

Arab Academy for Science, Technology and
Maritime Transport-College of Computing &
Information Technology—Sheraton branch
Course : Problem Solving and
Programming
Examiner : Dr. Shireen A. Hussein



Academic Year : 2023/2024
Semester : Spring
Department : Computer Science
Time Allowed : 90 Minutes

Lab. Test (B)

Tuesday 3

Name
Class

15

Write a C program for each of the following problems:

(9 points)

Using arrays, represent the seating chart of the plane on each flight (capacity: 50 seats and 0 indicates that all seats are empty initially). As each seat is assigned, set the corresponding availability value of the array to 1 to indicate that the seat is no longer available. Write a program to assign seats on each flight through the following menu of alternatives:

Please type F for "first class" If the person types 'F', it will be assigned a seat in the first class section (seats 1– 25).

Please type E for "economy" If the person types 'E', it will be assigned a seat in the economy section (seats 26– 50). Use the following functions:

- **void Assign_Seat(int x);** (*this function sets to 1 the corresponding availability value after checking it is already assigned or not*).
- **void Print_Boarding();** (*with the person's seat number and whether it's in the first class or economy section of the plane*).

2. Write a program that reads a line of text and prints a list indicating the number of occurrences of a and b letters in the text.

(6 points)

For example, the phrase *"To be or not to be, that is the question"* outputs: one "a," two "b's,".