Ministry of Higher Education and Scientific Research

Al-Mustaqbal University

Computer Engineering Techniques Department

C/C++ programming language

Lecture (7)

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Example

A program to read a one-dimensional array with correct numbers, size (100 elements), and find the largest number in the array.

```cpp
 #include<iostream>
using namespace std;
 main ()
{
int a[100] ;
int i, n ,large ;
cout<<"enter the elements "<<endl;
for(i=0; i<=99; i++)
{
cin>>a[i] ;
}
large =a[0];
for (i=0 ; i<=99 ; i++)
if (larg < a[i])
larg = a[i] ;
cout<<" largest value in the array = "<< larg ;
return 0;

}
```

Example

A program to find the sum of elements of a one-dimensional array.

```cpp
#include<iostream>
using namespace std;
int main ( )
{
int myarray [ ] = {16, 22, 7, 34, 55, 72};
int i sum=0;
  for ( i=0 ; i<6 ; i++ )
  {
    sum += myarray[i];
  }
cout << sum;
return 0;
}
```

Example

Program to read an array of 20 elements, then find the average of its elements.

```cpp
#include<iostream>
using namespace std;
main()
{
int myarray[20] ;
int sum =0;
for ( int i=0; i<20 ; i++ )
  cin << myarray [i] ;
for ( i=0; i<20 ; i++ )
  sum = sum + myarray[i] ;
  float Average = sum / 20 ;
cout << " average = " << average ;
}
```

Example

A program to read an array (A [25]), then find the number and sum of elements that can be divided by 7.

```cpp
#include<iostream>
using namespace std;
{
int A[25] ;
int sum =0, j =0 ;
for ( int i=0; i<25 ; i++ )
cin >> A [i] ;
for ( i = 0 ; i < 25 ; i++ )
if ( A[i] % 7 = = 0 )
{
sum + = A[i] ;
}
cout <<" Number of elements in array accept dividing by 7 = "<<  i << sum;
cout << " Sum of elements in array accept dividing by 7 =\n "<< sum ;

}
```

Example

A program to read an array of n dimension, if the number is odd print the number and location of its.

```cpp
#include<iostream>
using namespace std;
main ( )
{
int i, n;
cin >>n;
int a [n];
for ( i = 0; i < n ; i++ )
cin >>a[i];
for ( i = 0; i < n ; i++ )
  if ( a[i] % 2 != 0 )
cout << i << a[ i ];
  }
```

Example

A program to read an array of n dimension then find the summation of an odd number and print the summation.

```cpp
#include<iostream>
using namespace std;
 main ( )
{
  int i, n, sum=0;
  cin >>n;
  int a [n];
   for ( i = 0; i < n ; i++ )
     if ( a[i] % 2 != 0 )
       sum+=a[i];
cout << "sum="<< sum;
}
```

Example

A program to find the value of the array (C), by adding an array of 20 elements name (A), an array of 20 elements name (B).

```cpp
#include<iostream>
using namespace std;
 main ( )
{
  int i, A[20], B[20],C[20];
    for ( i = 0; i < 20 ; i++ )
     cin >>A[i];
     for ( i = 0; i < 20 ; i++ )
      cin >>B[i];
     for ( i = 0; i < 20 ; i++ )
```

```
C[i]= A[i] + B[i];
for ( i = 0; i < 20 ; i++ )
cout << C[i];                    }
```

Example

A program to read 4*4 2D- array, then find the summation of the array elements, finally print these elements.

```
#include<iostream>
using namespace std;
main( )
{
      int a[4][4] ;
      int i, j, sum=0;
      for (i=0 ; i< 4 ; i++ )
        for (j =0 ; j< 4 ; j++ )
          cin>>a[i][j] ;
    for ( i =0 ; i < 4 ; i++ )
        for (j =0 ; j< 4 ; j++ )
          sum+=a[i] [j];
    cout << "the summation is:"<<sum<< endl ;
    for ( i =0 ; i < 4 ; i++ )
      {
       for (j =0 ; j< 4 ; j++ )
          cout << a[i] [j]
      }
}
```