Requirement Analysis:

3.1 <u>Login:</u>

Functional
- The user can log in to the system by entering a username and password.
- The system verifies the given username and password. If the username and password are valid, then the system allows the user to book tickets for transportation and hotels.
- If the given username or password is wrong, the system notifies the user by showing a message box. The message box contains a reset password button by which the user can change the password by verification with an email account.

<u>Priority Level:</u> High
<u>Precondition:</u> User needs to provide correct username and password.

Nonfunctional

- **Performance:** The login process should take no more than 3 seconds to authenticate the user.
- **Security:** User passwords must be stored securely using encryption techniques such as hashing with salt.
- **Accessibility:** The login page should be designed to be accessible to users with disabilities, following WCAG guidelines.

3.2 <u>SignUp:</u>

Functional
- A user can sign up by providing the required information, e.g. name, username, email, phone number, gender, password, confirm password, and address.
- Password must have a length of at least 8 characters and must contain special characters and digits.
- The username must contain at least one special character and digit. The system checks if the given username matches with any existing username. If the username matches or is not valid, the user will be notified.
- If all the required information is given, the account is created, otherwise it will notify the user about the specific unfilled item.

<u>Priority Level:</u> High
<u>Precondition:</u> User needs to provide all valid information.

Nonfunctional
- **Usability:** The signup process should be intuitive and easy to understand, with clear error messages for incorrect input.
- **Performance:** Account creation should be completed within 5 seconds of submitting valid information.
- **Data Validation:** Ensure data validation is in place to prevent SQL injection attacks and other security vulnerabilities.

3.3 <u>Logout:</u>
Functional
- By clicking the logout button, logging out will succeed after confirmation, and the system will return the user to the home page.

  <u>Priority Level:</u> Low
  <u>Precondition:</u> User needs to login first.

Nonfunctional
- **Security:** Ensure that all session data is cleared upon logout to prevent unauthorized access.
- **Usability:** The confirmation dialog for logout should provide clear instructions and options for the user.

3.4 <u>Profile:</u>
Functional
- In the profile all the information will be shown where the user can edit his/her information.
- There will be an option to upload his image to the profile which is not mandatory.

  <u>Priority Level:</u> Medium
  <u>Precondition:</u> User needs to login first.

Nonfunctional
- **Performance:** The profile page should load quickly, even when loading large user images.
- **Privacy:** Users should have control over the visibility of their profile information to other users.
- **Compatibility:** Profile image uploads should support common image formats and sizes.

3.5 <u>Home Page:</u>
Functional
- Initially homepage will appear and show some information about the services.
- The home page will contain a short introduction and branding part. This page will also have a logo, search bar, quick menu bar and so on.
- The menu bar button will show bus, train, flight, hotel, activities, packages, wallet, booking information and about.
- On the home page, the user will find featured deals, destination details and ratings of the services made by other users.
- The home page will also contain a sign-in and sign-up button if the user is not signed in yet, else the sign-in and sign-out button will be substituted by the profile button along with the sign-out button.
- At the bottom of the page the contact details will be shown.

  <u>Priority Level:</u> High
  <u>Precondition:</u> User has the access to homepage.

Nonfunctional

- **Performance:** The home page should load within 3 seconds on average internet connections.
- **Scalability:** Design the home page to handle high traffic loads during peak times.
- Browser Compatibility: Ensure the home page is compatible with major web browsers such as Chrome, Firefox, and Safari

3.6 Transportation:

Functional

- The transportation page categorized as bus, train, and flight will contain two combo boxes including 'From Station' and 'To Station' and a DateTimePicker to select the desired journey date.
- If required fields are selected and the search button is clicked, this page will show the bus information, otherwise, if any of the fields are not selected, the system will notify the user about the unfilled box.
- Bus information will have a 'Book' Button which will show the available seats of that bus if clicked. From the available seats, the user will be able to select any of them and book the seat.
- A back button will allow the user to navigate back from available seats to bus information.

