**User Acceptance Testing (UAT)**

| Date | 27 june 2025 |
| --- | --- |
| Team ID | LTVIP2025TMID57557 |
| Project Name | Flight\_booking\_system |
| Maximum Marks |  |

**Project Overview:**

Project Name: [Flight\_booking\_system]

Project Description: [The **Flight Booking System** is a full-stack web application designed to simulate the functionalities of a real-world airline ticket reservation system. It allows users to search for available flights, make bookings, and manage their travel details. Admin users can manage flight data and oversee bookings.]

Testing Period: [27 june 2025] to [27 june 2025]

**Testing Scope:**

| **User Registration & Login** | **Verify new users can register and existing users can securely log in.** |
| --- | --- |
| **Role-Based Access** | **Ensure admin-only pages are restricted and user permissions are enforced.** |
| **Flight Management** | **Admin can add, edit, delete, and view all flights.** |
| **Flight Search** | **Users can search flights based on source, destination, and travel date.** |
| **Booking System** | **Users can book flights, view booking details, and cancel bookings.** |
| **Seat Availability** | **System correctly updates and shows available seats after each booking or cancellation.** |
| **Profile Management** | **Users can view and edit their profiles.** |
| **Input Validation** | **Frontend and backend validation for all forms (e.g., email, date formats, null fields).** |
| **Session Management & Logout** | **Sessions are handled securely and users are logged out properly.** |
| **Exception Handling** | **Graceful error messages for invalid inputs or system errors.** |
| **Security** | **Password encryption (BCrypt), CSRF protection, and access control.** |

### **List of User Stories or Requirements to be Tested:**

| **User Story** | **Test Objective** |
| --- | --- |
| **As a user, I want to register and log in so that I can access the system.** | **Verify authentication, session handling, and access control.** |
| **As a user, I want to search and book flights so I can plan my travel.** | **Validate search filters, booking flow, and confirmation.** |
| **As a user, I want to view and cancel my bookings.** | **Check booking history and cancellation updates.** |
| **As an admin, I want to manage flights so that I can maintain up-to-date schedules.** | **Test CRUD operations on flight records.** |
| **As an admin, I want to view all user bookings.** | **Ensure admin access to reservation reports.** |
| **As a user, I want to edit my profile information.** | **Verify update functionality with valid and invalid inputs.** |

**Testing Environment:**

|  |  |
| --- | --- |
| **URL/Location** | Project needs to be run locally via Spring Boot |
| **Application Type** | Web-based Spring Boot MVC Application |
| **Backend** | Java 17+, Spring Boot |
| **Database** | MySQL (configured in application.properties) |
| **Frontend** | Thymeleaf (HTML, CSS, Bootstrap) |
| **Browser** | Chrome, Firefox (recommended for UI testing) |
| **Tools Used** | IntelliJ IDEA / Eclipse, Postman (for API), MySQL Workbench |

