# A PROJECT ON

# **Rent My Car**

SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE COURSE OF
DIPLOMA IN ADVANCED COMPUTING FROM CDAC



# SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY Hinjewadi

#### **SUBMITTED BY:**

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UNDER THE GUIDENCE OF:

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Faculty Member
Sunbeam Institute of Information Technology, Pune.

# **CERTIFICATE**

This is to certify that the project work under the title "Rent My Car" is done by Asheesh Patel, Avinash Lohar, Ashutosh Kamble, Abhishek Khamkar in partial fulfillment of the requirement for award of Diploma in Advanced Computing Course.

Mr. Snehal Jadhav Project Guide Mr. Yogesh Kolhe Course Co-Coordinator

Date: 17/08/2024

### ACKNOWLEDGEMENT

A project usually falls short of its expectation unless aided and guided by the right persons at the right time. We avail this opportunity to express our deep sense of gratitude towards Mr. Nitin Kudale (Center Coordinator, SIIT, Pune) and Mr. Yogesh Kolhe (Course Coordinator, SIIT, Pune).

We are deeply indebted and grateful to them for their guidance, encouragement and deep concern for our project. Without their critical evaluation and suggestions at every stage of the project, this project could never have reached its present form.

Last but not the least we thank the entire faculty and the staff members of Sunbeam Institute of Information Technology, Pune for their support.

#### 1. INTRODUCTION TO PROJECT

#### • Project Overview:

RentMyCar is car rental platform that connects car owners (hosts) with individuals looking to rent vehicles (guests). The platform simplifies the process of car rental by offering a seamless experience for booking, managing listings. With an easy-to-use interface, RentMyCar makes renting a car as simple as a few clicks.

#### • Key Features:

#### User Roles:

- Guests: Individuals who browse and rent cars from the platform. They can search for cars based on location, view details, book cars, and rate their rental experience.
- Hosts: Car owners who list their vehicles for rent. They manage listings, set availability, and make their cars unavailable if needed. Hosts do not review booking requests; bookings are confirmed automatically based on car availability.
- Admin: Administrators who manage the platform. They are responsible for approving car listings, ensuring that all cars meet the platform's standards, and managing user accounts.

#### Car Listings and Approval:

- Hosts add their cars to the platform, specifying details like make, model, year, rental rates, and availability.
- Admins review and verify the car details before approving them. Only approved cars become visible to guests for booking, ensuring the quality and reliability of available vehicles.

#### Booking and Payment:

 Guests can book cars based on their preferred dates and times, with options for hourly or daily rentals.

#### Location-Based Search:

 Guests can filter available cars by city, ensuring they find options convenient to their location.

#### Ratings and Reviews:

 After a rental period, guests can rate their experience and leave feedback about the car and host, helping other users make informed decisions.

#### Security and Compliance:

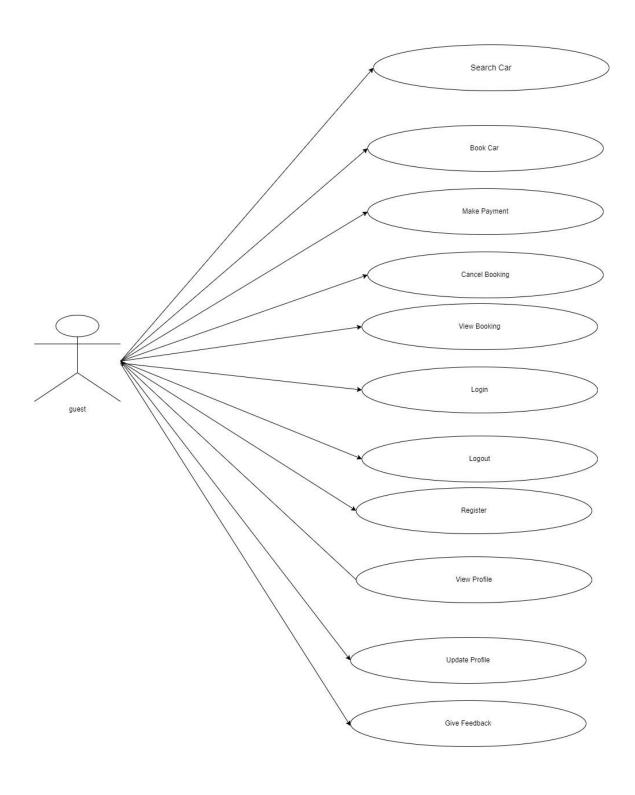
- The platform includes strong security features such as role-based access control, secure payment gateways, and data encryption.
- Admin oversight ensures that only verified and compliant cars are listed, maintaining a high standard of service.

#### Technology Stack:

- **Frontend:** React is used to build a responsive and dynamic user interface.
- Backend: Spring Boot and Java EE handle the server-side logic and API requests.
- **Database:** MySQL stores user data, car listings, bookings, and transactions securely.

