

CAR RESELLER PROJECT

Software Requirements Specification

Problem Statement:

Preetham motors deals with second hand cars. To reach out to large number of people we develop an ecommerce site supporting different devices such as iPad, laptops and mobiles where users can be able to buy a car and sell a car online through their website where sellers can list their cars on the portal and a buyer can access the listing of the cars and can buy it. Making it a platform for both buyers and sellers to make their wish fulfilled.

1. Introduction

1.1 Purpose

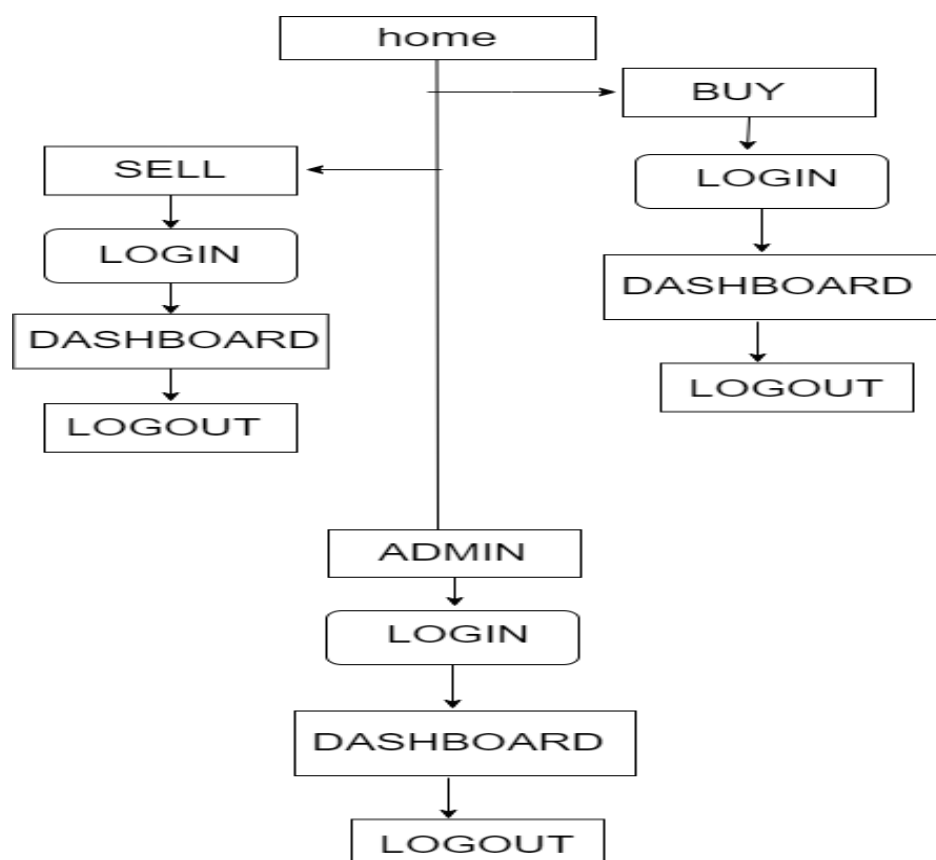
The purpose of this document is to define the requirements and specifications for the development of a web-based application for Preetham Motors. The application will serve as a platform for buying and selling second hand cars, including budget, model, prices, brand etc. Our project is meant to give people a better and trustworthy platform where they can sell and buy cars of their own choice and on their own terms and condition. By providing features such as user registration and login, car browsing, test drive booking, car details submission by sellers, reviews, and Q&A sections, tracking of slot bookings, buyer's buying history, seller's selling history, and admin functionality.

1.2 Scope

The application will include the following key functionalities:

- Single registration and login form for all users.
- Users will have access to different components based on their roles (buyer, seller, admin).
- The UI (User Interface) will be responsive and user-friendly, providing an intuitive experience for users.

