

# Project Proposal

**Project Name:** Airline Management System (*A private jet hiring concept*) – php, scss, Microsoft SQL.

**Introduction:** The proposed Airline Management System aims to streamline operations and enhance customer experience for an airline company. It will be developed using PHP, Microsoft SQL Server 2022, SCSS, and necessary library for renting private jets.

## **Algorithms used:**

- **Default Searching Algorithm:** The default search algorithm used for searching data in SQL Server is typically a Binary Search. We used this algorithm in the admin panels to allow the admin to search any flight logs based on their FID for verification of ticket purchase and to improve the work flow of the management.
- **Default Sorting Algorithm:** For sorting data, SQL Server typically uses a variation of the Merge Sort algorithm. We used this sorting algorithm to sort both date and the return date and merged them into a single sorted array so that the admin can see all the flight times in a sorted manner.
- **Hashing Algorithm:** To ensure the security of our management system we included passwords which are encrypted using a built-in hashing algorithm called **bcrypt**. Which is a strong one-way hashing algorithm. We then used a matching algorithm that can take the hash as an argument to verify to password and allow access to the user or admins.

## **Resources used:**

Frontend: HTML, SCSS, JavaScript

Backend: PHP

Database: Microsoft SQL Server 2022

Security: PHP built-in security

### **Features:**

#### **Customer Panel:**

- User Registration and Authentication.
- Flight Search and Booking.
- User Management/Dashboard.

#### **Admin Panel:**

- Admin Authentication.
- Flight Management.
- Ticket verification.
- Booking Management.
- Financial Reports.

### **Development Team:**

- CSE 078 08419 - Ishiat Al Mahmood.
- CSE 078 08421 - Yaseer Ahmed.
- CSE 078 08427 – Md. Shakibul Islam.

### **Conclusion:**

The Airline Management System will optimize airline operations and improve customer satisfaction. Developed using PHP, JavaScript, Microsoft SQL Server, SCSS. The system will have separate panels for customers and admins.

Date: 06.08.2023