Full Stack Development with MERN

Frontend Development Report

Date	11-July-2024
Team ID	SWTID1720075141
Project Name	Project – House Hunt
Maximum Marks	10 Marks

Project Title: House Hunt

Date: 11-July-2024

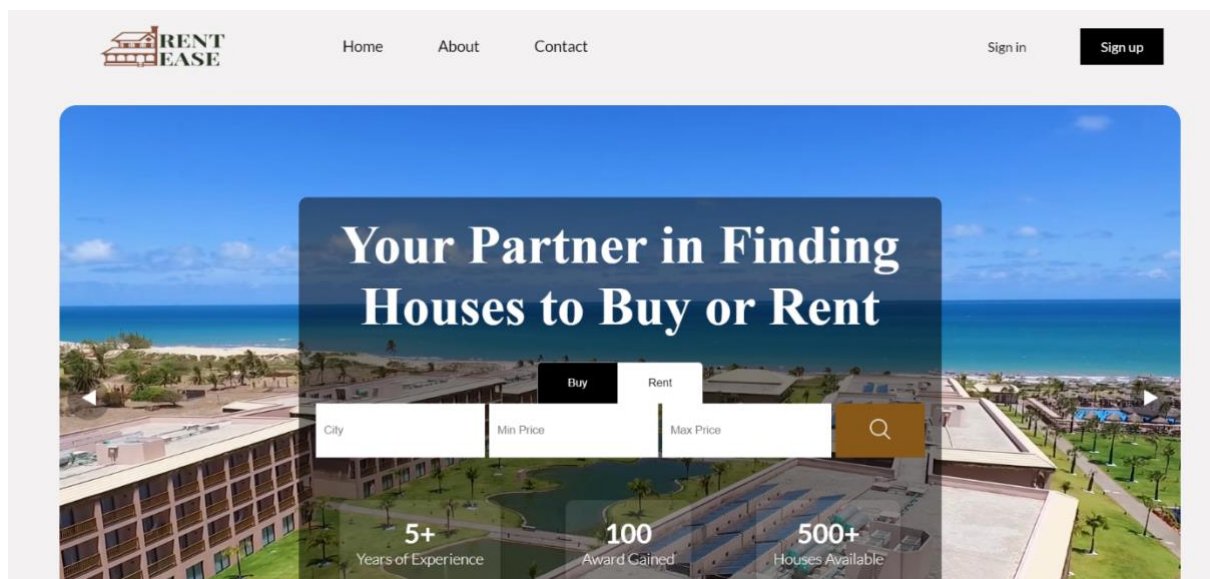**Prepared by**: A Bhavana & Korru Kiranmayee

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Objective

The objective of this report is to document the frontend development progress and key aspects of the user interface implementation for the House Hunt project.

Technologies Used

- **Frontend Framework:** React.js
- **State Management:** Zustand
- **UI Framework/Libraries:** React-Leaflet, React-Quill, Sass
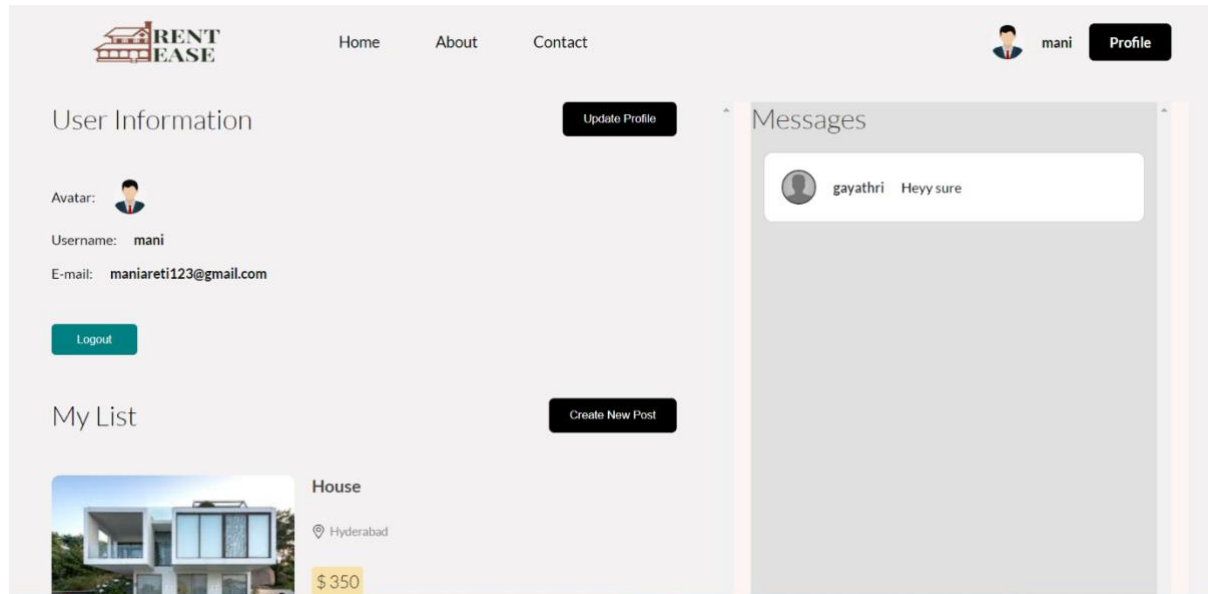- **API Libraries:** Axios
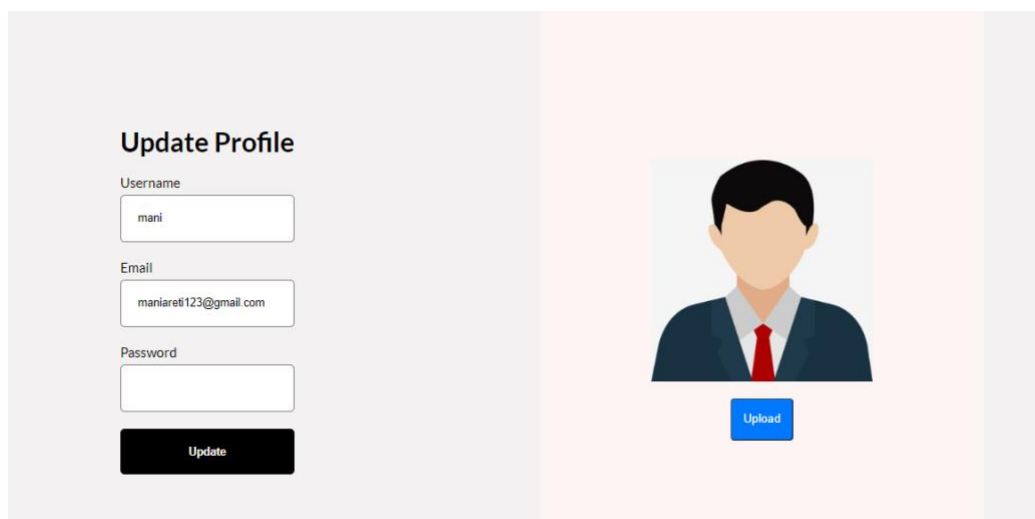
Project Structure:

