**Final Project**

**Object Oriented Programming**

Project name: **E-PORT**

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Class:

**Project Specification**

The purpose for this project is to simulate an airport from activities such as buying a ticket to the cancellation of tickets. The thought of this came from the fact that people had to wait in lines in order to check in or when buying a ticket. This can be a nuisance and considering that we are in a pandemic having a crowd or long lines is never a good idea. Creating an application that can handle all the activities that are being done in an airport would save people a lot of time as it would be more efficient. Users will have to sign up first before being greeted by the main menu which allows the user to navigate through the different services that the airport offers. For this project I am just going to take the most common activities that are being done in an airport which is the checking in, immigration, buying tickets and cancelling of tickets. Users can also deposit money into their account which will then be used for purchases. I will also be using CLI for a straighter forward demonstration and users will use numbers to navigate around the application.

**Input:**

Name

Age

Nationality

Gender

Integer (for choices and navigation)

Float (for deposit)

Flight Number when purchasing ticket

**Output:**

Ticket details

Balance

Tickets bought for other people

Flight details

Passenger details

**Solution Design**

**MAIN MENU**

The main menu is used to navigate through the different services that the application provides. It includes:

1. Book a flight
2. Check in/Immigration
3. Deposit
4. Account Information
5. Cancel Booking
6. Exit/Logout

**BOOK A FLIGHT**

When the user picks this option it will ask the user whether or not the user wants to buy a ticket for him/herself or for someone else. If the user picks to buy a ticket for someone else, then it will direct the user into a series of inputs of the person’s details. The inputs will be the same with the ones that were used during the sign up. These details are then used to create another passenger object. Then the user will be brought into a sub menu consisting of (if users choose to buy tickets for themselves then they skip to this part immediately):

1. View Flights
2. Custom Search
3. Back

The view flights sub menu will show the users all the available flights and it will have the user pick whether or not they want to continue with their transaction. The users will then pick the flight that they want by entering the number corresponding to the airline shown. The transaction will be made and then the ticket details will be printed out along with the remaining balance of the account.

The custom search sub menu will require users to enter their own flight name, destination and maximum price they are willing to pay. This will filter out the airlines available according to the users input. The users will then pick the flight that they want by entering the number corresponding to the airline shown. The transaction will be made and then the ticket details will be printed out along with the remaining balance of the account.

The back sub menu will just bring the user back to the main menu.

**CHECK IN/IMMIGRATION**

This will first check whether the user has already bought a ticket or not. If they have already purchased a ticket, it will show the ticket details and ask the user to confirm. Once the user confirms, the checked in and immigration attribute of the passenger will be set to TRUE.

**DEPOSIT**

The user will enter the amount that they want to deposit and it will be added to their account.

**ACCOUNT INFORMATION**

This will display the user’s personal information along with the ticket details if the user has bought a ticket. The tickets that the user bought for other people will also be shown and the balance of the account as well.

**CANCEL BOOKING**

This will first check whether the user has bought any tickets. The user will then be shown a sub menu where they will have to choose whether they want to cancel their own ticket or someone else’s. If they want to cancel their own ticket, it will check whether they have checked in or not. If they have checked in, then they cannot cancel booking. If they have not, then the user will have to enter the flight number of the ticket that they want to cancel. The program will then print out the new balance of the account indicating the success of the cancellation.

If they pick to cancel a ticket that they bought for someone else, then they will have to enter the first and last name of the person that they bought the ticket for and the flight number of the ticket. The program will then print out the new balance of the account indicating the success of the cancellation.