# Functional Requirements Document (FRD)

Project: TravelDemo – Online Travel Booking Platform

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## 1. Project Overview

This FRD outlines the functional and non-functional requirements for TravelDemo, an online travel booking platform. Users can search and book flights, hotels, cars, holiday packages, and buses. The document serves as a base for the STP and detailed test cases (manual UI and API).

## 2. Link to Application Diagram

Demo site – diagram not provided. Placeholder for future link.

## 3. Functional Requirements

### 3.1 Authentication & Roles

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| --- | --- | --- |
| Req ID | Description | Acceptance Criteria |
| FR-AUTH-01 | B2C user sign up / sign in. | Successful login redirects; invalid credentials show error. |
| FR-AUTH-02 | B2B agency login. | Only valid B2B accounts access B2B area. |
| FR-AUTH-03 | Role-based access. | Only authenticated users can view/manage own bookings; admin can view all. |

### 3.2 Flight Booking (UI + API)

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| --- | --- | --- |
| Req ID | Description | Acceptance Criteria |
| FR-FLT-01 | Select One Way / Round Trip / Multicity. | Return date hidden for One Way; required for Round Trip. |
| FR-FLT-02 | Enter From/To by airport code/name. | Autocomplete suggests valid airports; invalid code rejected. |
| FR-FLT-03 | Pick dates and travellers, choose class. | Past dates blocked; traveller counters update totals. |
| FR-FLT-04 | Search flights and view results. | Results show airline, time, price; errors handled gracefully. |
| FR-FLT-05 | API: GET /flights with params. | JSON list returned for valid params; 400 for invalid. |
| FR-FLT-06 | API: POST /booking (flight). | Returns bookingId with 200/201; persisted for retrieval. |
| FR-FLT-07 | API: GET /booking/{id}. | Returns details; 404 if not found. |
| FR-FLT-08 | API: DELETE /booking/{id}. | Cancels booking; 200/204 and no longer retrievable. |

### 3.3 Hotel Booking (UI + API)

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| --- | --- | --- |
| Req ID | Description | Acceptance Criteria |
| FR-HTL-01 | Search hotels by location & dates. | Results show hotel cards (price, stars). |
| FR-HTL-02 | Filter by price/star/amenities. | Filters narrow results correctly. |
| FR-HTL-03 | API: GET /hotels | 200 with filtered list. |
| FR-HTL-04 | API: POST /booking (hotel). | Booking created and returns bookingId. |

### 3.4 Cars, Holidays, Buses (Summary)

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| --- | --- | --- |
| Req ID | Description | Acceptance Criteria |
| FR-CAR-01 | Search and book rental cars. | List vehicles with price and supplier; booking confirmation ID. |
| FR-HOL-01 | Search holiday packages. | Packages show destination, duration, inclusions; booking confirmation ID. |
| FR-BUS-01 | Search bus routes & book. | Routes, schedules displayed; booking confirmation. |

## 4. Non-Functional Requirements

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| --- | --- |
| Category | Requirement |
| Security | Auth required for sensitive actions; TLS for data in transit; audit logs for bookings. |
| Performance | Search results within ≤3s; support up to 100k records/day. |
| Usability | Responsive UI; accessible error messages; simple filters. |
| Scalability | Allow adding providers/channels without downtime. |
| Compliance | Respect privacy policies; data retention configurable for demo. |

## 5. Use Cases

UC-1: Search & Book Flight (UI).

UC-2: Retrieve & Cancel Booking (API).

UC-3: Search Hotels & Apply Filters (UI).

## 6. Assumptions & Constraints

Demo data may reset periodically; payments are mocked; some inventory is sample only.

## 7. Acceptance Criteria

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| --- | --- |
| ID | Criterion |
| AC-01 | Flight search returns at least one result for common routes during demo hours. |
| AC-02 | API booking returns bookingId; GET returns matching details. |
| AC-03 | Only authenticated users can access booking management areas. |
| AC-04 | Key actions (search/book/cancel/login) are logged. |