**Content 45**

Pointers: new and delet keywords In C++

**Points you will find in code:**

* Basic concept about the pointers.
* Use of new keyword.
* Use of delet Keyword.

#include <iostream>

using namespace std;

int main()

{

    int a = 8;

    int \*ptr = &a;

    cout << "The value of a: " << a << endl;

    cout << "The Adress of a: " << &a << endl;

    cout << "The value of a by pointer: " << \*ptr << endl;

    cout << "The Adress of a by pointer: " << ptr << endl;

    // Using new operator which will give new value to

    cout << "\n\n The use new operator in pointer....." << endl;

    float \*p = new float(77.4);

    cout << "The value at address of p is: " << \*p << endl;

    cout << "The value address of p is: " << p << endl;

    // Using of new operator for arays

    cout << "\n\n The use of new operator with arrays..." << endl;

    int \*arr = new int[3];

    arr[0] = 10;

    arr[1] = 7;

    \*(arr + 2) = 9;

    cout << "The value of arr[0] is " << arr[0] << endl;

    cout << "The value of arr[1] is " << arr[1] << endl;

    cout << "The value of arr[2] is " << arr[2] << endl;

    // use of delet operator for freeing the space used

    cout << "\n\n The use of new operator with arrays..." << endl;

    int \*array = new int[3];

    arr[0] = 10;

    arr[1] = 7;

    \*(arr + 2) = 9;

    delete[] arr;

    // here all the space got clear so you will got an garbage value.

    cout << "All the space is clear so there is garbage value...." << endl;

    cout << "The value of arr[0] is " << arr[0] << endl;

    cout << "The value of arr[1] is " << arr[1] << endl;

    cout << "The value of arr[2] is " << arr[2] << endl;

    return 0;

}

**Output For all:**

The value of a: 8

The Adress of a: 0x61feac

The value of a by pointer: 8

The Adress of a by pointer: 0x61feac

The use new operator in pointer.....

The value at address of p is: 77.4

The value address of p is: 0xeb6f18

The use of new operator with arrays...

The value of arr[0] is 10

The value of arr[1] is 7

The value of arr[2] is 9

The use of new operator with arrays...

All the space is clear so there is garbage value....

The value of arr[0] is 15429688

The value of arr[1] is 15401152

The value of arr[2] is 9