Content 11

Pointers in C++

#### Pointers in C++

A pointer is a data type which holds the address of other data type. The “**&**” operator is called “**address off**" operator, and the "**\***” operator is called “**value at**” dereference operator.

**Code for poiner:**

#include<iostream>

using namespace std;

int main()

{

int a=3;

int \*b=&a;      //\* is deerefference operator

cout<<"Address of a is: "<<&a<<endl;

cout<<"Address of a by pointing is: "<<b<<endl;

cout<<"\n\nValue of a is: "<<a<<endl;

cout<<"Value OF a by pointing is: "<<\*b<<endl;

return 0;

}

**Code:**

Address of a is: 0x61feb8

Address of a by pointing is: 0x61feb8

Value of a is: 3

Value OF a by pointing is: 3

#### Pointer to Pointer

Pointer to Pointer is a simple concept, in which we store the address of one Pointer to another pointer.

**Code:**

#include<iostream>

using namespace std;

int main()

{

int a=3;

int \*b=&a;      //\* is deerefference operator

cout<<"Address of a is: "<<&a<<endl;

cout<<"Address of a by pointing is: "<<b<<endl;

cout<<"\n\nValue of a is: "<<a<<endl;

cout<<"Value OF a by pointing is: "<<\*b<<endl;

// Pointer o pointer

cout<<"\n\n\*\*\*\* Pointer to POinter\*\*\*\*\*\*\*"<<endl;

int \*\*c;

c=&b;

cout<<"Address of b is: "<<&b<<endl;

cout<<"Address of b is by pointer: "<<c<<endl;

cout<<"Value of b is: "<<\*c<<endl;

cout<<"\n\nValue of b is by pointer: "<<\*\*c<<endl;

return 0;

}

**Output:**

Address of a is: 0x61feb8

Address of a by pointing is: 0x61feb8

Value of a is: 3

Value OF a by pointing is: 3

\*\*\*\* Pointer to POinter\*\*\*\*\*\*\*

Address of b is: 0x61feb4

Address of b is by pointer: 0x61feb4

Value of b is: 0x61feb8

Value of b is by pointer: 3