

**National University of Sciences and Technology (NUST)**  
**Department of Mechanical Engineering (SMME)**



**Fundamentals of Programming (FOP)**

[Home Tasks](#)

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By

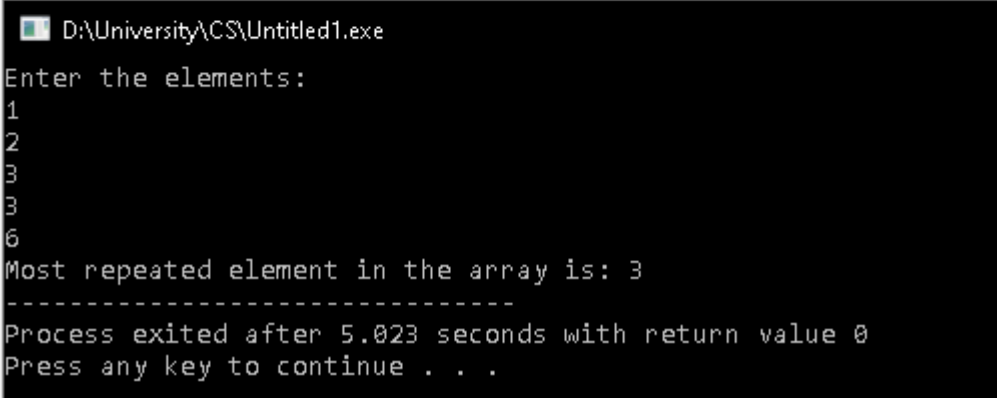
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## Home Task-1:

```
1  #include <iostream>
2  using namespace std;
3  int main () {
4      int arr[5];
5      int element = arr[0];
6      int temp=0, tempCount, count=1;
7      cout << "Enter the elements: " << endl;
8      for(int i=0;i<5;i++)
9          cin >> arr[i];
10     for (int i=0;i<5;i++){
11         tempCount = 0;
12         temp=arr[i];
13         tempCount++;
14         for(int j=i+1;j<5;j++){
15             if(arr[j] == temp){
16                 tempCount++;
17                 if(tempCount > count){
18                     element = temp;
19                     count = tempCount;
20                 }
21             }
22         }
23     }
24     cout << "Most repeated element in the array is: " << element;
25     return 0;
26 }
```



D:\University\CS\Untitled1.exe

Enter the elements:

1  
2  
3  
3  
6

Most repeated element in the array is: 3

-----

Process exited after 5.023 seconds with return value 0

Press any key to continue . . .

## Home Task-2:

```
1  #include <iostream>
2  using namespace std;
3  int main () {
4  int a[8]={13,15,17,9,99,77,65,43}, large, small;
5  large=small=a[0];
6  for(int i=1;i<8;++i){
7  if(a[i]>large)
8  large=a[i];
9  if(a[i]<small)
10 small=a[i];
11 }
12 cout << "The smallest element is " <<small<<endl;
13 cout << "The largest element is " <<large<<endl;
14 return 0;
15 }
```

```
16
17 D:\University\CS\Untitled1.exe
18 The smallest element is 9
19 The largest element is 99
20
21 -----
22 Process exited after 0.04447 seconds with return value 0
23 Press any key to continue . . .
24
25
26
27
```

### Home Task-3:

```
1  #include <iostream>
2  using namespace std;
3  int main () {
4      int size = 5;
5      int arr[size];
6      cout<<"Enter 5 elements of the array"<<endl;
7      for (int i=0; i<size; ++i){
8          cout<<"Element"<<i+1<<" : ";
9          cin>>arr[i];
10     }
11     if (size >= 5){
12         int temp = arr[2];
13         arr[2] = arr[4];
14         arr[4] = temp;
15     }
16     else{
17         cout<<"Array size is less than 5 so invalid"<<endl;
18         return 1;
19     }
20     cout<<"array aftrer swap between elements 2 and 4: "<<endl;
21     for(int i =0; i<size; i++){
22         cout<<arr[i]<<" ";
23     }
24     return 0;
25 }
```

```
26
27  D:\University\ACS\Untitled1.exe
28  Enter 5 elements of the array
29  Element1 : 2
30  Element2 : 4
31  Element3 : 5
32  Element4 : 6
33  Element5 : 7
34  array aftrer swap between elements 2 and 4:
35  2 4 7 6 5
36  -----
37
38  Process exited after 5.478 seconds with return value 0
39  Press any key to continue . . .
40
```