**National University of Computer & Emerging Sciences**

**Karachi Campus**



**Flight Ticket Booking System**

**Lab instructor: Muhammad Ali Naseer**

**Project Proposal**

**Object Oriented Programming**

**Section: BCY-2A**

**Group Members:**

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**1. Project Idea and Objectives:**

The project aims to develop a straightforward Flight Ticket Booking System using C++ with a strong emphasis on Object-Oriented Programming (OOP) principles. The objectives are:

Designing a simple system to manage flight schedules, passenger information, and reservations.

Implementing classes to represent flights, passengers, and reservations.

Providing functionalities for users to view flight schedules, make reservations, and manage bookings.

**2. Project Plan and Key Milestones:**

Our project plan includes the following key milestones and timelines:

**Week 1-2:** Requirements Gathering and Design

Gather user requirements for the system, focusing on essential functionalities.

Design class diagrams outlining the structure of flight, passenger, and reservation classes.

**Week 3-4:** Class Implementation

Implement basic class functionalities for flights, passengers, and reservations.

Test individual classes for functionality and correctness.

**Week 5-6:** User Interface Development

Develop a simple console-based interface for users to interact with the system.

Integrate user input/output with class functionalities.

**Week 7-8:** Testing and Debugging

Conduct thorough testing of the system to identify and fix bugs.

Test edge cases and handle exceptions gracefully.

**Week 9-10:** Refinement and Documentation

Refine the user interface for improved usability.

Document the codebase and provide usage instructions for users.

**Week 11-12:** Final Testing and Submission

Perform final testing to ensure the system meets all requirements.

Prepare for project submission, including code review and documentation review.

**3. Initial Research and Experimentation:**

During the initial phase, we conducted research on basic concepts of flight ticket booking systems. We explored ways to represent flights, passengers, and reservations in an object-oriented manner.

**4. Challenges and Strategies:**

**Simplicity:** Ensuring the project remains simple while meeting core requirements can be challenging. We focused on keeping the system straightforward and avoiding unnecessary complexities, while still providing essential functionalities.

**User Interface:** Designing a user-friendly interface within the console environment is a key challenge. We prioritized clarity and simplicity in user interactions, providing clear prompts and instructions to guide users through the booking process.