- User authentication and authorization for registered users.
- Car browsing based on brand, model, and other filters.
- Display of detailed car information, including images and specifications.
- Test drive booking with available time slots.
- Seller form for car details submission and inspection for pricing.
- Display of customer reviews and frequently asked questions (Q&A).
- Tracking of slot bookings and making cars unavailable for purchase during booked slots.
- Tracking and display of buyer's buying history and seller's selling history.
- User profile with options such as requests, orders, vehicles, and shortlisted cars.
- Admin functionality for managing requests and actions.
- Integration with Angular for the frontend, Spring Microservices for the backend, and SQL databases for data storage and retrieval.



1.4 References

[1] "Pre - owned car market booming in India", available at

<https://www.cars24.com/>

[2] <https://www.cardekho.com/>

[3] <https://cardealer.webtemplatemasters.com/>

2. Overall Description

2.1 User Classes and Characteristics

Users should be familiar with the terms like login, register, order system etc.

2.2.1 Users

- Individuals interested in buying or selling second hand cars.
- Buyers: Registered users who can browse and book cars for test drives.
- Sellers: Registered users who can submit car details for selling.
- Admin: An authorized user responsible for managing requests and actions.

2.2 Design and Implementation Constraints

- The front-end UI will be developed using Angular.
- The back end will be developed using Spring Microservices, implementing RESTful APIs with JWT token authentication.
- The database selection will be based on project requirements, with options such as SQL or MongoDB for data storage.

3. Functional Requirements

3.1 User Registration and Login

1. User Registration

- Users can register with the application using a registration form.
- User information, including credentials, will be stored securely.

2. User Login

- Registered users can log in using their credentials.
- JWT token authentication will be used to validate and authenticate users.

3.2 Car Browsing and Test Drive Booking

1. Car Browsing

- Buyers can browse available cars based on brand, model, and other filters.
- Detailed car information, including images and specifications, will be displayed.

2. Test Drive Booking

- Buyers can book test drive slots for selected cars.
- Available time slots will be displayed, and buyers can choose a convenient time.

3.3 Seller Form and Car Inspection

1. Seller Form and Car Details Submission

- Sellers can fill up a form with car details, including brand, model, year, mileage, price, and images.
- Additional information about the car's condition, history, and seller contact details will be collected.

2. Car Inspection and Pricing

- The seller's submitted car details will undergo inspection to determine the car's price.

3.4 Reviews and Q&A

1. Display Customer Reviews

- Customer reviews will be displayed on the front-end for users to view.

2. Frequently Asked Questions (Q&A)

- Commonly asked questions and their answers will be provided to users.

3.5 User History and Tracking

1. Slot Booking Tracking

- The application should track slot bookings and make the car unavailable for purchase for other users during the booked time.

2. Buyer and Seller History Tracking

- The application should keep track of a user's buying and selling history.
- User history should be displayed in the front-end.

4. Non-Functional Requirements

1. Security

- User authentication and authorization mechanisms implementation to protect user data and ensure secure access using JWT token authentication.

2. Performance

- API (Application Programming Interface) response fast times to provide a smooth user experience.

3. Reliability

- Proper error handling and exception management implementation to handle failures gracefully.

4. Testability

- Unit tests developed using a framework such as JUnit to verify the correctness of individual components.

4.Project Architecture

Database Models	Description
Users	userId uname uemail upass mobile address fullName
Admin	id username password email mobile
Car	id brand model year fuelType variant state KMSdriven city type
Signup/register	Username Password Email Phonenumber
Order	orderid dateOfOrder dateOfPurchase price status
Requests	requestId status
Location	id place

