**Airplane/Air flight Test Plan Assignment**

### **1. Introduction**

This test plan outlines the testing strategy for the Airplane Flight System, which includes reservation systems, check-in, flight tracking, communication systems, and onboard software. The objective is to ensure safety, reliability, performance, and a seamless user experience.

### **2. Objective**

To validate that all components of the airplane flight system perform as expected under various operating conditions and meet regulatory, business, and safety requirements.

### **3. Scope**

#### **In-Scope:**

* Flight booking and reservation system
* Passenger check-in and boarding process
* Flight status and tracking
* Flight scheduling and crew allocation
* Onboard software (navigation, autopilot, entertainment, communication)
* Integration with air traffic control (ATC)
* Emergency protocols and failovers

#### **Out-of-Scope:**

* Airport infrastructure systems
* Cargo and baggage handling not linked to passenger data

### **4. Test Items**

* Web & mobile booking platform
* Check-in systems (self and counter)
* Flight information system (FIDS)
* Aircraft navigation and control software
* Passenger data sync and alerts
* APIs for third-party systems (airlines, airports, regulators)

### **5. Testing Strategy**

| Test Type | Description |
| --- | --- |
| Functional Testing | Validate end-to-end functionalities like booking, check-in, etc. |
| Integration Testing | Ensure modules interact correctly (e.g., booking system to check-in system) |
| System Testing | Complete system testing in simulated live environments |
| Regression Testing | Ensure new features or bug fixes don’t affect existing functionality |
| Performance Testing | Test for high load conditions (holiday traffic, delays) |
| Security Testing | Validate encryption, data protection, and access controls |
| Safety & Compliance | Test for adherence to aviation safety standards |
| UAT (User Acceptance) | Ensure system usability for real-world users (passengers, pilots, crew) |

### **6. Test Environment**

* Simulated live flight data
* Real-time clock synchronization
* Mock ATC communication
* Simulated aircraft with onboard systems
* Web and mobile device testing for user interfaces

### **7. Test Deliverables**

* Test Plan Document
* Test Cases and Test Scenarios
* Test Scripts
* Test Execution Reports
* Defect Reports
* Final Test Summary Report
* Traceability Matrix

### **7. Exit Criteria**

* All critical and high-priority test cases passed
* No open critical or high-severity defects
* UAT signed off
* Test summary approved by stakeholders