

Programming fundamentals course (CS102)

Course Project

Write a program to manage a train station. The program should enable user to handle reservations in the train. The user will **first set the train data**, where he enters the **number of carriages**, and **for each carriage** he will **enter the class and the seat price**. The **number of seats in each carriage is 30 seats**. After that, a **menu** will be displayed to the user to enable him to make different operations. The **user can book a ticket, cancel ticket, display available seats** in a particular carriage, and **show the profits** in detail. Add functions for each operation required (a function to book a ticket, a function to cancel ticket, and so on).

Create a **structure "Carriage"** that contains the **carriage number, carriage class, price of the seat, and array of Booleans to represent the seats**. The index of the array represents the seat number, and the value true represents that this seat is reserved, otherwise, the value false represents it is free. Then use the Carriage structure in the program to represent the carriages in the train.

A program sample will be as follows:

```
Enter the number of carriages: 2
Carriage#1:
Enter class: 1
Enter price: 50
Carriage#2:
Enter class: 2
Enter price: 25
*****

Enter 1 to book a ticket.
Enter 2 to cancel a ticket.
Enter 3to show available seats.
Enter 4 to print profits in detail.
Enter 0 to exit.
Your choice: 1
*****
```

Deadline: 8th of May, 2018