FINAL EXAM SAMPLE

Exercise 1: (5 points)

1. *(3 points)* Write a functions in C language to accept a string as a parameter, then count the number of vowels in this string.

Output: The sum is: 70

2. *(2 points)* Write a functions to accept 10 inputs from users. If the input is a character, the program will warn to user to enter again.

Exercise 2: (5 points)

   Imagine you are developing a program to manage an inventory of cars in a store. The information of a car is described as a struct as follows:

```
struct car {
    char serial[20];
    char make[30];
    double price;
    int quantity;};
```

Design a program with the following interface: *(0.5 point)*

   Please choose:
   1. Enter car Information
   2. Print/show information of all cars in store
   3. Search and display devices by "make"
   4. Insert a new car
   5. Sort cars by serial number
   0. Exit

When the user chooses:

1. Allow the user to enter information for N cars. Ensure that serial numbers are unique. (1 point)
2. Display information for all cars in the inventory. (0.5 point)
3. Let the user search and display car by a given "make". (1 point)
4. Allow the user to insert a new car, checking for duplicate serial numbers. (1 point)
5. Sort the car in ascending order by serial number. (0.5 point)
0. Exit the program and release all resources (0.5 point)

Note: The program is written in functions