04/11/2023

CPEN201: C++ PROGRAMMING

Lab 3

1. **Problem**: *Airplane seat booking and arrangement.*
   Write a C++ program that can be used to assign seats for a commercial airplane. The airplane has 13 rows with six seats in each row. Row 1 and 2 are first class, row 3 through to 7 are business class, and rows 8 through to 13 are economy class. Your program must prompt the user to enter the following information:
   a. Ticket type (First class, Business class or Economy class).
   b. Select desired seat.

   Requirements:

   i. Create a function called **DisplayMenu()** that displays a menu to user to select the ticket type. By entering a number that corresponds to that ticket type.
   ii. Create another function called **ShowSeatingArrangement()** that displays the seating arrangement, showing clearly seats that are already booked and seats that are available to the user.
   iii. The user can only select seat that is not already booked and is available for his/her ticket type.
   iv. The user has the option to cancel the seat booking or proceed. The user has only two chances when the wrong choice is made, and program aborts automatically. Display appropriate error messages when the user makes the wrong choice. Display success message when user books a seat successfully.
   ***Hints**: use a do while loop.*
   v. Display the seating plan as shown below before the user selects a seat:

	A	B	C	D	E	F
Row 1	*	*	X	*	X	X
Row 2	*	X	*	X	*	X
Row 3	*	*	X	X	*	X
Row 4	X	*	X	*	X	X
Row 5	*	X	*	X	*	*
Row 6	*	X	*	*	*	X
Row 7	X	*	*	*	X	X
Row 8	*	X	*	X	X	*
Row 9	X	*	X	X	*	X
Row 10	*	X	*	X	X	X
Row 11	*	*	X	*	X	*
Row 12	*	*	X	X	*	X
Row 13	*	*	*	*	X	*

   - ***** Indicates that the seat is available, and **X** indicates seat is already booked.
   - Let the user know when seat selected is already book.
     Note: Users can only select seat that is for their ticket type.

Deadline: Sunday, November, 2023, 11:59pm