Practical # 02

Objective:

Discuss *one dimensional Array. Write C++ to declare and print elements of one dimensional Array.*

Theory:

In this Lab, we will introduce the array, a homogeneous data type also used to represent a group of data. This data type might be used to store many items of the same type as a conceptual unit. For example, all of the scores made on a test by students in a data structure and algorithm class might be stored in an array, or the names of students are stored in an array.

Lab Objectives:

- To be able to declare a one-dimensional array.
- To be able to perform fundamental operations on a one-dimensional array.
- To learn some common ways to search for an item in a one-dimensional array.

Introduction:

A **one-dimensional array** is a structured collection of components (often called array elements) that can be accessed individually by specifying the position of a component with a single index value. The syntax of a one-dimensional array declaration is:

Data_Type Array_Name [Int_Value];

Example program: *Declare and print elements of one dimensional Array.*

```
#include<iostream>
using namespace std;
int main()
{    /*an array with 5 rows*/
    int a[5]= {10,20,30,40,50};
    int i;
    /* Output each array elements value*/
    for(i=0; i<5; i++)
    {
       cout<<"element"<<i<<"="<<a[i]<<"\n";
    }
}
```

OUTPUT

Review Questions/ Exercise:

1. Write a C++ program to print largest value of array.
2. Write a C++ program to insert new ITEM at Top of the array. Print all elements of the array.
3. Write a C++ program to insert new ITEM at Bottom of the array. Print all elements of the array.
4. Write a C++ program to insert new ITEM at given location LOC. Print all elements of the array.
5. Write a C++ program to deletes ITEM from Top of the array. Print all elements of the array.
6. Write a C++ program to deletes ITEM from Bottom of the array. Print all elements of the array.
7. Write a C++ program to deletes ITEM from lOC given by user of the array. Print all elements of the array.
8. Write a C++ program to searches an element using the given index or by the value.
9. Write a C++ program to updates an element at the given index.
10. Write a C++ program to add two integer arrays and print the output array.

Name: _____

Roll #: _____

Date: _____

Subject Teacher

Remarks: