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CSC 330

Project #2

Requirements Specifications

For this project, we are expected to create an application capable of managing flights provided by the Flin Flon Airlines. The goal is to create a flight reservation system capable of gathering and manipulating data of both passengers and flights.

This system will be a multi-user one that will be utilized by different types of company employees – a booking agent and an administrator. Any booking agent will be able to book a flight for any specific passenger, noting the flyers data and flight preferences – as well as cancel the booking if required. A booking agent will also be able to see flyer information and print a boarding pass (displayed on the console).

Booking agents do not have access to modifying the passenger or flight data – these are only available to a higher-level user, representing the management. An administrator, after registering/logging in, will be capable of changing the flight information (reschedule), adding a new flight, changing passenger data. Administrators can also search through flights by certain criterion (destination and dates) and provide summary of a certain flight – passenger data, seating data, plane information etc.

The system requires a GUI for convenient use by the employees, as well as capability to store information to be potentially used on different computers.

The program retains the list of employees (booking agents and administrators) and their status – at system launch, the user is expected to login using his or her credentials, after which it determines the status of the employee (or calls an administrator to resolve any issue with access).

The employees are expected to have the following information:

1. Full Name
2. Login and Password
3. Status (booking agent or administrator)

For each passenger of the airline, the system needs to collect the following data:

1. Full Name
2. Date of Birth
3. Email
4. Phone number
5. Full Address
6. Flight Number
7. Class (economy or business)
8. Seat preference (window or aisle)
9. Meal preference (meat or vegan)
10. Special requirements (wheelchair, child etc.)

Aside from passenger data, the program must be able to display and manipulate flight data:

1. Flight Number
2. Vessel model
3. Number of seats total
4. Number of seats taken/available
5. Destination
6. Time and date of departure/arrival

For the number of seats total, another number describing the number of seats that can be booked will be introduced. This number will be 15% larger, accounting for overbooking of the flight. It is expected that the administrator, who has access to changing client information, will be responsible for rescheduling the flights if not enough seats are available at a given day, with a monetary compensation to the clients – however, this system does not manage any monetary operations between the clients and the company.

**USE CASES:**

User will interact with the system using a GUI created within a Windows Console through an executable application using keyboard and mouse as input methods. There are two primary functions user can perform – modification of data or data display. The first step of the program is requesting the employees ID, which is then checked by the system.

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| **User Actions** | **System Response** |
| **USE CASE:** | |
| Choose “History” command | Display menu of available options |
| Choose “Complete History” command | Display table containing previous vehicle usage data including employee ID, type of vehicle, model (insurance information, fuel cost, and mileage if available for the type) |
| **USE CASE: Display History of Certain Vehicle Type Used** | |
| Choose “History” command | Display menu of available options |
| Choose the type of vehicle from:   1. “Cargo Transportations” command 2. “Business Trips” command 3. “Personal Loan” command | Display table containing the use history of chosen vehicle type (cargo, business, personal). |
| **USE CASE: Edit History of Vehicle Use** | |
| 1. Choose “Add Vehicle Use Case” command | Ask the user about the type of vehicle used |
| 1. Choose the type of vehicle | Request the user to input the data regarding the vehicle type (cargo information, business trip information, or personal use information) |