# **2.REQUIREMENTS**

# 2.1 FUNCTIONAL REQUIREMENTS OF GUEST



#### Search Car:

 Description: The guest can search for available cars based on various criteria such as location, date, car type, and price range. This feature allows users to find suitable options quickly.

#### o Book Car:

Description: Once a guest has found a car they wish to rent, they can
proceed to book it. This process includes selecting the rental period,
confirming the car details, and providing necessary information.

#### Make Payment:

 Description: After booking a car, the guest can make a payment through various methods (credit card, debit card, online payment gateways). The system should securely process the payment and confirm the transaction.

#### Cancel Booking:

 Description: Guests have the option to cancel their bookings if their plans change. The system should allow them to cancel within a specified timeframe and provide a confirmation of the cancellation.

#### **O View Booking:**

Description: Guests can view their current and past bookings. This
feature provides details such as booking dates, car information, payment
status, and any other relevant information.

#### o Login:

Description: Guests can create an account or log in to an existing account.
 This feature ensures that their personal information and booking history are securely stored and accessible.

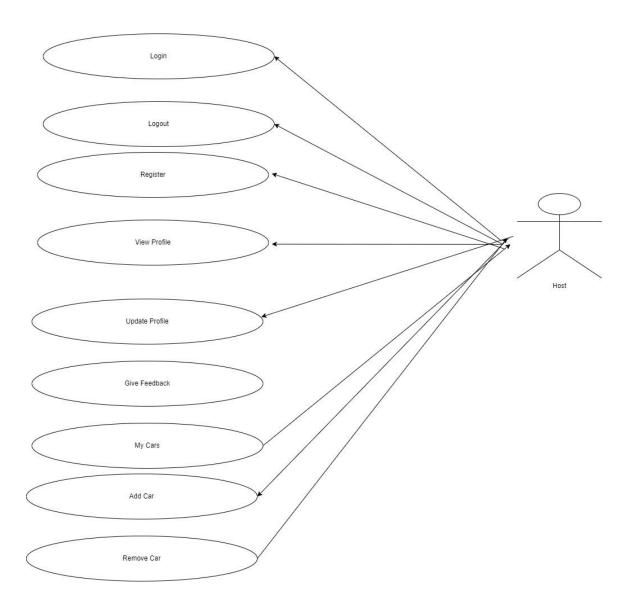
#### o Logout:

 Description: After completing their tasks, guests can log out of their accounts to ensure their information remains secure. This feature helps protect user data from unauthorized access.

### o Register:

 Description: New users can register for an account by providing necessary information such as name, email, phone number, and password. This process allows them to access personalized features and manage bookings.

# 2.2 FUNCTIONAL REQUIREMENTS OF HOST



#### View Profile:

 Description: Hosts can view their profile information, including personal details, contact information, and their car listings. This feature allows users to keep track of their account details.

#### Update Profile:

Description: Hosts can update their profile information as needed. This
includes changing their password, updating contact details, and modifying
preferences to enhance their user experience.

#### O My Cars:

 Description: Hosts can view a list of all the cars they have added to the platform. This feature provides an overview of their inventory and allows them to manage their listings effectively.

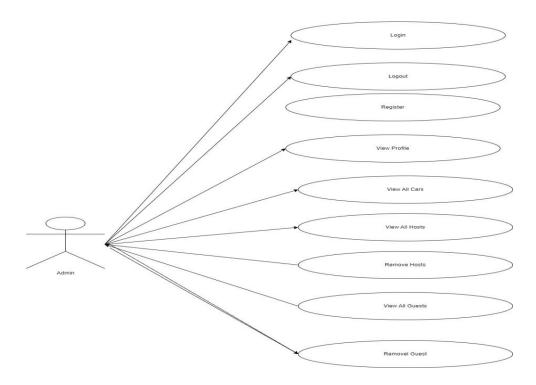
#### Add Car:

 Description: Hosts can add new cars to their inventory by providing details such as make, model, year, price, and features. This feature allows hosts to expand their offerings and attract more guests.

#### Remove Car:

 Description: Hosts can remove cars from their inventory if they are no longer available for rent. This feature ensures that the listings are up to date and prevents guests from booking unavailable cars.

### 2.3 Functional Requirements for ADMIN



#### O View Profile:

 Description: Admins can view their profile information, including personal details and account settings. This feature allows them to keep track of their account details and make necessary updates.

#### View All Cars:

 Description: Admins can view a comprehensive list of all cars available on the platform. This feature provides an overview of the inventory and allows for better management of car listings.

#### View All Hosts:

 Description: Admins can view a list of all hosts registered on the platform. This feature enables them to monitor host activities and manage host accounts effectively.

#### Remove Hosts:

 Description: Admins have the authority to remove hosts from the platform if necessary. This feature ensures that the admin can maintain the integrity of the platform by removing non-compliant or inactive hosts.

#### View All Guests:

 Description: Admins can view a list of all guests registered on the platform. This feature allows them to monitor guest activities and manage guest accounts effectively.

#### Remove Guest:

Description: Admins can remove guests from the platform if necessary.
 This feature ensures that the admin can maintain the integrity of the platform by removing non-compliant or inactive guests.

