**Functional Requirements**

Below are the primary functional requirements labeled and categorized for clarity:

**FR1: User Input**

* Users shall input travel preferences such as:
  + Destination
  + Budget
  + Duration
  + Preferred activity types

**FR2: Plan Generation**

* The system shall generate travel plans based on the input by:
  + Suggesting accommodations, flights, and activities
  + Sorting suggestions by user-defined preferences

**FR3: User Authentication**

* The system shall support user authentication through JWT.
* Users shall be able to register, log in, and manage their profile securely.

**FR4: Data Integration**

* The system shall retrieve real-time travel data using Web APIs for:
  + Flights
  + Hotels
  + Local activities

**FR5: Budget Calculation**

* The system shall automatically calculate the total estimated cost of the trip.
* The user shall be able to adjust the selections to view different budget scenarios.

**FR6: Result Display**

* The system shall present a complete travel plan with:
  + A timeline of activities
  + Accommodation details
  + Flight options
  + Cost breakdown

**FR7: Responsive UI**

* The system shall provide a responsive and intuitive user interface for desktop and mobile views.

**FR8: Error Handling and Feedback**

* The system shall notify users of input errors and API failures.
* A fallback mechanism shall be included if APIs fail to respond.