(ARRAY PRACTICE QUESTIONS)

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(BSCS IST (SS1)

Exercise Qno 1.

Write a program with an array of size 05. And it then counts the prime numbers from it .

And display total number of primes in the array .

```
#include <iostream>
using namespace std;
int main ()
{
int prime,count=0;
const int size =5;
int arr[size];
for (int i=0; i<size; i++)
{
cout<<"enter a number"<<endl;
cin>>arr[i];
}
cout<<"Total prime numbers in array    are"<<endl;
for (int j=0; j<size; j++)
{
if (arr[j]%2 !=0)
{
prime=arr[j];
count++;
```

```
}
else
break;
}
cout<<count<<endl;
return 0;
}
```

Practice Qno 1

Write a C++ program to find the largest element of a given array of integers

```
#include <iostream>
using namespace std;
int main ()
{
int max;
const int size =5;
int arr[size];
for (int i=0; i<size; i++)
{
cout<<"enter a number"<<endl;
cin>>arr[i];
max=arr[0];
}
cout<<"Maximum number in array    is "<<endl;
for (int j=0; j<size ; j++)
{
if (max<arr[j])
```

```
{
max=arr [j];
}
}
cout<<max<<endl;
return 0;
}
```

Practice Qno 2.

Write a program with an array of size 05. And find three largest element from them.

```
#include <iostream>
using namespace std;
int main ()
{
int fmax,smax,tmax;
const int size =5;
int arr[size];
for (int i=0; i<size; i++)
{
cout<<"enter number"<< (i+1) <<" : "<<endl;
cin>>arr[i];
}
  fmax=smax=tmax=arr[0];
for (int j=1 ; j<size ; j++)
{
if (arr[j]>fmax)
```

```
{
tmax= smax;
smax=fmax;
fmax=arr [j];
}
else if (arr[j]>smax)
{
tmax= smax;
smax=arr [j];
}
else if (arr[j]>tmax)
{
tmax=arr [j];
}
}
cout<<" First largest element is : "<<fmax<<endl;
cout<<" Second largest element is : "<<smax<<endl;
cout<<" Third largest element is : "<<tmax<<endl;
return 0;
}
```

(Record breaker)

```
#include <iostream>
using namespace std;
int main ()
{
    int n;
```

```
    cin>>n;
    int a[n+1];
    a[n]=-1;
    for ( int i=0; i<n;i++)
    {
        cin>>a[i];
    }
    if (n==1)
    {
        cout<<"1"<<endl;
        return 0;
    }
    int ans=0;
    int mx=-1;
    for (int i=0; i<n; i++)
    {
        if (a[i]>mx && a[i]>a[i+1])
        ans++;

    mx=max(mx, a[i]);
    }
cout<<ans<<endl;
return 0;
}
```

(Longest arithmetic array)

```
#include <iostream>
```

```
using namespace std;
int main ()
{
	int n;
	cin>>n;
	int a[n];
	for ( int i=0;
		i<n;
		i++)
	{
		cin>>a[i];
	}
	int ans=2;
	int curr=2;
	int pd= a[1]-a[0];
			int j=2;
	while (j<n)
	{
		if (pd== a[j]-a[j-1])
		{
			curr++;
		}
		else
		{
			pd== a[j]-a[j-1];
			curr=2;
```

```
            }
            ans= max(ans,curr);
                    j++;
        }
        cout<<ans<<endl;
        return 0;
        }
```

(Sum of sub arrays)

```
#include <iostream>
using namespace std;
int main ()
{

int curr=0;
        const int size =5;
        int arr[size];
        for (int i=0; i<size; i++)
        {
            cin>>arr[i];
        }
        cout<<"sum of sub arrays is"<<endl;
        for (int i=0; i<size; i++)
        {
        curr =0;
        for (int j=i; j<size ; j++)
        {
```

```
            curr += arr[j];
            cout<<curr<<endl;
        }
        }

        return 0;
}
```

(Maximum number till j)

```
#include <iostream>
using namespace std;
int main ()
{
int mx=-8899999;

        const int size =5;
        int arr[size];
        for (int i=0; i<size; i++)
        {
            cin>>arr[i];
        }
        cout<<"Maximum number till j is ";

        for (int j=0; j<size ; j++)
        {
            mx= max(mx, arr[j]);
            cout<<mx<<endl;
```

```
    }


    return 0;
}
```

2nd method

```
#include <iostream>
using namespace std;
int main ()
{



    const int size =5;
    int arr[size];
    for (int i=0; i<size; i++)
    {
        cin>>arr[i];
    }
    cout<<"Maximum number till j is ";
    int max=arr[0];
    for (int j=0; j<size ; j++)
    {
        if ( arr[j]>max)
        max=arr[j];
        cout<<max<<endl;
    }
    return 0;
```

```
}
```