

Session-10 Constructors

Sunday, July 10, 2022 12:50 PM

Today's Topic

- What is Constructors
- How to create Constructors
- Rules for creating Java constructor
- Types of Constructors
 - No argument Constructors (Default Constructor)
 - Parameterized Constructors

What is Constructor

A constructor in Java is a **special method** that is used to **initialize objects**. The constructor is **called** when an **object of a class is created**. It can be used to **set initial values for object attributes**.

Abstract- can't have body in it.

1. what is constructor
2. Rules to create constructor

- (a) Constructor name must be the same as its class name
- (b) A Constructor must have no explicit return type
- (c) A Java constructor cannot be **abstract, static, final**

Note: we can have private, protected, public or default constructor in Java.

3. syntax of constructor

```
class className()
{
    className()
    {
        //constructor body
        //initialise values of the class attributes
    } //exit
}
```

4. Constructor without parameter
5. Constructor with parameter

```

1 package java_hub;
2
3 public class New_41_Constructor {
4
5     int x; // attributes of class
6
7     New_41_Constructor(){
8
9         x=10;
10    }
11
12
13
14    public static void main(String[] args) {
15
16        New_41_Constructor obj = new New_41_Constructor();
17
18        System.out.println(obj.x);
19    }
20
21 }
22

```

Console × Problems × Debug Shell × Coverage × TestNG
 terminated> New_41_Constructor1 [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (24-Aug-2022, 12:31:13 am – 12:31:13 am) [pid: 14800]
 Alto 2012

```

1 package java_hub;
2
3 public class New_41_Constructor1 {
4
5     String car;
6     int year;
7
8
9     // constructor with parameter
10    New_41_Constructor1(String carname,int yr){
11        car=carname;
12        year=yr;
13    }
14
15    public static void main(String[] args) {
16
17        New_41_Constructor1 obj = new New_41_Constructor1("Alto", 2012);
18        System.out.println(obj.car + " " + obj.year);
19    }
20
21
22
23
24
25 }
26
27 }
28

```

| Visibility | Default | Public | Protected | Private |
|---------------------------------------|---------|--------|-----------|---------|
| Same class | Yes | Yes | Yes | Yes |
| Class in same package | Yes | Yes | Yes | No |
| Subclass in same package | Yes | Yes | Yes | No |
| Subclass outside the same package | No | Yes | Yes | No |
| Non-subclass outside the same package | No | Yes | No | No |
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