HomePage

This is the RentEase homepage, your gateway to effortless rental home searches. Here, you'll find curated house listings customized to your preferences, along with intuitive search tools and personalized recommendations. Our platform is designed to simplify your rental journey, offering innovative features and dedicated support.

2. Sending Messages:

Communicate seamlessly with property owners and agents through RentEase's messaging feature. Send inquiries, schedule viewings, and stay updated on your rental discussions—all within a secure and user-friendly messaging environment.

Update your profile on RentEase to ensure a personalized rental experience. Easily manage your personal information.

Easily create and manage house listings on RentEase to reach a wide audience of potential tenants. Showcase your rental house with detailed descriptions, photos, and amenities, ensuring it stands out to interested renters.

Key Components

1. App.js

- Manages routing and main application layout.

2. components

- list

- Displays the list of properties.

- map

- Integrates maps for property location visualization using React-Leaflet.

- navbar

- Provides the main navigation bar for the application.

- pin

- Represents a pin on the map for property locations.

- searchBar

- Allows users to search for properties based on criteria.

- slider

- Displays property images in a slider format.

- uploadWidget

- Handles property image uploads.

3. pages

- Includes different pages for the web application.

4. context

- Provides context and state management using Context API and Zustand.

5. routes

- Defines routes and layout components for the application.

6. lib

- Contains utility functions and loaders for data fetching.

7. apiRequest.js

- Configures axios for API requests with base URL and credentials.Routing

Routing

Routing is managed using React Router. Here are the main routes:

/routes:

- **layout**
  - Defines the main layout and structure for nested routes.
- **listPage**
  - Displays the list of properties with filtering options.
- **login**
  - Provides the login page for user authentication.
- **newPostPage**
  - Allows users to add new property listings.

- **profilePage**
    - Displays the user's profile with their listed properties.
- **profileUpdatePage**
    - Enables users to update their profile information.
- **register**
    - Provides the registration page for new users.
- **singlePage**
    - Shows detailed information about a single property.

State Management

State management is achieved using Zustand.

Integration with Backend

The frontend communicates with the backend APIs hosted on http://localhost:8800/api. Key endpoints include:

- **GET /api/posts** - Retrieves posts for display.
- **POST /api/users/login** - Handles user authentication.
- **GET /api/users/profilePosts** - Retrieves posts for the user profile.
- **GET /api/chats** - Retrieves chat data.
- **GET /api/users/notification** - Retrieves notifications for the user.

User Interface (UI) Design

- The UI design follows a modern, responsive approach.
- Implemented using Sass for styling and includes interactive maps with React-Leaflet.
- Rich text editing capabilities are provided by React-Quill.

Third-Party Integrations

• **axios** for making HTTP requests.

• **dompurify** for sanitizing HTML inputs.

• **socket.io-client** for real-time communication.

• **timeago.js** for displaying relative timestamps.