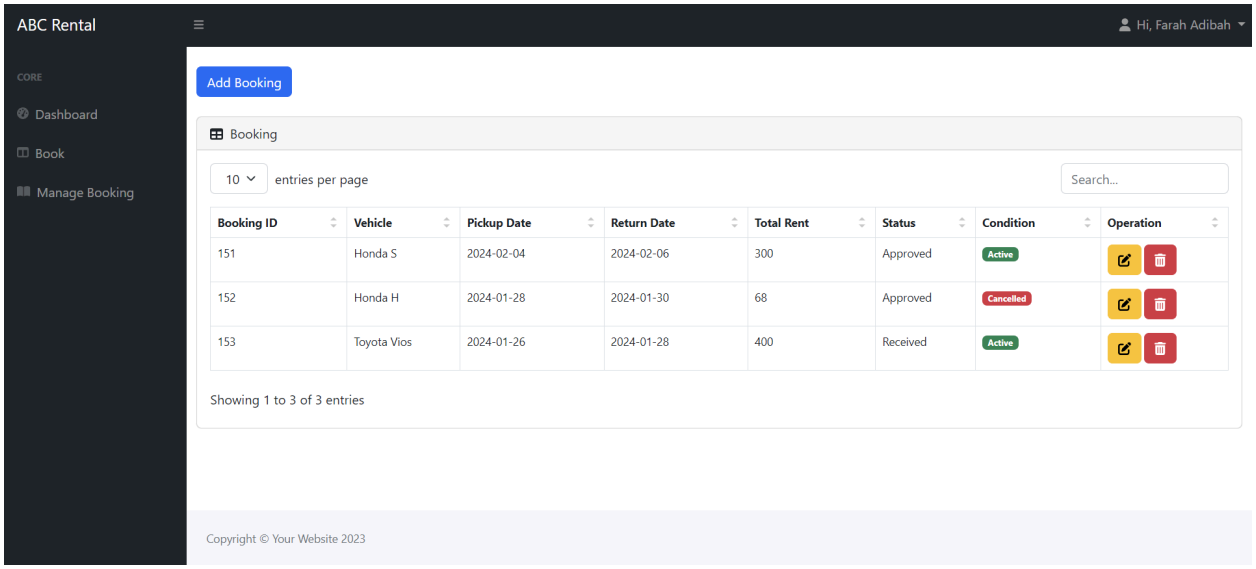
Booking Form:



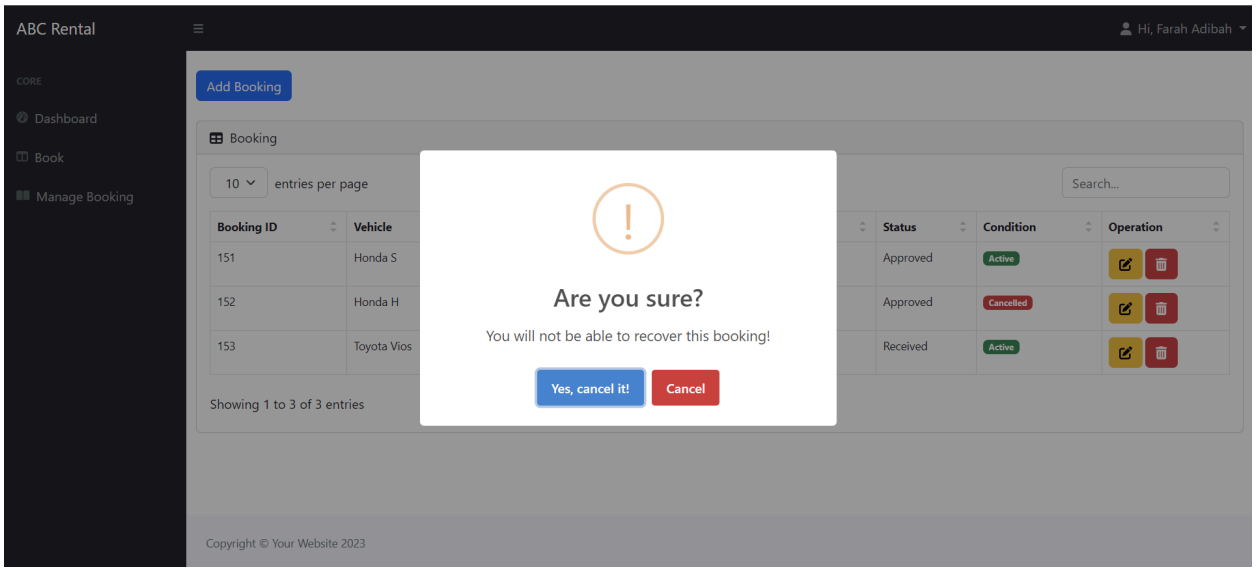
Booking Details:



