Introduction to C++

CLASS- 6

Object Oriented Concepts

C++ Class Example

```
#include <iostream>
class Student {
  public:
     int id;//data member (also instance variable)
     string name;//data member(also instance variable)
     void insert(int i, string n)
      {
         id = i;
         name = n;
      }
     void display()
      {
         cout<<id<<"  "<<name<<endl;
      }
};
```

C++ Class Example

```
int main(void) {
    Student s1; //creating an object of Student
    Student s2; //creating an object of Student
    s1.insert(201, “Amit");
    s2.insert(202, “Anil");
    s1.display();
    s2.display();
    return 0;
}
```

C++ Constructor

In C++, constructor is a special method which is invoked automatically at the time of object creation. It is used to initialize the data members of new object generally. **The constructor in C++ has the same name as class or structure.**

There can be two types of constructors in C++:

- Default constructor
- Parameterized constructor

C++ Default Constructor

A constructor which has no argument is known as default constructor.

It is invoked at the time of creating object.

Ex-

C++ Default Constructor

```
class Employee
 {
   public:
        Employee()
        {
           cout<<"Default Constructor Invoked"<<endl;
        }
};
int main(void)
{
    Employee e1; //creating an object of Employee
    Employee e2;
    return 0;
}
```

- C++ Parameterized Constructor
- Destructor