Programming Fundamentals (CL-1002)

Lab 08

Deadline: November 07, 2021 (02:00 PM After noon) (Submit on Google Classroom)

Points: 80

Instructions:

1. Solve each problem in separate file, Name the code file with problem no (Task_01, Task_02,.)
2. Copy these files (Task_01, Task_02,.) in a folder and name the folder like that K21XXXX. where XXXX is your 4-digit Student Id.
3. Now compress that folder using WinRAR software and submit on google-classroom.
4. Do not attach .exe file, otherwise it will show a threat or virus and not allow me to download.
5. Make sure you must Press the Turn-In button after uploading the solution folder. Otherwise, it will not be submitted.

Task_01: Write a Program that takes 10 integers from the user and stores them in an array. After that calculate the sum of odd numbers and multiplication of even numbers stores in this array. Finally, display the results of odd and even numbers.

Task_02: Write a program that takes 15 elements from the user and sort the numbers. If a user press 1, sort the elements of array in ascending order or press 2, sort them in descending order.

```
int sort[15] = {45, 65, 3, 0, 19, 23, 16, 3, 7, 46, 15, 11, 9, 3, 1}; // Expected Input
    sort[15] = {0, 1, 3, 3, 3, 7, 9, 11, 15, 16, 19, 23, 45, 46, 65 }; //Expected Output (Ascending order)
```

Task_03: Declare a character array for N no of elements, where N is the no of elements of your First Name and Last Name. Now store your name in it. Finally sort the alphabets of your name stored in your array in ascending order.

```
Char Name[] = “azam khan”;    // Expected Name as input
      Name[] = “aaahkmnz”;
```

Task_04: Using task no. 3, list and count the alphabets in your name.

```
Char Name[] = “azam khan”;    // Expected Name as input
Output:
        Alphabets    |    Count
        ------------------------------
            a        |       3
            h        |       1
            k        |       1
            m        |       1
            n        |       1
            z        |       1
```

Task_05: Write a program that takes 3 1-D array of 10 elements each. Initialize the first 2 arrays with user input. And the last array with 0 value on each index. [Hint: use loop]

1. ADD the element of same index value of 1st and 2nd array and store them in the 3rd array.
2. MULTIPLY the elements of same index value of 1st and 2nd array and store them in the 3rd array.
3. SUBSTRACT the elements of same index value of 1st and 2nd array and store them in the 3rd array.

Task_06: Take an array of 20 elements filled with random numbers. Now you need to ask a number from the user to find that number is in the list or not.

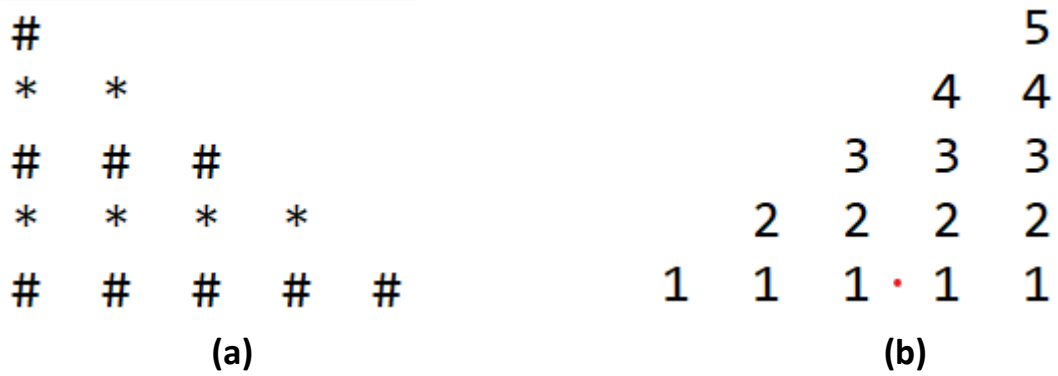
- If the number found in the list, then print the number and its index position of the array.
- If the number is not found in the list, then ask another number to found.

[Hint: Use srand() or rand() function to fill the array]

Task_07: Write a program that takes 7 characters from the user, store them in an array and check the array is elements are SYMETRIC or not.

```
Char Name[] = “asdfdsa”;
// SYMETRIC
```

Task_08: Draw the following 2 pattern for N no of rows from the user.



(a) **(b)**

Enjoy Coding