Computer Systems and Programming

LAB Manual 8 (Home Task)

Muhammad Dawood Saeed

ME-15-C

465231

Q1)

```cpp
#include <iostream>

using namespace std;

int main()
{
    int x,y=0,z;
    cout<<" Enter the size of array ";
    cin>>x;
    int arr[x]={};
    for(int i=0;i<x;i++){
        cout<<" Enter the elements of array ";
            cin>>arr[i];

    }
    for(int j=0;j<x;j++){
        int rep=1;
        for(int k=0;k<x;k++){
            if(arr[k]==arr[j]){
                rep++;
            }
        }
        if(rep>y){
            y=rep;
            z=arr[j];
        }
    }
    cout<<" The most repeated element is= "<<z;
    return 0;

}
```
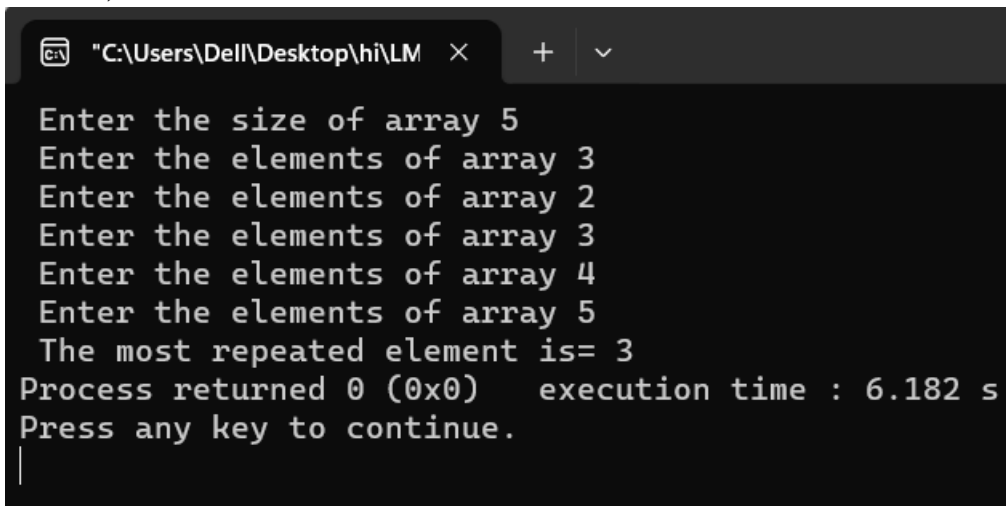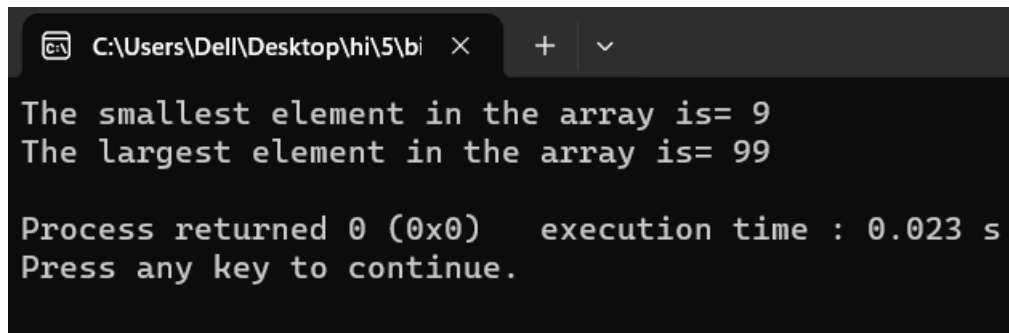
Ans 1)

```
"C:\Users\Dell\Desktop\hi\LM    ×      +    ∨

 Enter the size of array 5
 Enter the elements of array 3
 Enter the elements of array 2
 Enter the elements of array 3
 Enter the elements of array 4
 Enter the elements of array 5
 The most repeated element is= 3
Process returned 0 (0x0)    execution time : 6.182 s
Press any key to continue.
```

Q2)

```cpp
#include <bits/stdc++.h>
using namespace std;
int main(){
    int x=0,y=0,z,a;
    int arr [8] = {13 , 15 , 17 , 9 , 99 , 77, 65 , 43};
    for(int i=0;i<8; i++){
        x=0,y=0;
        for(int j=0; j<8;j++){
            if(i==j)
            {
                continue;
            }
            if(arr[i]<arr[j]){
                x++;
            }
            else if(arr[i]>arr[j]){
                y++;
            }
        }
        if(x==7){
            z=arr[i];
        }

    }
    if(y==7){
            a=arr[i];
    }
}
    cout<<"The smallest element in the array is= "<<z<<endl;
        cout<<"The largest element in the array is= "<<a<<endl;
    return 0;
}
```

Ans 2)

```
The smallest element in the array is= 9
The largest element in the array is= 99

Process returned 0 (0x0)    execution time : 0.023 s
Press any key to continue.
```

Q3)

```cpp
#include <iostream>

using namespace std;

int main()
{
    int x[5], y;
    cout << "Enter the 5 array elements: ";
    for(int i=0; i<5; i++) {
    cin >> x[i];
  }
    y = x[1];
    x[1] = x[3];
    x[3] = y;
  cout<<"New array after swapping of position 2 and 4 will be= ";
  for(int i=0; i<5; i++) {
    cout << x[i] << " ";
}
    return 0;

}
```
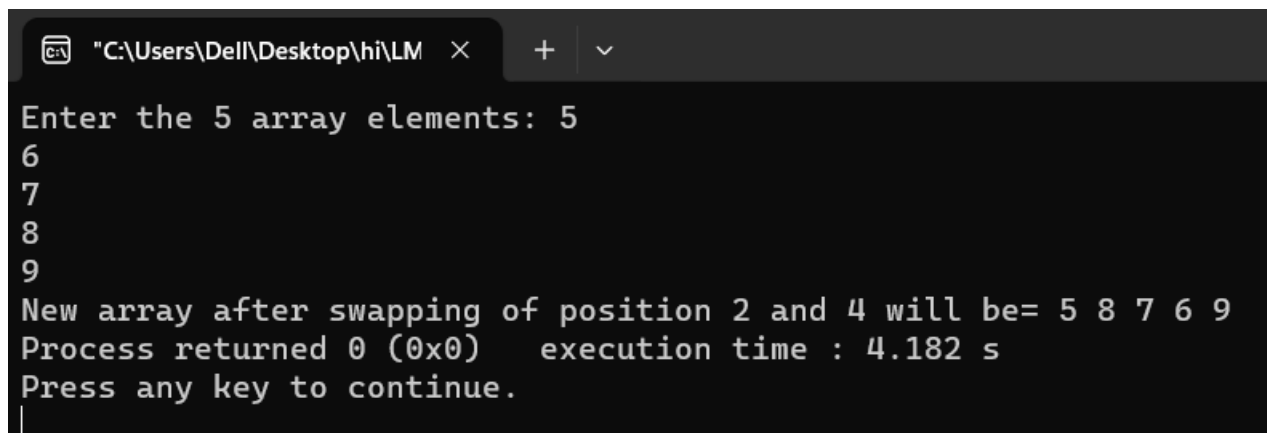
Ans 3)

```
"C:\Users\Dell\Desktop\hi\LM  ×      +   ∨

Enter the 5 array elements: 5
6
7
8
9
New array after swapping of position 2 and 4 will be= 5 8 7 6 9
Process returned 0 (0x0)   execution time : 4.182 s
Press any key to continue.
```