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### OOPs Recap & Nesting of Member Functions in C++

#### Object-Oriented programming Recap

* Stroustrup initially named C++ language as C with classes because C++ language was almost the same as C language but they added a new concept of classes in it.
* Classes are the extension of structures in C language.
* Structures had limitations such as; members are public and no methods.
* Classes have some additional futures than structures such as; classes that can have methods and properties.
* Classes have a feature to make class members as public and private.
* In C++ objects can be declared along with class deceleration as shown in Code Snippet 1.

class Employee{

// Class definition

} harry, rohan, lovish;

**Code Snippet 1: Declaring Objects with Class Declaration**

#### Nesting of Member Functions

If one member function is called inside the other member function of the same class it is called nesting of a member function. A program to demonstrate the nesting of a member function is shown below.

#include <iostream>

using namespace std;

class binary

{

    string s;

public:

    void take(void);

    void check(void);

    void ones\_compliment(void);

    void display(void);

};

void binary ::take(void)

{

    cout << "Enter an Binary number: ";

    cin >> s;

}

void binary ::check(void)

{

    for (int i = 0; i < s.length(); i++)

    {

        if ((s.at(i) != '1') && (s.at(i) != '0'))

        {

            cout << "Your Input is Invalid" << endl;

            exit(0);

        }

    }

}

void binary ::ones\_compliment(void)

{

    for (int i = 0; i < s.length(); i++)

    {

        if (s.at(i) == '1')

        {

            s.at(i) = '0';

        }

        else

        {

            s.at(i) = '1';

        }

    }

}

void binary ::display(void)

{

    for (int i = 0; i < s.length(); i++)

    {

        cout << s.at(i);

    }

    cout << endl; //after priting all

}

int main()

{

    binary b;

    b.take();

    b.check();  //above(class body) if i put it into the private then will give me an error

    b.display();

    b.ones\_compliment();

    b.display();

    return 0;

}

**Output:**

Enter an Binary nnumber: 10101110

10101110

01010001