Navrachana University

School of Engineering and Technology

Department of Computer Science and Engineering

Course: CS1008 Introduction to Computer Programming

Programming Assignment – 2

Date : 1st Nov 2021

Instructions

- Implement the given Questions using C programming language.
- Use meaningful and descriptive variable/identifier names:
  Good variable names (camelCase): rollNo, studentName, empSalary, salesPrice, taxRate,
  Every Program should have header and footer having following information in multi-line comments
  '''
  @author: RollNo Firstname Lastname
  @description: Program No. - write short purpose/ description here
  '''
- Every Program should be with output of the Program in multi-line comment after the code of respective program.
- **Submission details:** Submit your assignment on **lms.nuv.edu.in** before the given submission date. Create one **.ZIP file** containing **all C/C++ programs** (.c and .cpp files) and **one word file.** Keep filename as **RollNo-Name-Assignment1.zip**.
- Programs submitted by a student should be the result of individual work based on his/her own efforts. Full or part of the code should not be copied from internet or from peer students or other sources. A student should not share/circulate the code/programs developed by them (for individual assignments) with their peers in any form. Violation of above will be considered as academic dishonesty and any such case will be strictly dealt with and liable to get zero in the evaluation.

Aim: Implementation of Array, String and pointer concepts.

Array is a collection of homogeneous elements, i.e. elements belonging to same data type. String is a sequence of characters, more specifically, it can be called a character array. Pointer stores address of another variable. All three make up the derived data types in C language. This practical helps the student to understand logical manipulation of these types through implementation.

Requirements:

1) A desktop computer system

2) Code Blocks IDE

1	WAP to take 10 values from the user and store them in an array and Print the elements stored in the array.
2	WAP to find out the average of n numbers using arrays
3	WAP to get positive integers from a user into an array of size 10 and calculate the number of odd and even integers in the array.
4	Write a program in C to copy the elements of one array into another array

5	a. WAP to insert an element from the given array. b. WAP to delete an element from the given array.
6	WAP to search an element and its position from the given array.
7	WAP to merging an element from the given two array.
8	WAP to find the minimum(smallest) and maximum(largest) value and its position in array from the given numbers using array.
9	a. WAP to find first 2 maximum number form the given value or number using array. b. WAP to find first 2 minimum number form the given value or number using array.
10	a. WAP to find Sum of N Input Numbers using Array b. WAP to get a set of positive integers from user and store it in an array of size 10. Calculate the sum of odd integers and product of even integers.
11	a. WAP to sort an array Ascending order b. WAP to sort an array Descending order
12	WAP to print a given array in reverse order
13	WAP to delete the repeated value from the elements of an array.
14	WAP to read and print a Row and Column Matrix, where value of Row and Column must be entering by User.
15	WAP to read a matrix and find the addition and multiplication of all elements of two dimensional matrix array.
16	WAP to transpose of a matrix
17	a. WAP to find addition of values of two 3 X 3 matrices. b. WAP to find multiplication of two 3 X 3 matrices.
18	a. WAP in C to input a string and print it. b. WAP in C to find the **length of a string** without using library function. c. WAP to find the length of a String with using any standard library function
19	a. Write a program in C to **copy one string** to another string with using strcpy function. b. Write a program in C to copy one string to another string without using strcpy function.
20	a. Write a program in C to **compare two strings** with using string library functions. b. Write a program in C to compare two strings without using string library functions.
21	a. Write a program in C to **count** the total number of words in a string. b. Write a program in C to count total number of alphabets, digits and special characters in a string.
22	a. WAP to **concatenate** two strings with using strcat standard library function. b. WAP to concatenate two strings without using strcat standard library function.
23	a. WAP to find the number of times a given word 'the' appears in the given string. b. Write a program in C to Find the Frequency/occurrence of Characters.
24	WAP to reverse a string given by user without using string functions.
25	WAP to check whether string entered by user is palindrome or not.
26	WAP to sort a string in alphabetical order by swapping the characters in the string
27	WAP to read a sentence and replace lowercase characters by uppercase and vice-versa.
28	WAP to Swap Strings in C
29	WAP in C to store n elements in an array and print the elements using pointer.
30	WAP in C to find the factorial of a given number using pointers.
31	WAP in C to sort an array using Pointer.
32	WAP in C to compute the sum of all elements in an array using pointers.

33	WAP in C to print a string in reverse using a pointer.
34	WAP to find length of string entered by user using char pointer.
35	WAP to Find Largest Number Using Dynamic Memory Allocation
36	WAP to demonstrate wild pointer and constant pointer
37	WAP to display values and addresses of elements of two dimensional array using pointers.