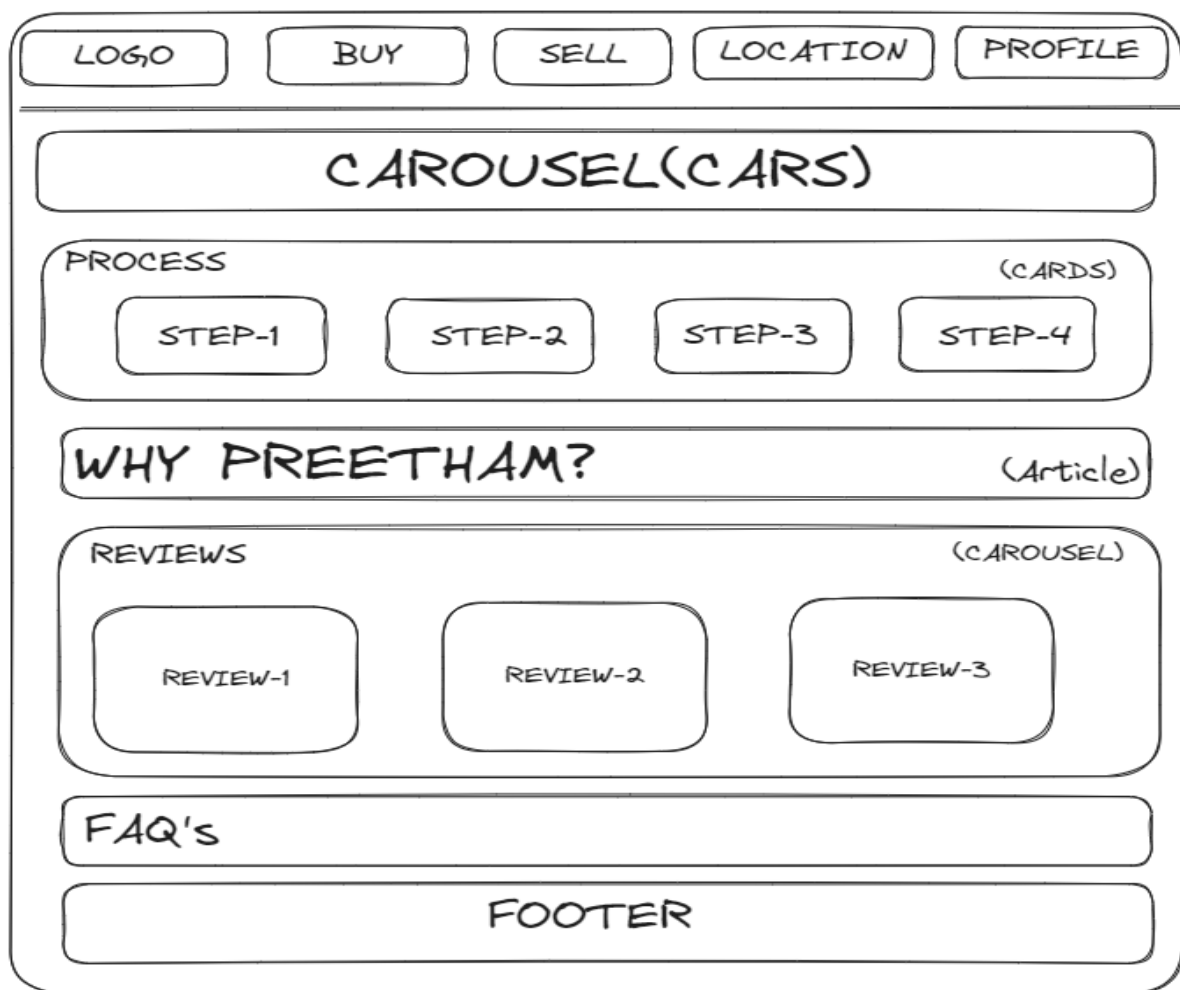
UI component	Description
Buyer	Buyer can see frequently asked questions, filtering options to make choice then the images of cars with their price and seller details will be displayed as per the choices.
Seller	User can enter car number and on clicking of get price, user can see the selection options of brand, year, city etc.
Login	User can login using this component.
Signup	User can sign up using this component.
Home	User can see information about Preetham motors, reviews, process, frequently asked questions, login/signup options, location option and buy/sell options
Admin	Admin can see the requests, approves them, and gives price.
City	User can see list of cities to select
Profile	User can see their bookings, status, appointments.

