



# FUNDAMENTAL OF PROGRAMMING

HOME TASK 8

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

**CODE:**

```
#include <iostream>

using namespace std;

int main(){

    int maxSize=100;

    int arr[maxSize];

    int n;

    cout<<"Size of the array: ";

    cin>>n;

    cout<<"Elements of the array: ";

    for(int i=0;i<n;i++){

        cin>>arr[i];

    }

    int mostrepeated=arr[0];

    int maxf=1;

    for(int i=0;i<n;i++) {

        int currente=arr[i];

        int currentf=1;

        for(int j=i+1;j<n;j++){

            if(arr[j]==currente){

                currentf++;

            }

        }

        if(currentf>maxf){

            maxf=currentf;

            mostrepeated=currente;

        }

    }

    cout<<"Most repeated element is: " << mostrepeated << endl;

    return 0;

}
```

```

    }
}

if(currentf>maxf){
    mostrepeated=currente;
    maxf=currentf;
}

}

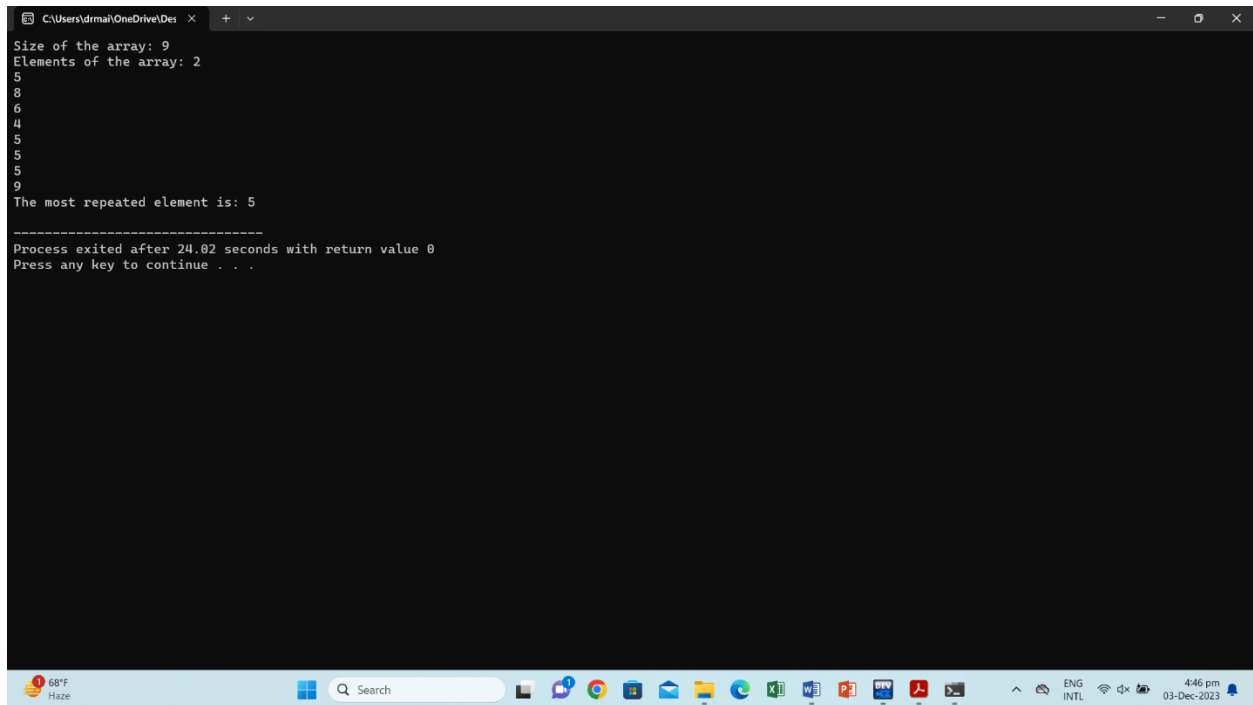
cout<<"The most repeated element is: "<<mostrepeated
    <<endl;

return 0;

}

```

## OUTPUT:



```

C:\Users\drmai\OneDrive\Des x + v
Size of the array: 9
Elements of the array: 2
5
8
6
4
5
5
5
9
The most repeated element is: 5

-----
Process exited after 24.02 seconds with return value 0
Press any key to continue . . .

