**Project overview**

**Project Name:** Delta Airlines Black Box System

1. **Objective:** Reverse engineering Delta Airlines system to get a glimpse at how the system works. Given Delta’s extensive flight network, the system must accommodate multiple destinations, seat configurations.
2. **Business Objectives:**
   1. Provide a user-friendly interface that allows Delta passengers to book flights and seats.
   2. Ensure the platforms can handle Delta’s high passenger load and support rapid functionalities such as booking, check-in etc.
3. **Project Scope:**

**In-Scope:**

* System diagrams at level 0,1, and 2, illustrating overall system architecture.
* Development of risk assessment, test cases, defect tracking and project metrics
* Integration of Delta’s personalized travel options and digital ID functionality
* Bonus requirements is database support

**Out-of-scope:**

* Real-time data integration with live Delta system.
* Production environment deployment
* Vacation package, including the booking of hotels, and car.

1. **Functional Requirements:**

* Allow users to create, login and manage bookings and profiles.
* Search for flights based on destination, date and other parameters.
* Booking process with seat selection and payment integration
* Integration of Delta Digital ID.
* In-seat personalization for entertainment and services.
* Enable features to manage and support Delta’s Wi-fi upgrade

1. **Non-Functional requirements:**

* The systems must support thousands of concurrent users without performance degradation.
* Ensure compliance with data protection regulations.

1. **Technical requirements:**

* Database, API integration, Web framework
* Minimum 10 test cases per student.
* Defect tracking with a minimum of 15 defect cases documented.

1. **Risk Assessment:**

* The system may experience downtime or latency due to heavy user traffic.
* User data breach during booking/payment.

1. **Project Metrics**

* Track test coverage percentage for all system components.
* Measure defects per module to ensure code quality.