Constructor and Its Types

- A constructor in Java is similar to a method that is invoked when an object of the class is created.
- Unlike Java methods, a constructor has the same name as that of the class and does not have any return type.
- Constructors help in constructing the objects of a class.
- Multiple objects can be constructed using the same constructor.
- One object can call one constructor only once.
- Constructor is called as many times as we create the object of the class.

Types of Constructor

In Java, constructors can be divided into 3 types:

1. No-Args Constructor / Zero parameter
2. Parameterized Constructor
3. Default Constructor

1. Java No-Args Constructors

- Similar to methods, a Java constructor may or may not have any parameters (arguments).
- If a constructor does not accept any parameters, it is known as a no-argument constructor
- The programmer will create the no-args constructor

2. Java Parameterized Constructor

- A Java constructor can also accept one or more parameters. Such constructors are known as parameterized constructors (constructor with parameters).

3. Java Default Constructor

- If we do not create any constructor, the Java compiler automatically create a no-args constructor during the execution of the program. This constructor is called default constructor.
- Here, we haven't created any constructors. Hence, the Java compiler automatically creates the default constructor.
- The default constructor initializes any uninitialized instance variables with default values.

Type	Default Value
boolean	false
byte	0
short	0
int	0
long	0L
char	\u0000
float	0.0f
double	0.0d
object	Reference null

Class20_StaticKeyword.java | Class18_Constructor.java | Class19_Constructors.jav

```java
package pack1;

public class Class18_Constructor {
//Constructors
//these are special methods
//they don't have return type
//their name is same as the class name
//constructors are used to initialize class instance variable.
//constructors are called when we create object of the class.

    int a;              //default value  = 0
    static int b;       //default value  = 0

    Class18_Constructor () {
        System.out.println("Constructor Started.");
        a=16;
        System.out.println("This is a Constructor.");
    }

    public static void main(String[] args) {

        Class18_Constructor obj = new Class18_Constructor();
        System.out.println(b);
        System.out.println(obj.a);

        new Class18_Constructor();
        System.out.println(b);
        System.out.println(new Class18_Constructor().a);
    }
}
```

Class20_StaticKeyword.java | *Class18_Constructor.java | Class19_Constructors.java

```java
package pack1;

public class Class19_Constructors {
/*Types of constructors-
 * 1) Default constructor
 * 2) No args / Zero parameter Constructor
 * 3) Parameterized Constructor
 */

    int a;
    boolean var;

    Class19_Constructors(){          //No args / Zero parameter Constructor
        System.out.println("This is a zero parameter constructor.");
    }

    Class19_Constructors(int a){     //one parameter Constructor
        System.out.println("This is one parameter constructor");
    }

    Class19_Constructors(int a, String name){       //two parameter Constructor
        System.out.println("This is two parameter constructor.");
        System.out.println(a);
        System.out.println(name);
    }

    public static void main(String[] args) {

        Class19_Constructors obj = new Class19_Constructors();
        new Class19_Constructors(10);
        new Class19_Constructors(12, "RJ Vicky");
        System.out.println(new Class19_Constructors().a);
        System.out.println(obj.var);

    }

}

```