



C++ Assignments | Arrays - 1 | Week 5

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

A screenshot of a Visual Studio Code editor window. The Explorer sidebar on the left shows a project structure with folders like 'array' and 'pointer', and various C++ files. The main editor area displays the code for 'armultiply.cpp'. The code includes `<iostream>`, uses the `std` namespace, and defines a `main` function. It prompts the user to enter the size of the array (`n`) and then the elements of the array. A loop calculates the product of all elements, and the final result is printed. The output window at the bottom shows the execution of the program, where the user entered 6 for the size and 12 14 6 8 4 96 for the elements, resulting in a product of 3896576.

```
1 // array > C++ armultiply.cpp > main()
2 Click here to ask Blackbox to help you code faster
3 #include<iostream>
4 using namespace std;
5 int main()
6 {
7     int n;
8     cout<<"enter the size of array";
9     cin>>n;
10    int arr[n];
11    for(int i=0;i<n-1;i++){
12        cin>>arr[i];
13    }
14    int multiply=1;
15    for(int i=0;i<n-1;i++){
16        multiply=arr[i];
17    }
18    cout<<"the product of array is "<<multiply;
19    return 0;
20 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR

```
cd "/Users/sushantshekar/Desktop/...sushant coding/c++/array/" && g++ armultiply.cpp -o armultiply && "/Users/sushantshekar/Desktop/...sushant
0 armultiply && "/Users/sushantshekar/Desktop/...sushant coding/c++/array/" && g++ armultiply.cpp -
enter the size of array 6
12 14 6 8 4 96
the product of array is 3896576
sushantshekar@sushants-Air 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;
}
```

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