

CONSTRUCTOR(06-04-2011)

Definition:-

Constructor is a special member function of class which is use to initialize the object.

- ✓ Can't call explicitly
- ✓ Its name is similar to class name.
- ✓ It never returns any value. Reason is implicitly constructor return a value which is reference id and we know that any method return only value at a time.
- ✓ Constructor is implicitly static.
- ✓ No class will possible without constructor.
- ✓ Any class in OOPS language user not define any constructor explicitly then technology implicitly create default constructor.

Constructor has two type:-

1. Default Constructor
2. Parameterized constructor

Default Constructor:-

When constructor has no arguments then it is known as Default Constructor.

Parameterized Constructor:-

When constructor has some arguments then it is known as parameterized constructor.

Uses

- ✓ When non-static data member who carry some static value the programmer need default constructor.
- ✓ When non-static data member carry value dynamically then developer use parameterized constructor.

Example of Default constructor

```
Class Temp
{
    int x, y;
```

Subject : Programming in Java

Paper Code : CC-3

Course : BCA, Sem-II

©Chanchal Acharya,

e-mail : c.acharya.me@gmail.com

```
Temp()// Default Constructor
{
    x=0;
    y=0;
}
Void show()
{
    System.out.println("x="+x);
    System.out.println("y="+y);
}
Public static void main(String[]args)
{
    Temp t=new Temp();
    t.show();
}
}
```

Example of Parameterized Constructor

```
Class Temp
{
    int x,y;
    Temp(int x,int y)//Parameterized Constructor
    {
        this.x=x;
        this.y=y;
    }
    Void show()
    {
        System.out.println("x="+x);
        System.out.println("y="+y);
    }
    Public static void main(String[]args)
    {
        Temp t=new Temp(20,30);
        t.show();
    }
}
```

COPY CONSTRUCTOR

When any constructor holds the duplicate reference id of another constructor which will all ready define then it is known as copy constructor, but generally it is a parameterized constructor.

Example of copy constructor:-

Class Temp

```
{
    int x,y;
    Temp(int x, int y)//Parameterized Constructor
    {
        this.x=x;
        this.y=y;
    }
    Temp(Temp t)
    {
        this.x=t.x;
        this.y=t.y;
    }
    Void show()
    {
        System.out.println("x="+x);
        System.out.println("y="+y);
    }
    Public static void main(String[]args)
    {
        Temp t=new Temp(30,40);
        t.show();
        Temp t1=new Temp(t);
        t1.show();
    }
}
```

Optional

this.x=t.x;
this.y=t.y;

CONSTRUCTOR CHAINING

- ✓ More than one constructor joins each other.(07-04-2011)
- ✓ It will use to separate the work which will automatically upload when object will created.
- ✓ It will help to remove the complexity and helps in debugging.
- ✓ For constructor chaining “this” is required. Without “this” keyword it will not possible.
- ✓ In this concept single object executed all constructors in a sequence which will construct by programmer.

Example:-

Class Temp

```
{
    Temp()
    {
        this(20);// 1
        System.out.println("Default Constructor");// 5
    }
    Temp(int a)
    {
        this(20,30);// 2
        System.out.println(a);// 4
    }
    Temp(int a,int b)
    {
        System.out.println(a+b);// 3
    }
    public static void main(String[]args)
    {
        new Temp();//Anonymous object
    }
}
```

Output:-

50

20

Subject : Programming in Java

Paper Code : CC-3

Course : BCA, Sem-II

©Chanchal Acharya,

e-mail : c.acharya.me@gmail.com

Default Constructor