

# Feature: Flight Search

## 1. Overview

The **Flight Search** feature allows users to discover available flights between an origin and destination for given travel dates. The feature supports one-way, round-trip, and multi-city journeys and integrates with multiple airline and GDS providers to return real-time availability and pricing.

## 2. Goals & Objectives

- Enable fast and accurate flight discovery
- Support global routes and major airlines
- Provide reliable pricing and availability
- Minimize search latency (<3 seconds for first results)

## 3. In Scope

- One-way and round-trip searches
- Economy, Premium Economy, Business, First class
- Adult, child, and infant passengers
- Basic fare comparison across airlines
- Currency localization

## 4. Out of Scope

- Seat selection
- Ancillary services (meals, baggage add-ons)
- Loyalty point redemption

## 5. User Flow

1. User selects **Flights** tab
2. Enters:
  - Origin (city/airport)
  - Destination (city/airport)
  - Departure date
  - Return date (optional)
  - Passengers & class
3. User clicks **Search**
4. System fetches flight options
5. Results page displays available flights

## 6. Functional Requirements

ID	Requirement
FR-FS-01	System must validate origin $\neq$ destination
FR-FS-02	System must support flexible dates ( $\pm 3$ days)
FR-FS-03	Results must show total price incl. taxes
FR-FS-04	Results must display airline, duration, stops

FR-FS-05 Sort by price, duration, departure time

## 7. Non-Functional Requirements

- **Performance:** Initial results  $\leq 3s$
- **Availability:** 99.9% uptime
- **Scalability:** Support peak holiday traffic
- **Localization:** Language & currency support

## 8. Edge Cases

- No flights available
- Airline API timeout
- Price change between search and booking
- Invalid airport codes

## 9. Success Metrics

- Search → results success rate
- Average response time
- Search abandonment rate