**Test Plan for Airline Reservation System**

**1. Introduction**

This test plan outlines the strategy and scope for testing the Airline Reservation System (ARS), which enables customers to search flights, book tickets, manage bookings, and make payments.

**2. Objectives**

* Ensure the system allows flight search and booking.
* Validate payment and ticketing functionality.
* Confirm proper functioning of user registration, login, and booking management.
* Test system’s performance, security, and usability.

**3. Scope**

**In Scope:**

* Flight search (one-way, round-trip)
* Booking and reservation
* Payment gateway integration
* Booking history and management
* User login/registration
* Email confirmations

**Out of Scope:**

* Backend airline inventory system
* In-flight services management

**4. Test Items**

* Flight Search Module
* Booking & Reservation Module
* Payment Module
* User Account Module
* Admin Panel (optional)
* Notifications (email/SMS)

**5. Test Types**

* Functional Testing
* Integration Testing
* System Testing
* Usability Testing
* Performance Testing
* Security Testing
* Regression Testing

**6. Test Approach**

* Manual testing for UI and functional flows
* Automation for regression and repeated test cases (e.g., login, booking)
* Use of tools like Selenium (UI), Postman (API), JMeter (performance), OWASP ZAP (security)

**7. Test Environment**

* Web browsers: Chrome, Firefox, Edge
* Mobile devices (iOS and Android)
* Simulated low and high network conditions
* Staging server with access to test airline data

**8. Test Data**

* Valid and invalid user credentials
* Different origin-destination combinations
* Credit card/payment data (sandbox)
* Simulated booking records for history tests

**9. Deliverables**

* Test Cases Document
* Bug Reports
* Test Summary Report
* Automation Scripts (if applicable)
* Final Test Plan Approval

**10. Schedule**

| **Phase** | **Start Date** | **End Date** |
| --- | --- | --- |
| Test Planning | May 6, 2025 | May 8, 2025 |
| Test Case Development | May 9, 2025 | May 13, 2025 |
| Test Execution | May 14, 2025 | May 24, 2025 |
| Bug Fix & Retesting | May 25, 2025 | May 29, 2025 |
| Final Report | May 30, 2025 | May 31, 2025 |

**11. Entry & Exit Criteria**

**Entry Criteria:**

* All development is complete
* Test environment is ready
* Test data is prepared

**Exit Criteria:**

* All critical and major bugs fixed
* 95% test case pass rate
* Test summary report reviewed

**12. Risks & Mitigation**

| **Risk** | **Mitigation** |
| --- | --- |
| Unavailable test environment | Use cloud-based test platforms |
| Payment gateway downtime | Use mock or sandbox environments |
| Changing requirements | Agile test case updates |