#### 2.2 NON FUNCTIONAL REQUIREMENTS

#### o **Performance**:

• The system should handle up to 1000 concurrent users without significant degradation in performance, with page load times not exceeding 2 seconds.

#### o Security:

 User data must be encrypted both in transit and at rest, and the system should implement role-based access control.

#### o Availability:

• The system should have an uptime of 99.9%, ensuring high availability for users.

### o Usability:

• The user interface should be intuitive and easy to navigate, allowing users to complete tasks with minimal training.

### 3. DESIGN

#### 3.1 Database Design

The following table structures depict the database design.

#### Table1: user

Field	Туре	Null	Key	Default
id	bigint	NO	PRI	NULL
created_on	date	YES		NULL
updated_on	datetime(6)	YES		NULL
email	varchar(50)	YES		NULL
first_name	varchar(30)	NO		NULL
is_deleted	tinyint(1)	NO		0
last_name	varchar(30)	NO		NULL
mobile	varchar(12)	NO		NULL
password	varchar(70)	NO		NULL
role_enum	varchar(5)	YES		NULL

# **Table2: address**

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
adr_line1	varchar(200)	NO		NULL	
adr_line2	varchar(200)	YES		NULL	
city	varchar(20)	NO		NULL	
country	varchar(20)	NO		NULL	
is_deleted	tinyint(1)	NO		0	
pincode	char(10)	NO		NULL	
state	varchar(20)	NO		NULL	
user_id	bigint	NO	MUL	NULL	

# **Table3: booking**

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
amount	double	NO		NULL	
booking_status_enum	varchar(10)	NO		PENDING	
drop_off	datetime(6)	NO		NULL	
payment_date_time	datetime(6)	YES		NULL	
pick_up	datetime(6)	NO		NULL	
transaction_id	char(50)	YES		NULL	
car_listing_id	bigint	NO	MUL	NULL	
guest_id	bigint	NO	MUL	NULL	
guest_address_id	bigint	NO	MUL	NULL	

# Table4:car

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
brand	varchar(20)	NO		NULL	
fuel_type_enum	varchar(10)	YES		NULL	
model	varchar(20)	NO		NULL	
seating_capacity	tinyint	NO		NULL	
transmission_type_enum	varchar(10)	YES		NULL	
car_features_id	bigint	YES	MUL	NULL	

# <u>Table5:</u> car\_features

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
has_abs	tinyint(1)	YES		0	
has_ac	tinyint(1)	YES		0	
has_air_bags	tinyint(1)	YES		0	
has_bluetooth	tinyint(1)	YES		0	
has_power_steering	tinyint(1)	YES		0	
has_usb_charger	tinyint(1)	YES		0	

# Table6:car\_listing

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
car_image	varchar(20)	YES		NULL	
fuel_meter	tinyint	YES		NULL	
is_approved	tinyint(1)	YES		0	
is_available	tinyint(1)	YES		1	
is_deleted	tinyint(1)	YES		0	
km_driven	int	NO		NULL	
no_of_trips	int	YES		NULL	
registration_no	varchar(20)	NO		NULL	
spare_tyre_count	tinyint	NO		NULL	
address_id	bigint	NO	MUL	NULL	
car_id	bigint	NO	MUL	NULL	
car_pricing_id	bigint	NO	MUL	NULL	
host_id	bigint	NO	MUL	NULL	

# Table 7 : car\_pricing

<u>Field</u>	<b>Type</b>	Null	Key	<b>Default</b>	Extra
<u>id</u>	<u>bigint</u>	<u>NO</u>	<u>PRI</u>	NULL	auto_increment
created_on	<u>date</u>	YES		NULL	
updated_on	datetime(6)	YES		NULL	
price_per_day	double	<u>NO</u>		NULL	
price_per_hr	double	NO		NULL	
security_deposit	double	NO		NULL	

Table 8 : driving\_license

<u>Field</u>	<b>Type</b>	Null	Key	Default	<u>Extra</u>
<u>id</u>	<u>bigint</u>	<u>NO</u>	<u>PRI</u>	NULL	auto_increment
created on	<u>date</u>	<u>YES</u>		<u>NULL</u>	
updated_on	datetime(6)	<u>YES</u>		NULL	
license no	varchar(25)	<u>NO</u>	<u>UNI</u>	<u>NULL</u>	
license_expiry_date	date	<u>NO</u>		NULL	
license_issue_date	date	<u>NO</u>		NULL	
license_class_enum	varchar(10)	<u>NO</u>		<u>NULL</u>	
user_id	<u>bigint</u>	<u>NO</u>	<u>MUL</u>	<u>NULL</u>	

Table 9: review

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
rating	tinyint	NO		NULL	
review_text	varchar(50)	YES		NULL	
booking_id	bigint	YES	MUL	NULL	
guest_id	bigint	NO	MUL	NULL	
car_host_address_pricing_id	bigint	NO	MUL	NULL	

### 4. CODING STANDARDS IMPLEMENTED

# **Naming and Capitalization**

Below summarizes the naming recommendations for identifiers in Pascal casing is used mainly (i.e. capitalize first letter of each word) with camel casing (capitalize each word except for the first one) being used in certain circumstances.

