**Array in C++**

## Definition

An array is a collection of data that holds homogeneous values. That means values should be in same type

## Syntax

type variable\_name[size]

## Details of Array

int varName[10];

Here, varName has 10 containers,

varName[0], varName[1] to varName[9]

### For example,

Array values stores like below structure,

int value[6] = {5,10,15,20,25,30};

Value[0] = 5

Value[1] : 10

Value[2] : 15

Value[3] : 20

Value[4] : 25

Value[5] : 30

## Example Program

/\* Example Program For Single Dimensional Array In C++ Programming Language

Array Example In C++\*/

// Header Files

#include <iostream>

#include<conio.h>

using namespace std;

int main()

{

int i;

// declaring and Initialising array in C

int value[6] = {5,10,15,20,25,30};

cout<<"Single Dimensional Array In C++ Example Program\n";

for (i=0;i<6;i++)

{

// Accessing each variable using for loop

cout<<"Position : "<<i<<" , Value : "<< value[i]<<" \n";

}

// Wait For Output Screen

getch();

//Main Function return Statement

return 0;

}

## Sample Output

Position : [0] , Value : 5

Position : [1] , Value : 10

Position : [2] , Value : 15

Position : [3] , Value : 20

Position : [4] , Value : 25

Position : [5] , Value : 30

## Read Array and Print Array C++ Example Program

/\*##Read Array and Print Array In C++\*/

/\*##Simple Programs In C++, Array Example Programs In C++\*/

// Header Files

#include <iostream>

#include<conio.h>

using namespace std;

#define ARRAY\_SIZE 5

int main()

{

int numbers[ARRAY\_SIZE], i;

cout<<"Read Array and Print Array In C++ Example Program\n";

cout<<"Reading Array with Position : \n";

for (i = 0; i < ARRAY\_SIZE; i++)

{

cout<<"Enter the Number : "<< (i+1) <<" : ";

cin>>numbers[i];

}

cout<<"\nPrinting Array: \n";

for (i = 0; i < ARRAY\_SIZE; ++i)

{

cout<<numbers[i];

}

getch();

return 0;

}

## Sample Output

Reading Array with Position :

Enter the Number : 1 : 45

Enter the Number : 2 : 67

Enter the Number : 3 : 23

Enter the Number : 4 : 90

Enter the Number : 5 : 12

Printing Array:

45

67

23

90

12

## Simple Searching In Array Example

/\*##Simple Searching In Array\* C++ Example\*/

/\*##Searching Programs in C++, Array Example Programs in C++\*/

// Header Files

#include <iostream>

#include<conio.h>

using namespace std;

#define ARRAY\_SIZE 5

int main()

{

int numbers[ARRAY\_SIZE], i ,search\_key;

cout<<"Simple C++ Example Program for Simple Searching In Array\n";

// Read Input

for (i = 0; i < ARRAY\_SIZE; i++)

{

cout<<"Enter the Number : "<< (i+1) <<" : ";

cin>>numbers[i];

}

cout<<"Enter the key\n";

cin>>search\_key;

/\* Simple Search with Position \*/

for (i = 0; i < ARRAY\_SIZE; i++)

{

if(numbers[i] == search\_key)

{

cout<<"Search Element Found . Position Is :"<< (i+1) <<" \n";

break;

}

if(i == ARRAY\_SIZE - 1)

{

cout<<"Search Element is not in Array.\n";

}

}

}

## Sample Output

Sample 1:

Enter the Number : 1 : 45

Enter the Number : 2 : 56

Enter the Number : 3 : 67

Enter the Number : 4 : 78

Enter the Number : 5 : 34

Enter the key

78

Search Element Found . Position Is : 4

Sample 2:

Enter the Number : 1 : 45

Enter the Number : 2 : 67

Enter the Number : 3 : 48

Enter the Number : 4 : 35

Enter the Number : 5 : 78

Enter the key

23

Search Element is not in Array.