NAME:-KUMAR ANKIT CLASS:-B.TECH(EE)

BATCH:-DEODE2.0 ASSIGNMENT:-ARRAY-1(WEEK 5)

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

SOLN:-

ARRAY - 1 > Q1.cpp > ...

```cpp
#include<iostream>
using namespace std;
int multiArray(int a[],int n){
int x=1;
    for(int j=0;j<n;j++)
       {
         x=x*a[j];
       }
        return x;
}
int main(){
    int n;
    cout<<"Enter the size of array";
    cin>>n;
    int arr[n];
    cout<<"Enter the elements of array";
    for(int i=0;i<n;i++){
        cin>>arr[i];
    }
    cout<<"The multiplication of elemennts of array is "<<multiArray(arr,n);
    return 0;
}
```

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

SOLN:-

secondLargestElement.cpp > SecondLargest(int [], int)

```cpp
#include<iostream>
#include<climits>
using namespace std;
int SecondLargest(int a[],int n){
int Fmax =INT_MIN;
int Smax =INT_MIN;
    for(int j=0;j<n;j++){
        if(Fmax<a[j]) Fmax=a[j];
       }
        for(int j=0;j<n;j++){
        if(Smax<a[j] && Fmax!=a[j]) Smax=a[j];
       }
       return Smax;
}
int main(){
    int n;
    cout<<"Enter the size of array";
    cin>>n;
    int arr[n];
    cout<<"Enter the elements of array";
    for(int i=0;i<n;i++){
        cin>>arr[i];
    }
    cout<<"The Second largest element of array is "<<SecondLargest(arr,n);
    return 0;
}
```

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

SOLN:-

smallestElements.cpp > SmallestElement(int [], int)

```cpp
#include<iostream>
#include<climits>
using namespace std;
int SmallestElement(int a[],int n){
int min =INT_MAX;

    for(int j=0;j<n;j++){
        if(min>a[j]) min=a[j];
      }
      return min;
}
int main(){
    int n;
    cout<<"Enter the size of array";
    cin>>n;
    int arr[n];
    cout<<"Enter the elements of array";
    for(int i=0;i<n;i++){
        cin>>arr[i];
    }
    cout<<"The Smallest  element of array is "<<SmallestElement(arr,n);
    return 0;
}
```

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

SOLN:-

ARRAY - 1 > duplicate.cpp > main()

```cpp
#include<iostream>
using namespace std;
int main(){
    int n;
    cout<<"Enter the size of array";
    cin>>n;

    int a[n];
    cout<<"Enter the elements of array";
    for(int i=0;i<n;i++){
        cin>>a[i];
    }
    bool flag = false;
    for(int i=0;i<n;i++){
        for(int j=i+1;j<n;j++){
            if(a[i]==a[j]){
                flag=true;
                cout<<"The duplicate element is"<<a[i];
                break;
            }

        }
    }
    if(flag==false) cout<<"The array is not containing duplicate";
    return 0;
}
```

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

SOLN:-

ARRAY - 1 > smallMissingElement.cpp > main()

```cpp
#include<iostream>
using namespace std;
int main(){
int n;
cout<<"Enter the size of array";
cin>>n;

int a[n];
cout<<"Enter the elements of array";
for(int i=0;i<n;i++){
    cin>>a[i];
}
bool flag = false;
int x=1;
for(int i = 0;i<n;i++){
    if(a[i]!=x){
        cout<<"The smallest missing positive element is "<<x;
        flag = true;
        break;
    }
    x++;
}
if(flag==false) cout<<"There was not a missing element";
}
```

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;

}

Soln:-49

As “;” is placed after for loop which terminates the loop ,so after last iteration .i becomes 49 due to post increment .