Manage Booking, View Current and Past Reservation:

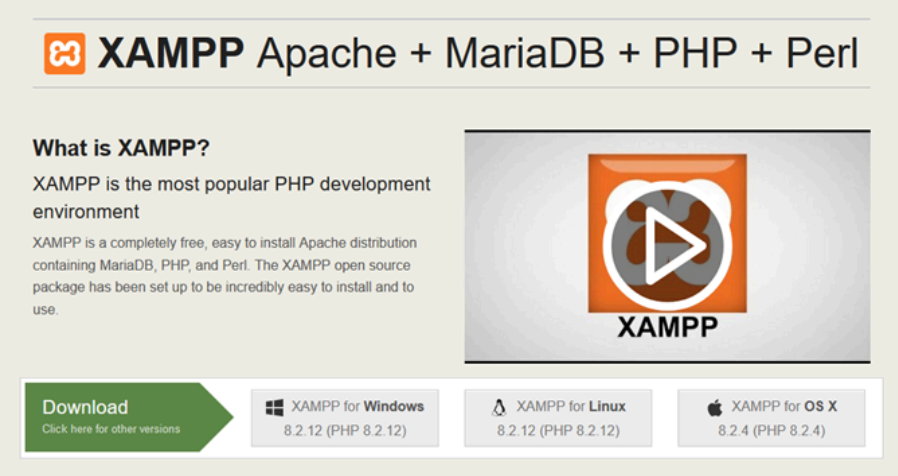


Cancel Booking Confirmation:

