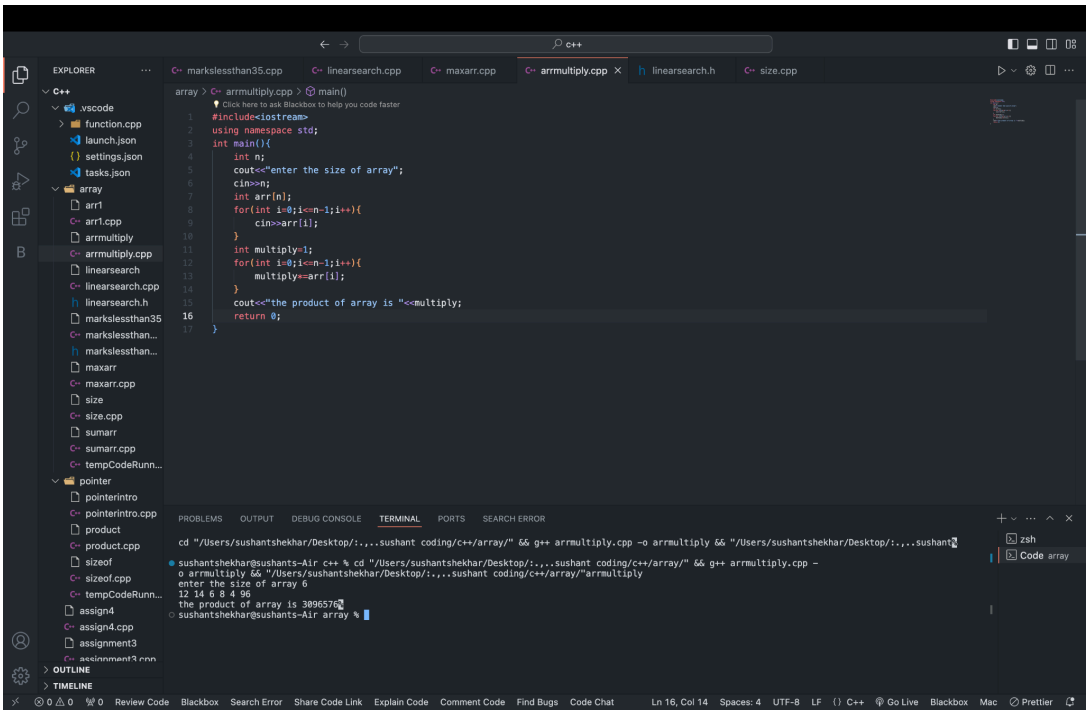
C++ Assignments | Arrays - 1 | Week 5

1. Calculate the product of all the elements in the given array.



Find the second largest element in the given Array in one pass.

```
#include<iostream>
using namespace std;
int main(){
    int n;
    cin>>n;
    int arr[n];
    for(int i=0;i<=n-1;i++){
        cin>>arr[i];
    }
    int max1 = arr[0]; // initialize max1 to the first element of the array
    int max2 = INT_MIN; // initialize max2 to the minimum possible value
    for ( int i=0;i<=n-1;i++){
        if(arr[i] > max1){
            max2 = max1;
            max1 = arr[i];
        }
        else if(arr[i] > max2 && arr[i]!= max1){
            max2 = arr[i];
        }
    }
    cout<<max2;
    return 0;
}
```

3. Find the minimum value out of all elements in the array.

```
#include<iostream>
using namespace std;
int main(){
    int n;
    cin>>n;
    int arr[n];
    for(int i=0;i<=n-1;i++){
```

```
        cin>>arr[i];
    }
    int min = arr[0]; // initialize min to the first element of the array
    for ( int i=1;i<=n-1;i++){
        if(arr[i] < min){
            min = arr[i];
        }
    }
    cout<<min;
    return 0;
}
```

4. Given an array, predict if the array contains duplicates or not.

```
#include<iostream>
using namespace std;
int main(){
    int n;
    cin>>n;
    int arr[n];
    for(int i=0;i<=n-1;i++){
        cin>>arr[i];
    }
    int count[n] = {0}; // initialize count array to zero
    for ( int i=0;i<=n-1;i++){
        count[arr[i]]++; // increment count of current element
        if(count[arr[i]] > 1){
            cout<<"Array contains duplicates";
            return 0;
        }
    }
    cout<<"Array does not contain duplicates";
    return 0;
}
```

5. WAP to find the smallest missing positive element in the sorted Array that contains only positive elements.

```
#include<iostream>
using namespace std;
int main(){
    int n;
    cin>>n;
    int arr[n];
    for(int i=0;i<=n-1;i++){
        cin>>arr[i];
    }
    int i=0;
    while(i<=n-1){
        if(arr[i]>0 && arr[i]<=n && arr[i]!=i+1){
            int temp=arr[i];
            arr[i]=arr[temp-1];
            arr[temp-1]=temp;
        }
        else{
            i++;
        }
    }
    for(int i=0;i<=n-1;i++){
        if(arr[i]!=i+1){
            cout<<i+1;
            return 0;
        }
    }
    cout<<n+1;
    return 0;
}
```

6. Predict the output.

```
int main()
{
int sub[50], i ;
for ( i = 0 ; i <= 48 ; i++ ) ;
{
sub[i] = i ;
cout<<sub[i]<<endl ;
}
return 0;
}
```

```
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
```