Microservices Models	Description
Buyer	Register/Login Get posts Post requests
Seller	Register/Login Post data Get requests Update requests and status
Admin	Login Get requests Post requests Update requests Manage operations

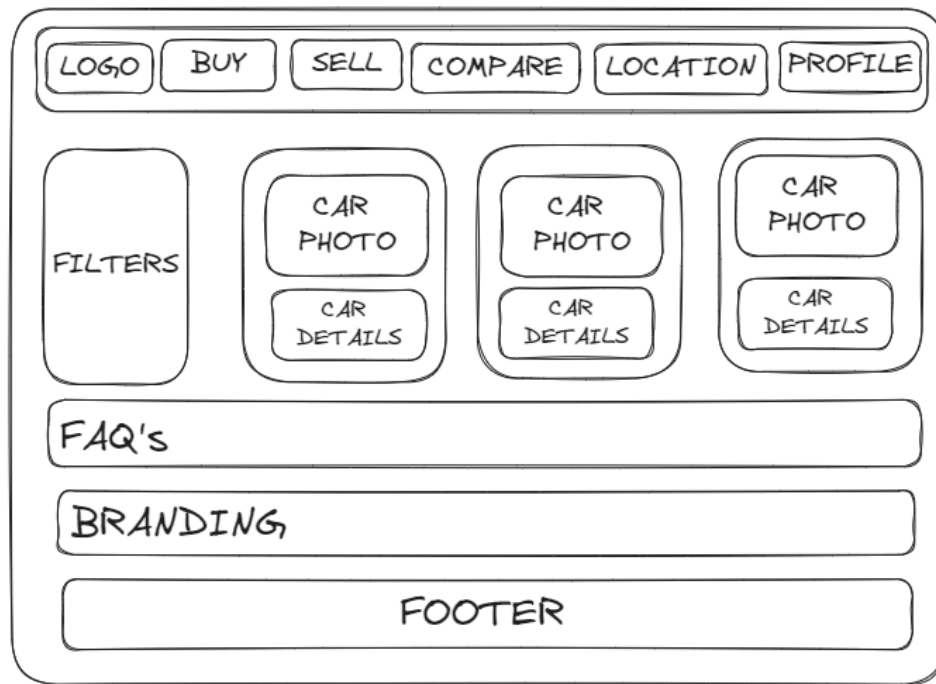
Login & Register	Get Data Post data Validate data
------------------	--

5. Website Layout

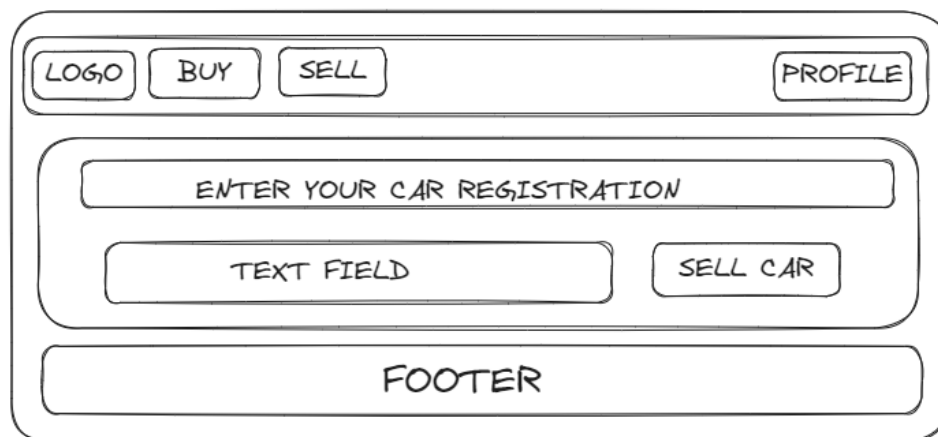
- Home Page



- Buyer Home



- **Seller Home**



6. Assumptions and Dependencies

- The application assumes that users have access to modern web browsers and an internet connection.

- The application assumes that the necessary infrastructure, including servers and hosting environments, will be provided.
- The application relies on the availability and proper functioning of external services, such as the database server and any additional services used for deployment and monitoring.