AIRASIA TICKETING SYSTEM

Course: Python Programming (IS-6495-001)

Submitted by:

Group-12

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**Strategy/approach to the project:**

To create an efficient and user-friendly airline ticketing system, we adopted a systematic approach. Firstly, we gathered and finalized all requirements and limitations specified in the project description after discussions and clarifications. Next, we designed a normalized database schema to store relevant information such as airports, aircrafts, employees, direct flights, customers, and tickets, while taking into account the project constraints. Subsequently, we developed an application architecture with Python programming language. We have utilized external libraries such as pandas, bcrypt to import and export CSVs along with password encryption.

We also created a user interface (menu) that was intuitive, user-friendly, and followed standard design principles. We implemented features such as CRUD functionality for customers, employees, airports, aircrafts, flights, and tickets, search functionality for flights, purchase and cancel ticket functionality for customers, and reports generation functionality for admins. We carried out testing on all implemented features, including unit, integration, and end-to-end testing, and developed test cases.

This approach resulted in the development of a high-quality airline ticketing system that met the project requirements and constraints.

**Ethics & Critical thinking implemented in our project:**

* The principle of least privilege:

We have implemented this security concept to ensure that the user will be granted only the minimum privileges necessary to perform their job junctions. This indicates that the user should have access only to the resources and data that they need to perform their duties, and no more. For instance, an admin will have different duties compared to employee and customer.

* Encryption:

In order to ensure the secure storage of passwords in our database, we utilized a library called "bcrypt" which is available as an open-source library.

**Comments in lining to the document:**

In our code, we have added comments at crucial phases to ensure hassle-free user interpretation of the code.