A small airline has just purchased a computer for its new automated reservations system. You've been asked to develop the new system. You're to write an application to assign seats on each flight of the airlines only plane (capacity: 10 seats). Your application should display the following alternatives: Please type 1 for First Class and Please type 2 for Economy. If the user types 1, your application should assign a seat in the firstclass section (seats 1–5). If the user types 2, your application should assign a seat in the economy section (seats 6–10). Your application should then display a boarding pass indicating the person's seat number and whether it's in the first-class or economy section of the plane. Use a one-dimensional array of primitive type boolean to represent the seating chart of the plane. Initialize all the elements of the array to false to indicate that all the seats are empty. As each seat is assigned, set the corresponding element of the array to true to indicate that the seat is no longer available. Your application should never assign a seat that has already been assigned. When the economy section is full, your application should ask the person if it's acceptable to be placed in the first-class section (and vice versa). If yes, make the appropriate seat assignment. If no, display the message "Next flight leaves in 3 hours.

Program

```
import java.util.Scanner;

public class AirlineReservation {
    final static int firstClsCapacity = 3;
    final static int economicCapacity = 7;
    final static int firstClass = 1;
    final static int economic = 2;
    static int[] seatN =new int[firstClsCapacity+ economicCapacity];
    static boolean[] seatStats =new boolean[firstClsCapacity+ economicCapacity];
    static int firstClassAvailable = firstClsCapacity;
```

```
    static int economicAvailable = economicCapacity;
    static int seatType= 0;
    static int seatNumber = 0;
    static Scanner input=new Scanner(System.in);

    public static void main(String[] args)
    {

       for (int i = 0; i< seatN.length; i++)
          seatN[i]=i+1;

       System.out.println("Flight Scheduler:");



       do{
          System.out.print ("Please enter 1 for first class , 2 for economy class  (input -1 exit):");
          seatType =input.nextInt();
          if(seatType ==-1){
             System.out.print("Exited Program");
             break;
          }

          if (seatType == firstClass)
             bookFirstClass();
          else if (seatType == economic)
             bookEconomic();
```

```
    } while (seatType != -1 && !(economicAvailable ==0 && firstClassAvailable ==0));


    input.close();
}



public static void bookFirstClass() {


    if (firstClassAvailable >0) {
        for (int i=0;i<firstClsCapacity;i++)
        {
            if (!seatStats[i])
            {
                seatNumber= seatN[i];
                seatStats[i]=true;
                firstClassAvailable--;
                System.out.printf ("You have  booked First Class,  Seat Number: %d%n", seatNumber);
                break;
            }
        }
    }
    else if(economicAvailable > 0)
    {
        System.out.print("Sorry, the first class is full, Enter 2 if you need to book economy class:");
        seatType =input.nextInt();
        if (seatType==2)
            bookEconomic();


    }
```

```
    else if  (economicAvailable ==0 && firstClassAvailable ==0)
        System.out.println("Sorry, all flights on this flight are full, please check other flights.");
}



public static void bookEconomic() {


    if (economicAvailable > 0) {
        for (int i = firstClsCapacity; i<firstClsCapacity+ economicCapacity; i++)
        {
            if (!seatStats[i])
            {
                seatNumber= seatN[i];
                seatStats[i]=true;
                economicAvailable--;
                System.out.printf ("You have  booked Economy Class, Seat Number: %d%n", seatNumber);
                break;
            }
        }
    }
    else if(firstClassAvailable > 0)
    {
        System.out.print("Sorry, economy class is full, Enter 1 if you want to book first class:");
        seatType =input.nextInt();
        if (seatType==1)
            bookFirstClass();


    }
    else if (economicAvailable ==0 && firstClassAvailable ==0)
```

```
            System.out.println("All flights on this flight are full, please check other flights.");
        }


}
```

Output: