

# **NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**



## **CS-114- FUNDAMENTAL OF PROGRAMMING**

### **LAB MANUAL 8 HOME TASKS**

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### TASK 1:

Let's say an array is  $a[8] = \{13, 15, 17, 9, 99, 77, 65, 43\}$ . Find largest and smallest element.

### CODE:

```
#include<bits/stdc++.h>
using namespace std;
int main()
{
    int i,largest,smallest;
    int n = 8;
    int arr[8]={77,99,13,65,15,9,17,43};
    largest = smallest = arr[0];
    for(i=1;i<n;i++) {
        if(arr[i]<smallest) {
            smallest = arr[i];
        }
        if(arr[i]>largest) {
            largest = arr[i];
        }
    }
    cout<<"The largest number of array is = "<<largest<<endl;
    cout<<"The smallest number of array is = "<<smallest<<endl;
    return 0;
}
```

```
C:\Users\Al-Wajid Laptops\OneDrive\Documents\lab 8 home 2.exe
The largest number of array is = 99
The smallest number of array is = 9

-----
Process exited after 0.2761 seconds with return value 0
Press any key to continue . . .
```

### TASK 2:

Develop a program that takes 5 array elements from user. Swap position [2] element with position [4] element.

### CODE:

```
#include <bits/stdc++.h>
using namespace std;
int main() {
    int i, n=5;
    int arr[n]={};
    for(i=0;i<5;i++) {
        cout<<i+1<<"Enter number : ";
        cin>>arr[i];
    }
    int temp=arr[1];
    arr[1]=arr[3];
    arr[3]=temp;
    cout<<"After swaping position 2 with 4 : ";
    for(i=0;i<5;i++){
        cout<<arr[i]<<" ";
    }

    return 0;
}
```

```
C:\Users\Al-Wajid Laptops\OneDrive\Documents\lab 8...
1.Enter number : 45
2.Enter number : 78
3.Enter number : 1
4.Enter number : 0
5.Enter number : 23
After swaping position 2 with 4 : 45 0 1 78 23
-----
Process exited after 22 seconds with return value 0
Press any key to continue . . .
```

### TASK 3:

Take an array and find the most repeated element in that array

CODE:

```
#include <bits/stdc++.h>
using namespace std;
int main() { // to find the most repeating number in an array
    int n;
    cout<<"Enter number of terms of your array : ";
    cin>>n;
    int arr[n] = {};
    for (int i=0;i<n;i++) {
        cout<<"Enter number : ";
        cin>>arr[i];
    }
    cout << "Repeating elements of array are: ";
    int z, y = 0;
    int x=arr[0];
    for (int i = 0; i < n; i++) {
        x = 1;
        for (int j = 0; j < n; j++) {
            if (arr[i] == arr[j]) {
                x++;
            }
        }
        if (x > y) {
            y = x;
            z = arr[i];
        }
    }
    cout << z;
    return 0;
}
```

```
C:\Users\Al-Wajid Laptops\OneDrive\Document...
Enter number of terms of your array : 9
Enter number : 98
Enter number : 67
Enter number : 2
Enter number : 4
Enter number : 2
Enter number : 98
Enter number : 56
Enter number : 98
Enter number : 54
Repeating elements of array are: 98
-----
Process exited after 31.22 seconds with return value 0
Press any key to continue . . .
```