Identifier	Case	Examples	Additional Notes
		Person, BankVault,	Class names should be based on "objects" or "real
Class	Pascal	SMSMessage,	things" and should generally be <b>nouns</b> . No '_' signs
		Dept	allowed. Do not use type prefixes like 'C' for class.

Method	Camel	getDetails, updateStore	Methods should use <b>verbs</b> or verb phrases.
Parameter	Camel	personName, bankCode	Use descriptive parameter names. Parameter names should be descriptive enough that the name of the parameter and its type can be used to determine its meaning in most scenarios.
Interface	Pascal with "I" prefix	Disposable	Do not use the '_' sign
Property	Pascal	ForeColor, BackColor	Use a noun or noun phrase to name properties.
Associated private member variable	_camelCase	_foreColor, _backColor	Use underscore camel casing for the private member variables
Exception Class	Pascal with "Exception" suffix	WebException,	

#### **Comments**

- Comment each type, each non-public type member, and each region declaration.
- Use end-line comments only on variable declaration lines. End-line comments are comments that follow code on a single line.
- Separate comments from comment delimiters (apostrophe) or // with one space.
- Begin the comment text with an uppercase letter.
- End the comment with a period.
- Explain the code; do not repeat it.

# **5. TEST REPORT**

Another group called Linux did the testing and the report of the testing is given hereunder.

### **GENERAL TESTING:**

GET	ERAL IESTING.		1	EDDOD MESSAGE
SR- NO	TEST CASE	EXPECTED RESULT	ACTUAL RESULT	ERROR MESSAGE
1	Register Page	Redirected to Next page	ОК	Nothing
2		Pop-up will come	Ok	Please enter username and password again .
3		Only users password will reset	Ok	Nothing
4	Search Cars	Gives all car listings	Ok	Nothing
5		All the fields should be filled for submission	Ok	Nothing
6		User is logged in or not	Ok	Nothing
7		Directed to payment page for payment of booking	Ok	Nothing
8	Got the payment page	Add payment details	Ok	Nothing
9		Save this all data into booking table	Ok	Nothing
	STATIC TESTING			
SR- NO	Deviation	Program		
1	Commenting not followed	All Web Application		

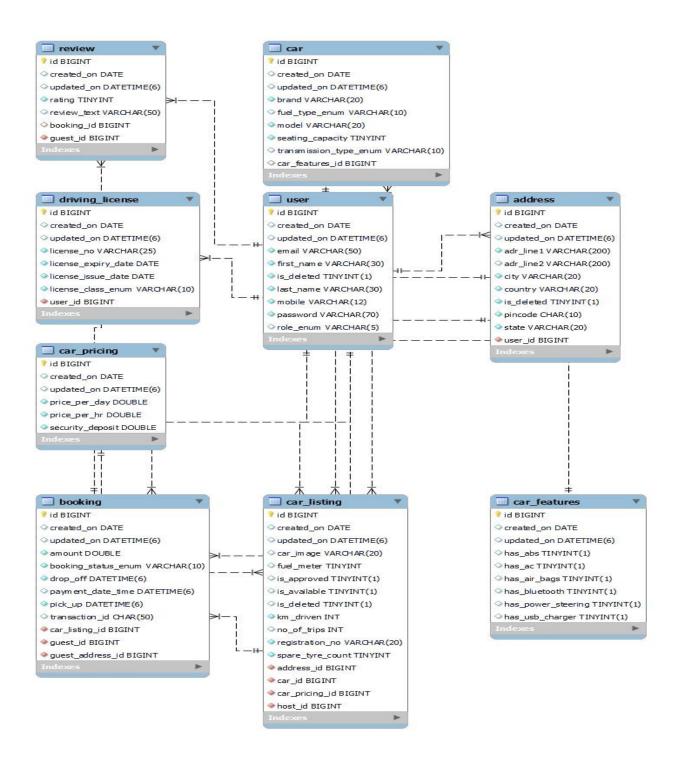
### 6. PROJECT MANAGEMENT RELATED STATISTICS

DATE	WORK PERFORMED	SLC Phase	Additional Notes
JUNE 25,2024	Project Allotment and User Requirements Gathering	Feasibility Study	Our team met the client Mr. Nitinkudale (CEO, SIIT Pune) to know his requirements.
JULY 01,2024	Initial SRS Document Validation And Team Structure Decided	Requirement Analysis (Elicitation)	The initial SRS was presented to the client to understand his requirements better
JULY 03,2024	Designing the use-cases, Class Diagram, Collaboration Diagram, E-R Diagram and User Interfaces	Requirement Analysis & Design Phase	Database Design completed
JULY 06,2024	Business Logic Component design Started	Design Phase	
JULY 12,2024	Coding Phase Started	Coding Phase	70% of Class Library implemented.
JULY 20,2024	Implementation of Web Application and Window Application Started	Coding Phase	Class Library Development going on.
JULY 22,2024	Off	Off	Off
JULY 23,2024	Implementation of Web Application and Window Application Continued	Coding Phase and Unit Testing	Class Library Modified as per the need.
JULY 24,2024	Implementation of Web Application and Window Application Continued	Coding Phase and Unit Testing	

JULY 26,2024	After Ensuring Proper Functioning the Required Validations were Implemented		Module Integration was done by the Project Manager
JULY 27,2024	The Project was Tested by the respective Team Leaders and the Project Manager	Testing Phase (Module Testing)	
AUG 07,2024	The Project was Submitted to Other Project Leader of Other Project Group For Testing		The Project of Other Team was Taken up by the Team for Testing
AUG 10 - 05,2024	The Errors Found were Removed	Debugging	The Project was complete for submission
AUG 17,2024	Final Submission of Project		

# Appendix A

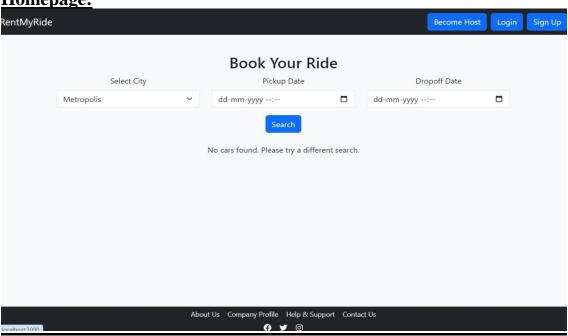
### **Entity Relationship Diagram**



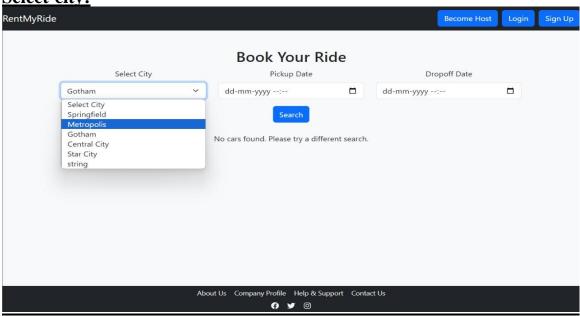
# **Appendix B**

### **Guest UI Flow**

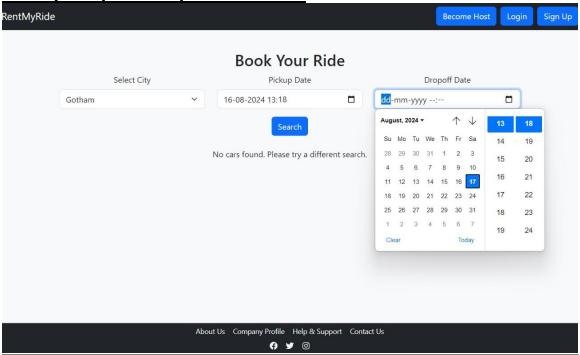
**Homepage:** 



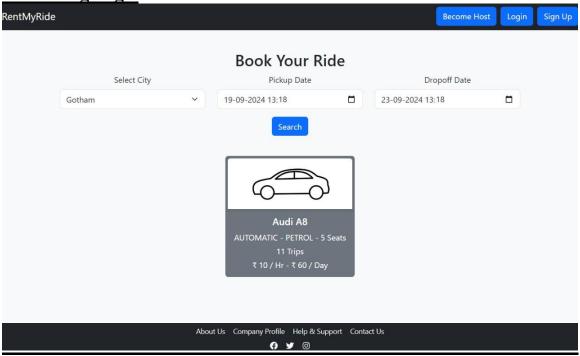
**Select-city:** 



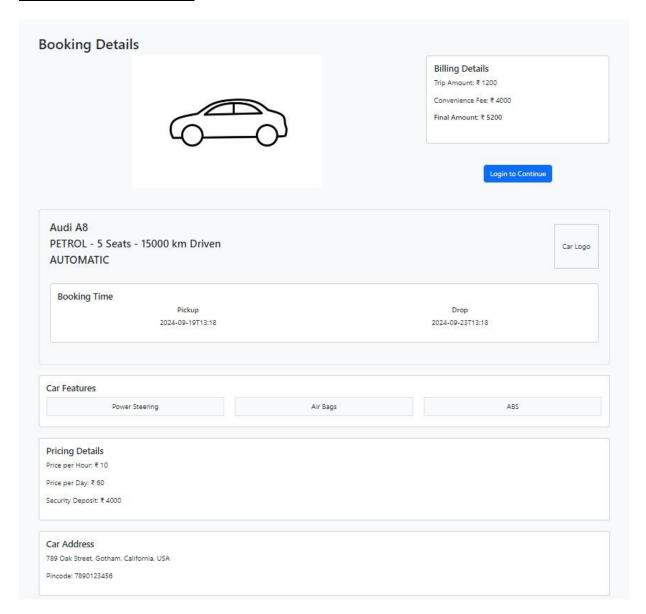
**Select pickUp and dropOff DateTime:** 



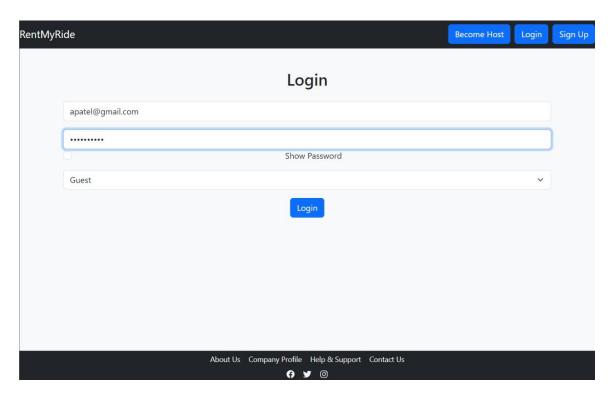
**CarListing Page:** 



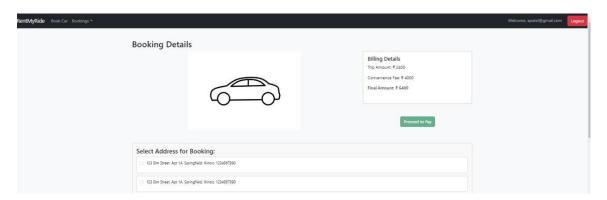
# **Booking Details Page:**



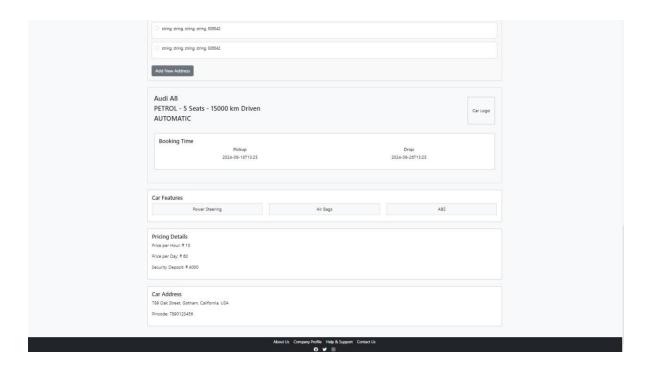
# **Login Page:**



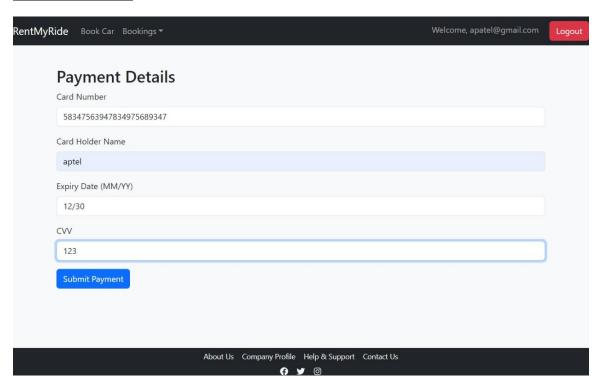