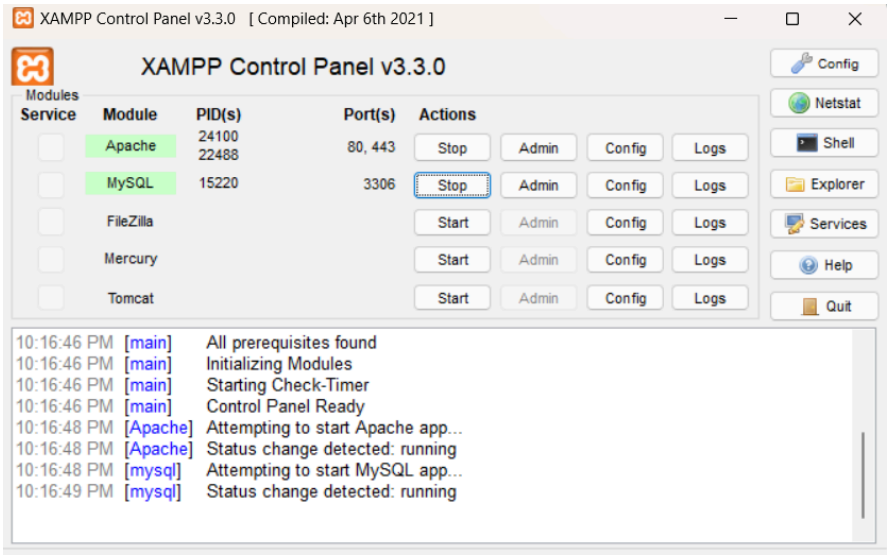


7. Localhost Setup (http://localhost/nurfarahadibah/)

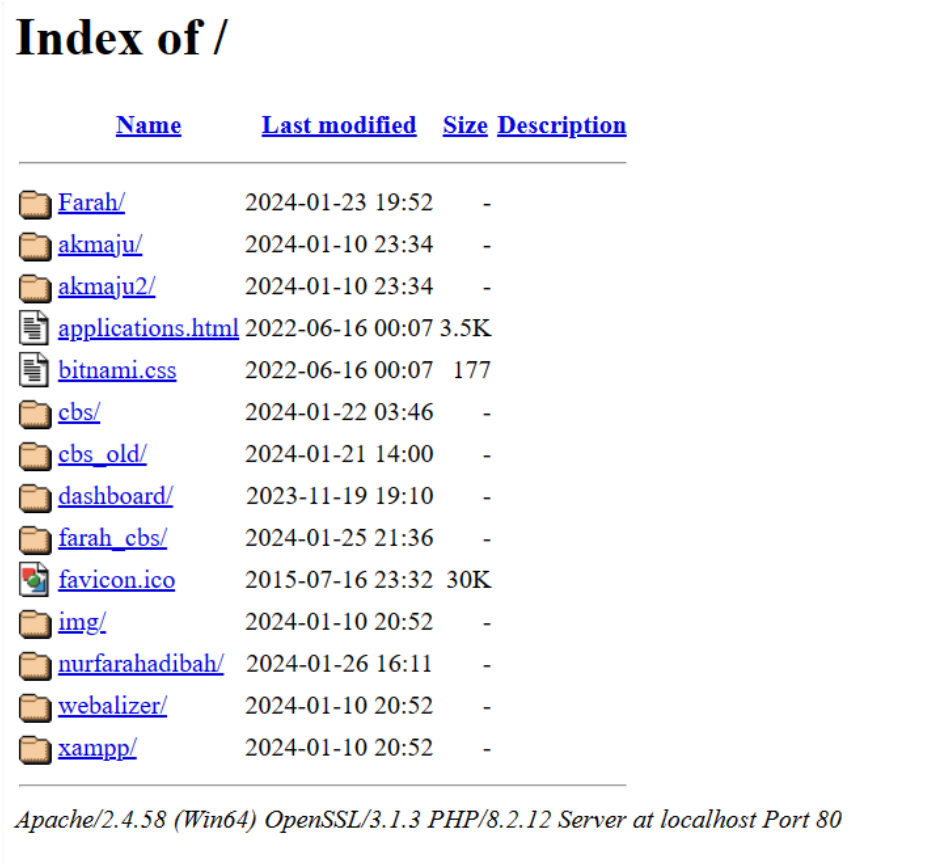
1. Download Local Server environment



2. Start local server



3. Verify setup (http://localhost)



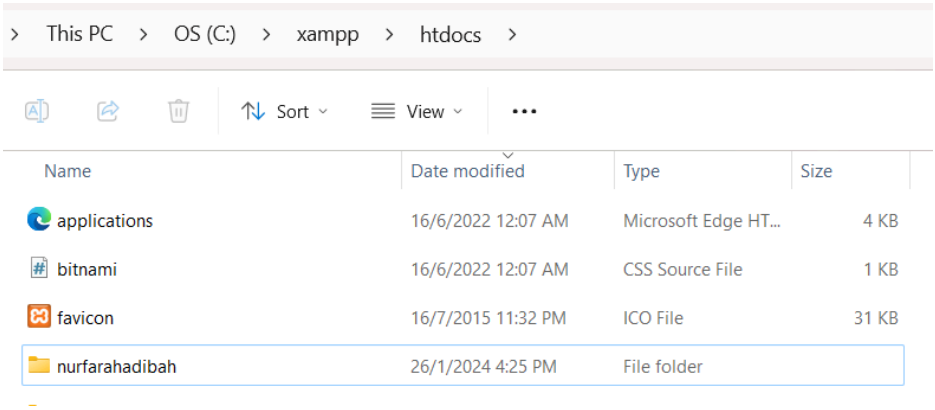
Index of /

Name	Last modified	Size	Description
Farah/	2024-01-23 19:52	-	
akmaju/	2024-01-10 23:34	-	
akmaju2/	2024-01-10 23:34	-	
applications.html	2022-06-16 00:07	3.5K	
bitnami.css	2022-06-16 00:07	177	
cbs/	2024-01-22 03:46	-	
cbs_old/	2024-01-21 14:00	-	
dashboard/	2023-11-19 19:10	-	
farah_cbs/	2024-01-25 21:36	-	
favicon.ico	2015-07-16 23:32	30K	
img/	2024-01-10 20:52	-	
nurfarahadibah/	2024-01-26 16:11	-	
webalizer/	2024-01-10 20:52	-	
xampp/	2024-01-10 20:52	-	

Apache/2.4.58 (Win64) OpenSSL/3.1.3 PHP/8.2.12 Server at localhost Port 80

- Click nurfarahadibah

4. Document Root: C:\xampp\htdocs



5. Download the db_cbs.sql and create a new database in http://localhost/phpmyadmin/ with db_cbs as its name.

8. URL

Webhosting: Link
Localhost: Link

9. User credentials

Admin	Customer
IC: 031215031215	IC: 030303121215
Password: farah101	Password: farahfarah