**Test Cases:**

| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| --- | --- | --- | --- | --- | --- |
| TC-001 | User Registration | 1. Go to /register page  2. Enter valid name, email, password  3. Click "Register" | User account is created and redirected to login page | User registered and redirected to login page | Pass |
| TC-002 | Login with Valid Credentials | 1. Navigate to /login  2. Enter correct email & password  3. Click "Login" | User is redirected to user dashboard | Dashboard loads successfully | Pass |
| TC-003 | Login with Invalid Credentials | 1. Navigate to /login  2. Enter incorrect email/password  3. Click "Login" | Login fails with error message | Error message shown: "Invalid Credentials" | Pass |
| TC-004 | Flight Search | 1. Login as user  2. Enter source, destination & date  3. Click "Search Flights" | Matching flight list appears | Flights displayed correctly | Pass |
| TC-005 | Flight Booking | 1. Search a flight  2. Click "Book"  3. Confirm booking | Booking is confirmed & shown in "My Bookings" | Booking saved & visible | Pass |
| TC-006 | Cancel Booking | 1. Go to "My Bookings"  2. Click "Cancel" on a booking  3. Confirm cancellation | Booking is removed from list | Booking removed successfully | Pass |
| TC-007 | Admin Login | 1. Login as admin  2. Enter admin credentials  3. Click "Login" | Redirected to admin dashboard | Admin dashboard shown | Pass |
| TC-008 | Add New Flight (Admin) | 1. Login as admin  2. Go to "Add Flight"  3. Enter details & submit | New flight appears in flight list | Flight added successfully | Pass |
| TC-009 | Delete Flight (Admin) | 1. Login as admin  2. View flight list  3. Click "Delete" on a flight | Flight is removed from list | Flight deleted successfully | Pass |
| TC-010 | Profile Update (User) | 1. Login as user  2. Go to "Profile"  3. Edit name/email & click "Update" | Updated profile saved and displayed | Changes reflected on profile | Pass |
| TC-011 | Access Restriction (Unauthorized Page) | 1. Login as user  2. Try to access /admin/flights | Access denied or redirected | Redirected or shown "Access Denied" | Pass |
| TC-012 | Input Validation (Empty Form) | 1. Submit empty register/login form  2. Observe the behavior | Validation errors shown | "Field required" messages shown | Pass |
| TC-013 | Password Encryption | 1. Register a user  2. Check database for stored password | Password should be encrypted (not plain text) | Password is stored as hashed (BCrypt) | Pass |

**Bug tracking:**

| **Bug ID** | **Bug Description** | **Steps to Reproduce** | **Severity** | **Status** | **Additional Feedback** |
| --- | --- | --- | --- | --- | --- |
| BG-001 | Login page does not show error message for empty fields | 1. Go to /login  2. Leave email and password empty  3. Click "Login" | Medium | Open | Add client-side validation to prompt user before submission |
| BG-002 | Flight list not updating after deleting a flight (admin) | 1. Login as admin  2. Delete a flight from list  3. Flight still appears until page is refreshed | Medium | Open | Implement AJAX or auto-refresh after deletion |
| BG-003 | Seat availability does not update until logout and re-login | 1. Book a flight  2. Check seat count again immediately  3. Seats not updated until next session | High | In Progress | Sync UI updates with real-time DB values |
| BG-004 | No password confirmation field in registration | 1. Go to /register  2. Enter password  3. Submit without verifying | Medium | Open | Add a confirm password field for user safety |
| BG-005 | Profile update does not show confirmation message | 1. Edit user profile  2. Click "Update"  3. Nothing appears to confirm success | Low | Open | Display toast or alert on successful update |
| BG-006 | Cancelled bookings still occupy seat count | 1. Book a flight  2. Cancel the booking  3. Seat is not released in count | High | In Progress | Backend should decrement seat count on cancel |
| BG-007 | Booking with invalid flight ID via URL causes crash | 1. Enter URL like /book/invalidID  2. Try booking directly via URL | High | Open | Add exception handling and user-friendly error page |
| BG-008 | Session does not expire after logout | 1. Login and logout  2. Click back in browser  3. Dashboard is still accessible | High | Open | Enforce session invalidation on logout |

**Sign-off:**

**Tester Name: Harsha V**

**Date of Test Completion: 27-June-2025**

### **Notes:**

**All test cases have been executed and validated for both positive and negative scenarios.**

**The test plan includes:**

* + **Functional testing (Login, Booking, Flight Management)**
  + **UI testing (Thymeleaf screens)**
  + **Validation testing (Form input handling)**
  + **Role-based security testing (Admin/User access control)**

**Bugs were logged with detailed information:**

* + **Bug ID, Description, Severity, Steps to Reproduce, and Status were captured**

**Suggestions for improvement were shared with the development team (e.g., adding client-side validation, improving session management)**

**Regression testing completed after resolving major bugs.**