# **After Login Page:**



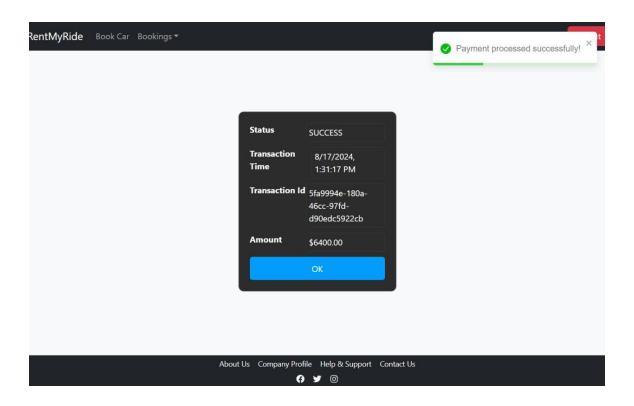
### Rent My Car



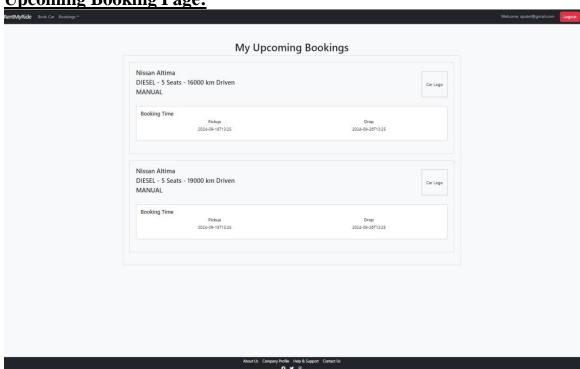
# **Payment Page:**



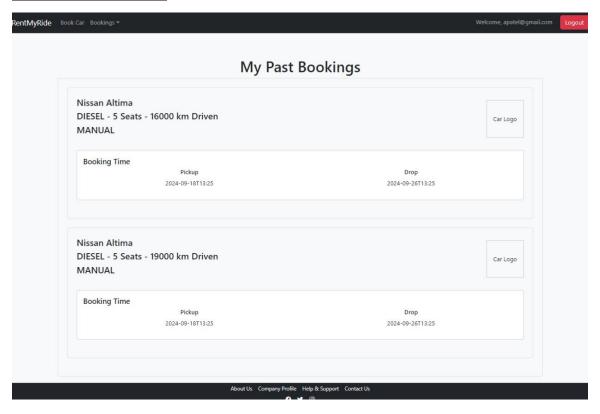
# **Confirmation Page:**



**Upcoming Booking Page:** 

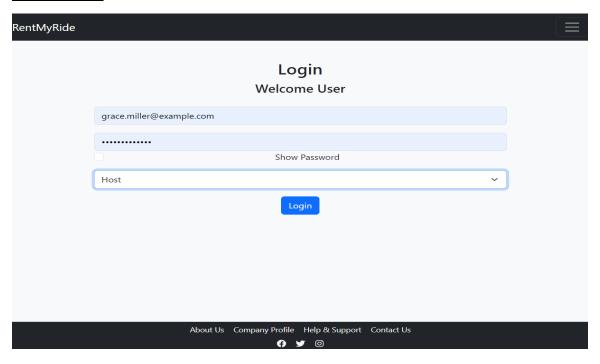


# Past Booking Page:

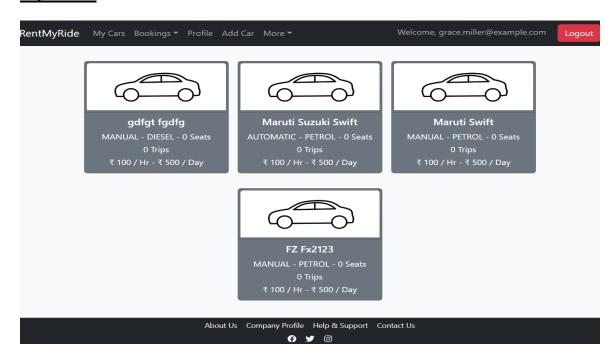


### **Host UI Flow**

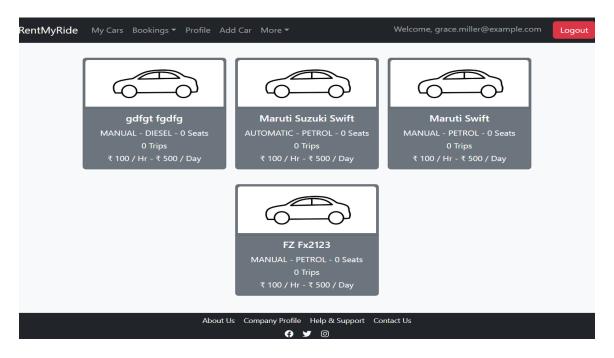
# **LoginPage:**



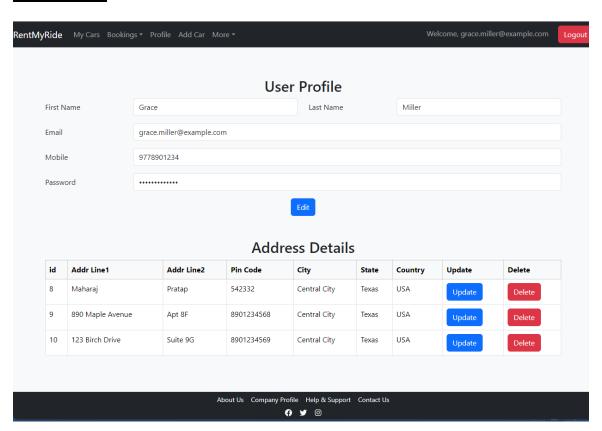
# My Cars:



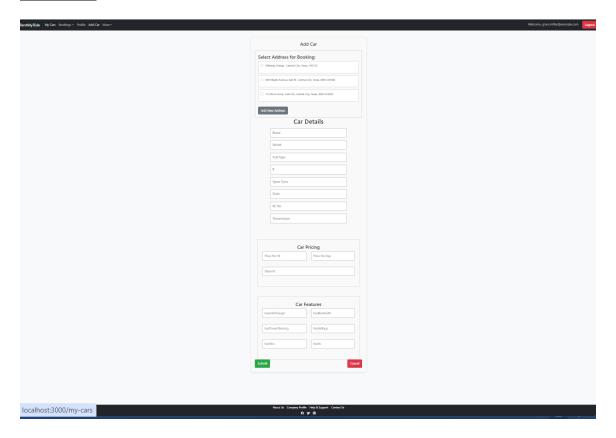
# My Pending Car's Approval:



