



CONSTRUCTORS IN JAVA

Velocity



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VELOCITY
Pune

Constructor-

It is the special method whose name is same as class name called as constructor.

It is invoked by JVM automatically when you create the object of class.

It does not return anything even void also.

There are three types of constructor are as

- No- argument constructor
- Parameterized constructor
- Default constructor

No- argument constructor-

A constructor that does not accept any arguments called as

```
package com.test;

public class Test2 {

    String name;

    public Test2() {
        name = "velocity";
    }

    public static void main(String[] args) {

        Test2 test2 = new Test2();
        System.out.println("Name is>>" + test2.name);
    }

}
```

Output-

Name is>>velocity

Default constructor-

A constructor that is automatically created by the Java compiler if it is not explicitly defined.

Program for default constructor-

```
package com.test;

public class Employee {

    public Employee() {
        System.out.println("this is the default
constructor.");
    }

    public static void main(String[] args) {

        Employee e = new Employee();
    }
}
```

Output-

this is the default constructor.

In this example, Employee () is default constructor.

Program for parameterized constructor-

A constructor with arguments called as parameterized constructor.

```
package com.test;

public class Test2 {

    int id;
    String name;
    String city;

    public Test2(int userId, String userName, String
userCity) {
        id = userId;
        name = userName;
    }
}
```

```

        city = userCity;
        System.out.println("id>>" + id);
        System.out.println("name>>" + name);
        System.out.println("city>>" + city);
    }

    public static void main(String[] args) {

        Test2 test2 = new Test2(10, "ram", "pune");
    }

}

```

Output-

id>>10

name>>ram

city>>pune

When you don't write any constructor in the class then default constructor will be added by JVM automatically at the compile time.

When you write any constructor in the class then default constructor will not added by JVM.

Constructor does not have any return type. If you write any return type then it will be called as method.

What is the use of constructor-?

If you want to execute some code at object creation. In other words, it is used for generally initialization of global variables.

There are five ways to calling the constructor as

```
Employee e= new Employee();  
super();  
this();  
new Employee();  
class.forName("com.test").newInstance();
```

Constructor can be overloaded because we can write same name with different arguments. Program for overloading the constructor.

```
package com.test;  
  
public class Employee {  
  
    int id;  
    String name;  
    String country;  
  
    public Employee(int id, String name, String country) {  
        this.id = id;  
        this.name = name;  
        this.country = country;  
    }  
  
    public Employee(int id, String name) {  
        this.id = id;  
        this.name = name;  
    }  
  
    @Override  
    public String toString() {  
        return "Employee [id=" + id + ", name=" + name + ",  
country=" + country + "];"  
    }  
  
    public static void main(String[] args) {
```

```
Employee e = new Employee(1, "Alex", "canada");  
Employee e1 = new Employee(1, "Adam");  
System.out.println(e);  
System.out.println(e1);  
}  
}
```

Constructor cannot be overridden because we can't write multiple constructor with same arguments. If you are tried to write it then you will get compiler time error "Duplicate method Employee".

Note- private Constructor are mostly used in singleton design pattern in java.