



School Of Mechanical & Manufacturing Engineering

Department of Mechanical Engineering

CS-114 - Fundamental of Programing

Lab Manual # 06

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TASK 1

Code:

```
#include<iostream>
using namespace std;
int main()
{
    int i, size, j, max, n;
    cout<<"Enter the size of the array: ";
    cin>>size;
    int a[size], rep[size]={0};
    cout<<"Enter the elements of the array: ";
    for(i=0;i<size;i++)
        cin>>a[i];
    for(j=0;j<size;j++)
    {
        for(i=j+1;i<size;i++)
        {
            if(a[j]==a[i])
                rep[j]++;
        }
    }
    int n1=0;
    n=0;
    max=rep[n];
    for(j=1;j<size;j++)
    {
        if(rep[j]>max)
            n=j;
        else if(rep[j]==max)
            n1=j;
    }
    if(n1==0)
        cout<<"The most repeated element is: "<<a[n];
    else
        cout<<"The most repeated elements are: "<<a[n]<<" and "<<a[n1]<<endl;
}
```

Output:

```
C:\Users\PMLS\Desktop\Untitled1.exe
Enter the size of the array: 10
Enter the elements of the array: 2
3
4
2
5
3
6
7
9
10
The most repeated elements are: 2 and 3

-----
Process exited after 18.23 seconds with return value 0
Press any key to continue . . .
```

TASK 2

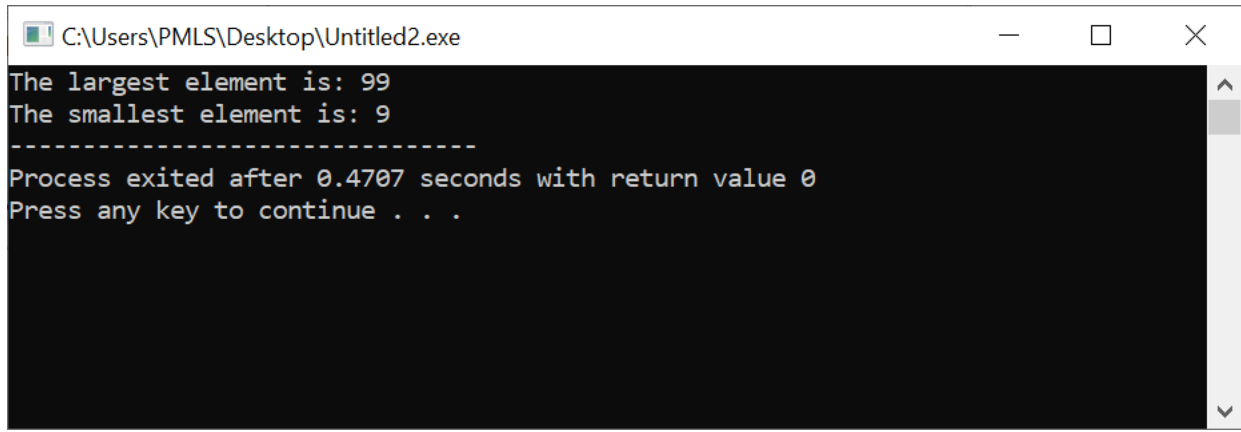
Code:

```
#include<iostream>
using namespace std;
int main()
{
    int a[9]={13,15,17,9,99,77,65,43};
    int i, j, max=a[0], min=a[0];

    for(j=i+1;j<8;j++)
    {
        if(a[j]>max)
            max=a[j];
        else if(a[j]<min)
            min=a[j];
    }

    cout<<"The largest element is: "<<max<<" \nThe smallest element is: "<<min;
}
```

Output:



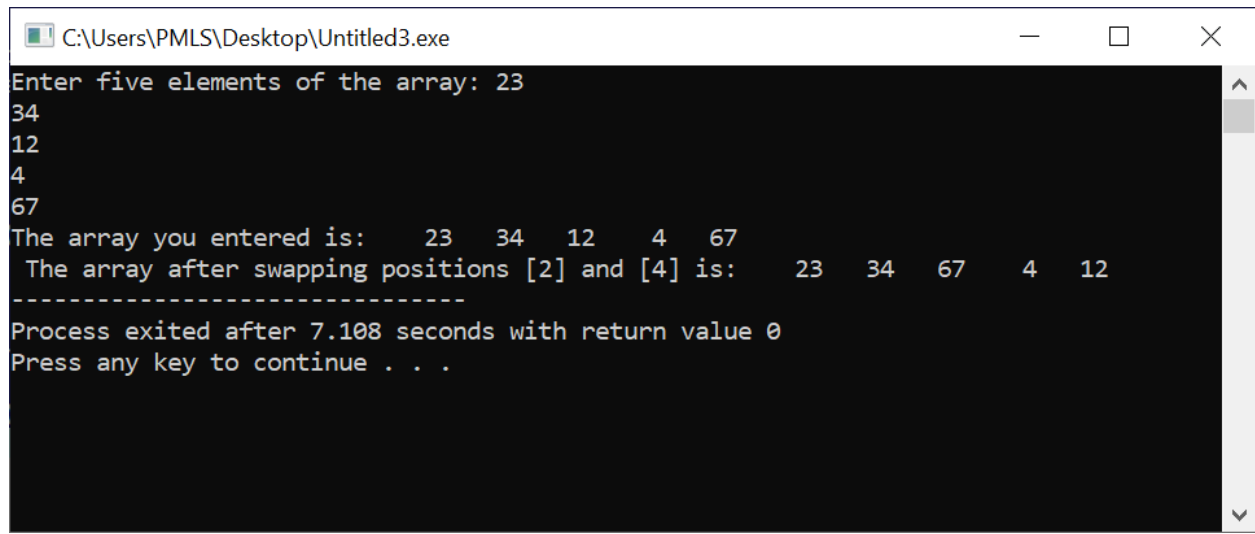
```
C:\Users\PMLS\Desktop\Untitled2.exe
The largest element is: 99
The smallest element is: 9
-----
Process exited after 0.4707 seconds with return value 0
Press any key to continue . . .
```

TASK 3

Code:

```
#include<iostream>
#include<iomanip>
using namespace std;
int main()
{
    int a[5], i, temp;
    cout<<"Enter five elements of the array: ";
    for(i=0;i<5;i++)
        cin>>a[i];
    cout<<"The array you entered is: ";
    for(i=0;i<5;i++)
        cout<<setw(5)<<a[i];
    temp=a[2];
    a[2]=a[4];
    a[4]=temp;
    cout<<"\n The array after swapping positions [2] and [4] is: ";
    for(i=0;i<5;i++)
        cout<<setw(5)<<a[i];
}
```

Output:



```
C:\Users\PMLS\Desktop\Untitled3.exe
Enter five elements of the array: 23
34
12
4
67
The array you entered is: 23 34 12 4 67
The array after swapping positions [2] and [4] is: 23 34 67 4 12
-----
Process exited after 7.108 seconds with return value 0
Press any key to continue . . .
```