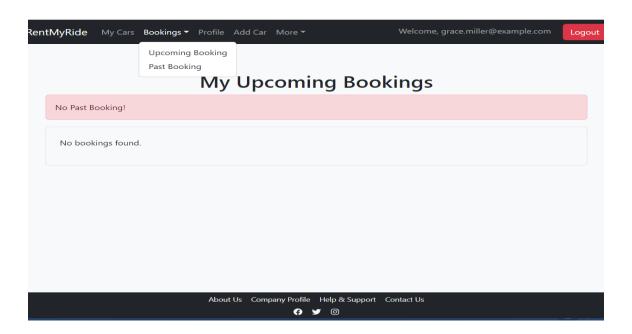
#### **Profile Page:**



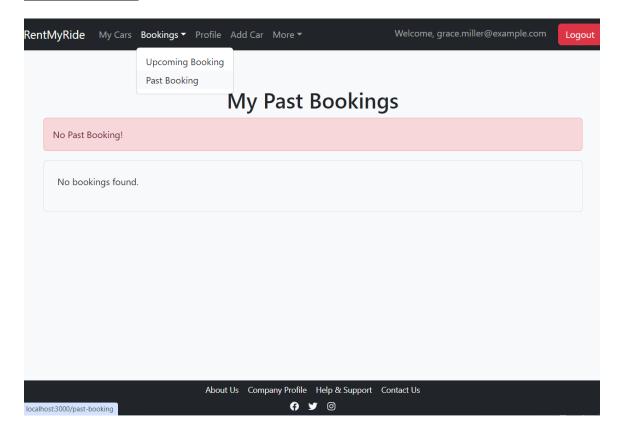
# **Add Car:**



# **UpcomingBookings:**

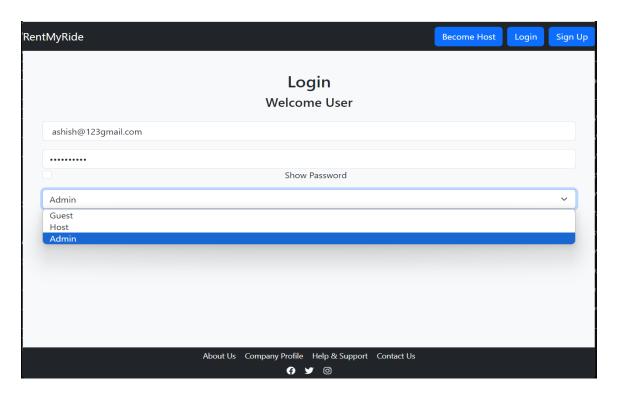


# PastBookings:

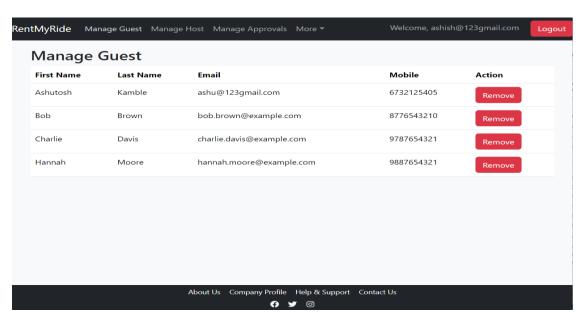


# **Admin UI Flow**

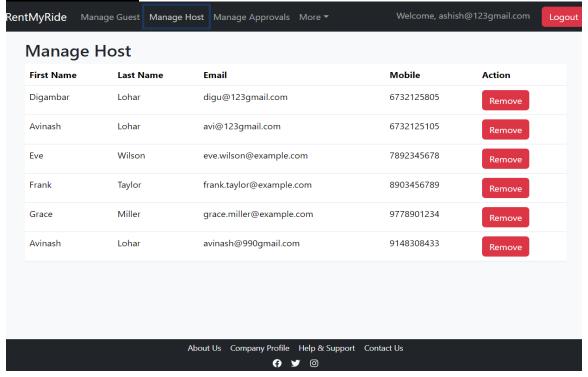
# **AdminLogin:**



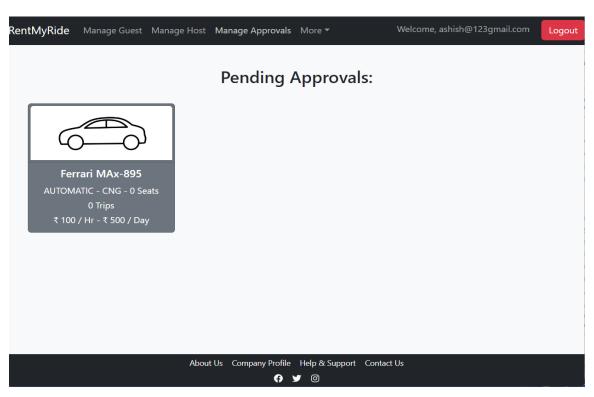
# **ManageGuest:**



**ManageGuest:** 



### **PendingApproval:**



Rent	Mv	Car
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### **7.REFERENCES:**

http://www.google.com

http://www.zoomcar.com

 $\underline{http://www.webdevelopersjournal.com}$ 

http://www.w3.org

http://www.wikipedia.org