Task 1 (40 marks)

Write a program to handle reservation operations for an airplane for students. Airplane has 10 rows and each row has four seats. First three rows are of business class and remaining seven rows are of economy class. A user can

i) Reserve a seat
ii) Change already reserved seat
iii) Cancel already reserved seat
iv) View seating plan
v) Seek Help

You have to make a separate function for each of the option that a user can select. Your program should display a proper error message in case of invalid input. Your program should fulfill following constraints:

i) Only one seat can be reserved against one roll number and name
ii) A user can make reservation for an available seat by entering name and roll number
iii) During the process of reservation, program asks the user to select desired class and shows the seating plan of that specific class only to reserve a seat
iv) A user can change a seat reserved against his/her name and roll number by providing roll number, name and seat number
v) A user can change seat only
    a) From economy class to business class
    b) Within business class
vi) A user can cancel an already reserved against his/her name and roll number. Name and roll number are required to cancel a seat.
vii) A user can view complete seating plan of plane. Seating plan will show reserved seat and available seats
viii) In case a user forgot his seat number, user can seek help by entering name and roll number. Your program will return the seat number reserved against entered name and roll number.
ix) If all seats are already reserved and user wants to reserve a seat, show user a message saying “Next flight will leave tomorrow”.

Seating Plan

	[Column1]	[column2]	[Column3]	[column4]
[A1]	*	o	o	*
[A2]	o	*	*	*
[A3]	*	*	*	o
[B4]	*	*	o	o
[B5]	*	o	*	*
[B6]	*	*	*	*
[B7]	*	*	o	*
[B8]	*	*	*	*
[B9]	*	*	*	*
[B10]	*	*	*	*

*= Available Seat; o= Reserved Seat