```

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

### **CODE:**

```
#include <iostream>

using namespace std;

int main(){

    int maxSize=100;

    int arr[maxSize];

    int n;

    cout<<"Size of the array: ";

    cin>>n;

    cout<<"Elements of the array: ";

    for(int i=0;i<n;i++){

        cin>>arr[i];

    }

    int largeste=arr[0];

    int smalleste= arr[0];

    for(int i=1;i<n;i++){

        if(arr[i]>largeste) {

            largeste=arr[i];

        }

        if(arr[i]<smalleste){

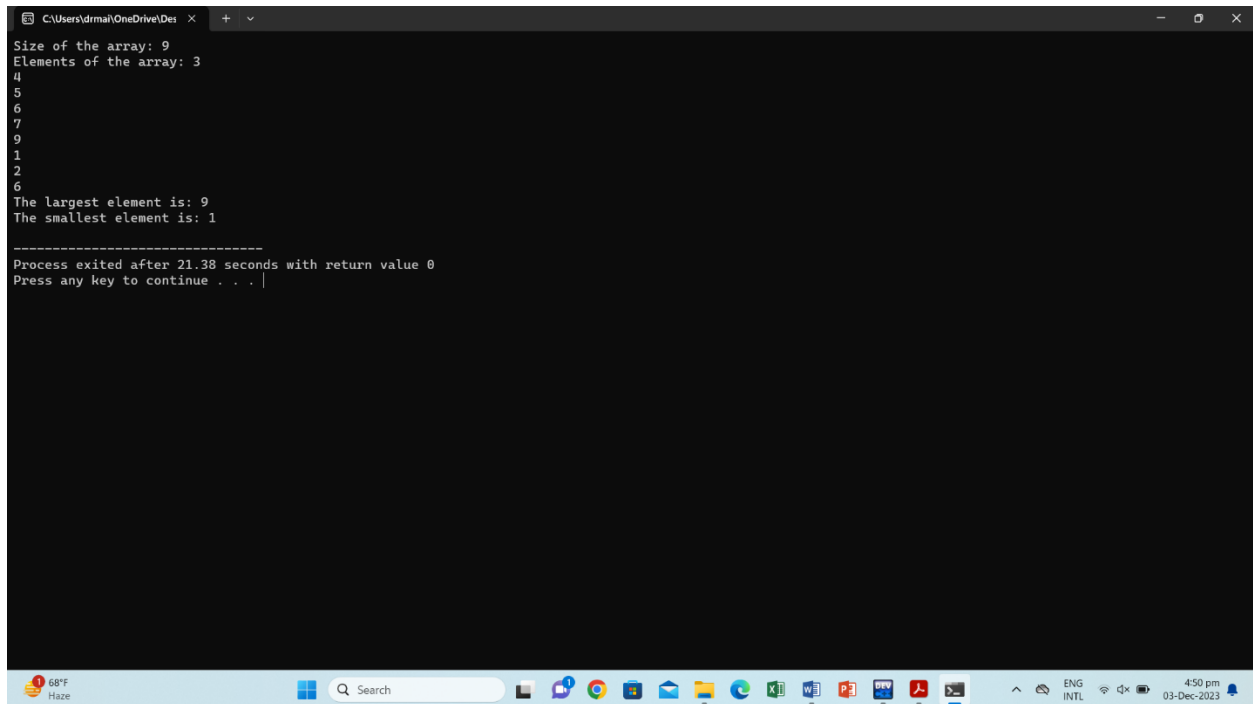
            smalleste=a; } } }
```

```
cout<<"The largest element is: " <<largeste<<endl;

cout<< "The smallest element is: " <<smalleste<<endl;

return 0;}
```

## OUTPUT:



```
C:\Users\drmai\OneDrive\Des x + v
Size of the array: 9
Elements of the array: 3
4
5
6
7
9
1
2
6
The largest element is: 9
The smallest element is: 1

-----
Process exited after 21.38 seconds with return value 0
Press any key to continue . . . |
```