    Priority Level: Medium
    Precondition: User has the access to homepage.

Nonfunctional

- **Reliability:** Ensure accurate and up-to-date information is displayed for bus, flight, and train schedules.
- **Performance:** Search results for transportation options should be displayed within 5 seconds.
- **Localization:** Provide options for language selection for users from different regions.

3.7 <u>Hotel:</u>
Functional
- The hotel page will contain a combo box for the location selection and two Date Time Picker for check-in and check-out.
- If required fields are selected and the search button is clicked, this page will show the hotel information, otherwise, if any of the fields are not selected, the system will notify the user about the unfilled box.
- Hotel information will have a 'Book' Button which will show the available rooms of that hotel if clicked. From the available rooms, the user will be able to select any of them and book the room.
- The user will be able to add other services like breakfast, lunch and dinner while booking the session is incomplete.
- A back button will allow the user to navigate back from available rooms to hotel information.

<u>Priority Level</u>: Medium
<u>Precondition</u>: User has the access to homepage.

Nonfunctional

- **Availability:** Ensure the hotel booking system can handle concurrent bookings without conflicts.
- Performance: Search results for available rooms should be displayed within 5 seconds.
- **Payment Security:** Implement secure payment processing for hotel bookings to protect user financial information.

3.8 <u>Activities:</u>
Functional
- Other optional services like dining, café, cycling, skydiving, flyboarding and sightseeing will be available on this page according to the destination the user has selected before on the Hotel Page. These package suggestions will be shown close to the hotel's location.

<u>Priority Level</u>: Medium
<u>Precondition</u>: User has the access to homepage.

Nonfunctional

- **Accuracy:** Activities suggested should be relevant to the user's selected destination and preferences.
- **User Engagement:** Provide engaging descriptions and images for activities to attract user interest.
- **Integration:** Activities should be integrated with maps or navigation services for easy access.

3.9 Packages:
Functional

- Combo packages will be available on the packages page, from where the user will be able to book all in one package.

    Priority Level: Medium
    Precondition: User has the access to homepage.

Nonfunctional

- **Customization:** Allow users to customize package options based on their preferences and budget.
- **Performance:** Package details should load quickly, even when including multiple components.
- **Feedback:** Gather feedback from users to continuously improve package offerings.

3.10 Booking Info:
Functional
- The user will be able to see all the booking info he has booked so far. If he wants to delete or add any of his bookings, he can make it from the 'Booking Info' page.

    Priority Level: High
    Precondition: User needs to login first.

Nonfunctional

- **Accessibility:** Ensure booking information is presented in a clear and organized manner for easy navigation.
- **Data Integrity:** Booking info should be accurate and reflect the latest updates or changes made by the user.
- **Backup and Recovery:** Implement regular backups of booking data to prevent data loss in case of system failure.

3.11 Wallet:
Functional
- A wallet is mainly the payment option which will result from the previous bookings of the services. This page will make a summation of all booking prices and show the receipt to the user.
- There will be two types of payment systems including cash and online. For the users who will pay cash, they will have to visit the office three days before the trip and pay the dues. The bookings will be cancelled if the user does not respond according to these conditions.

    Priority Level: High
    Precondition: User needs to login first.

Nonfunctional

- **Transaction Security:** Ensure secure encryption and authentication for online payment transactions.
- **Auditability:** Maintain a log of wallet transactions for auditing and tracking purposes.
- **Customer Support:** Provide clear instructions and contact information for users who need assistance with wallet transactions.

3.12 About:

Functional

- The About page will contain information about the policies, broad information, achievements and so forth.

  Priority Level: Low
  Precondition: User has the access to homepage.

Nonfunctional

- **Content Quality:** Ensure the information provided on the About page is accurate, up-to-date, and relevant.
- **User Engagement:** Use engaging visuals and storytelling techniques to make the About page interesting for users.

Mobile Responsiveness: The about page should be optimized for viewing on mobile devices for users on the go.