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

### CODE:

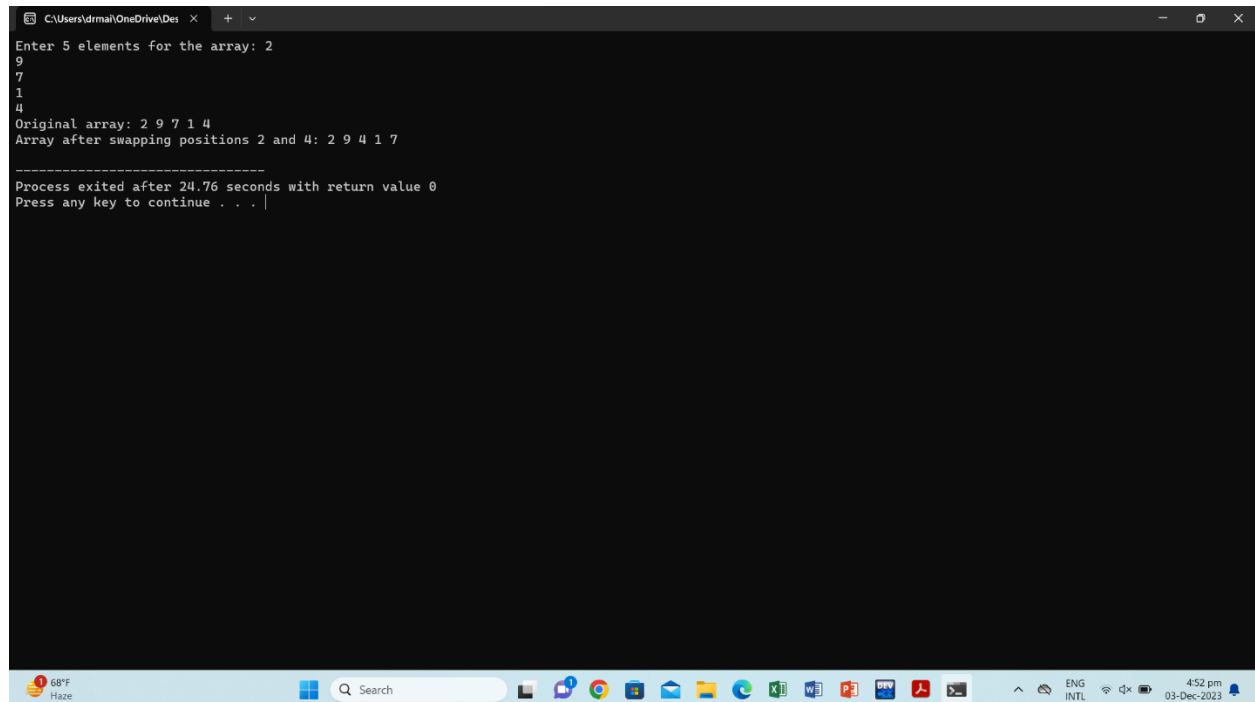
```
#include <iostream>
using namespace std;
int main() {
    int arraySize = 5;
    int arr[arraySize];
    cout<<"Enter 5 elements for the array: ";
    for(int i=0;i<arraySize;i++) {
        cin>>arr[i];
    }
}
```

```

cout<<"Original array: ";
for(int i=0;i<arraySize;i++) {
    cout<<arr[i]<< " ";
}
cout<<endl;
if(arraySize>=5){
    int temp=arr[2];
    arr[2]=arr[4];
    arr[4]=temp;
    cout<<"Array after swapping positions 2 and 4: ";
    for(int i=0;i<arraySize;i++) {
        cout<<arr[i]<< " ";
    }
    cout<<endl;
} else {
    cout<<"Array size is less than 5. Unable to perform the swap." <<endl;
}
return 0;
}

```

## OUTPUT:



```

C:\Users\drrmah\OneDrive\Desktop>
Enter 5 elements for the array: 2
9
7
1
4
Original array: 2 9 7 1 4
Array after swapping positions 2 and 4: 2 9 4 1 7

-----
Process exited after 24.76 seconds with return value 0
Press any key to continue . . .

```