CONSTRUCTOR-2

Velocity

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VELOCITY

pune

Constructor chaining-

Constructor chaining is the process of calling one constructor from another constructor with respect to current object. It occurs through inheritance. When we create an instance of a derived class, all the constructors of the inherited class (base class) are first invoked, after that the constructor of the calling class (derived class) is invoked.

Why to use?

One of the main use of constructor chaining is to avoid duplicate codes while having multiple constructor (by means of constructor overloading) and make code more readable.

Rules for constructor chaining

1. An expression that uses this keyword must be the first line of the constructor.
2. Order does not matter in constructor chaining.
3. There must exist at least one constructor that does not use this keyword.

How to achieve constructor chaining in java

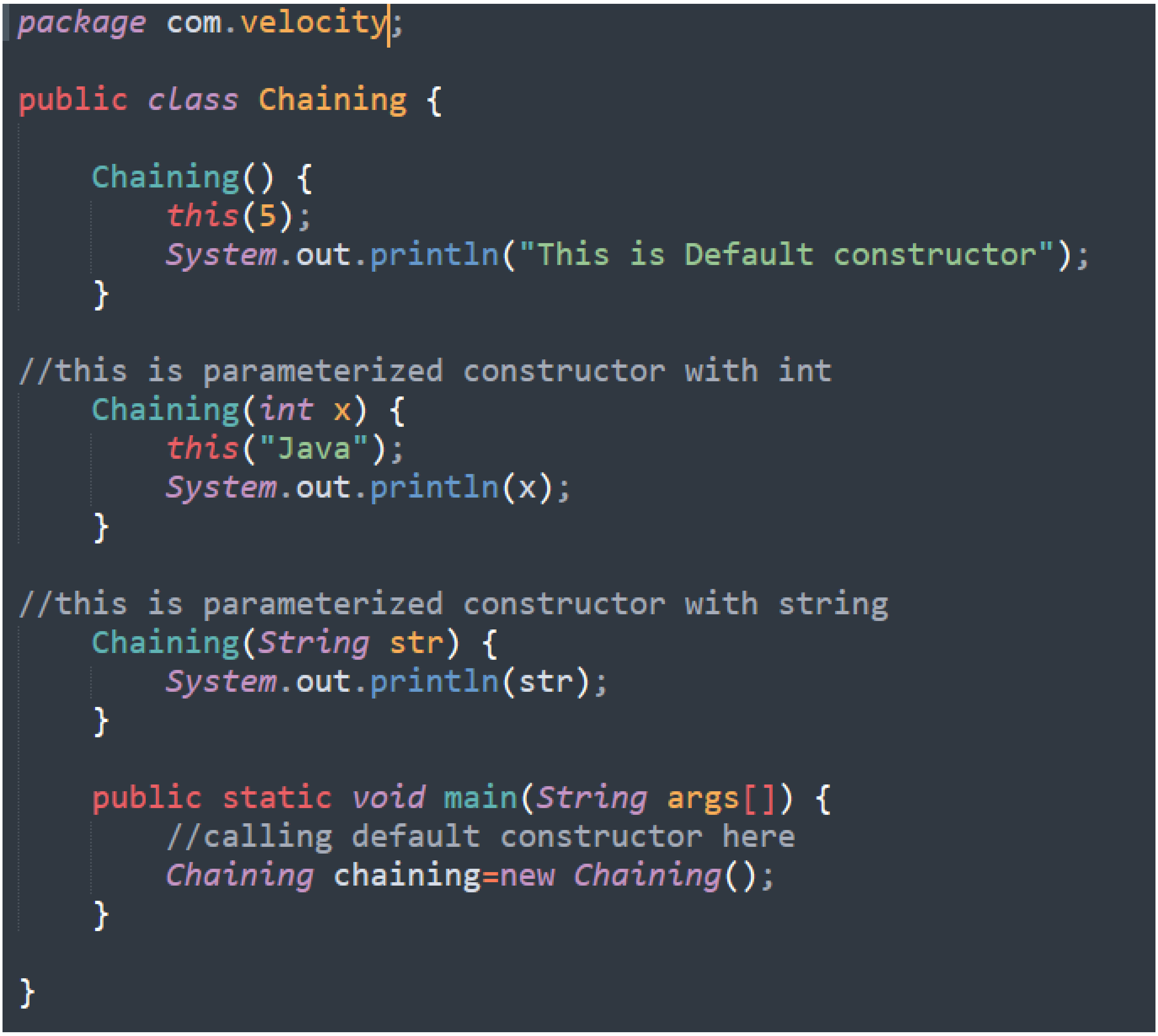
1. **Within the same class-**

   If the constructors belong to the same class, we use this keyword.

2. **From the parent class and child class-**

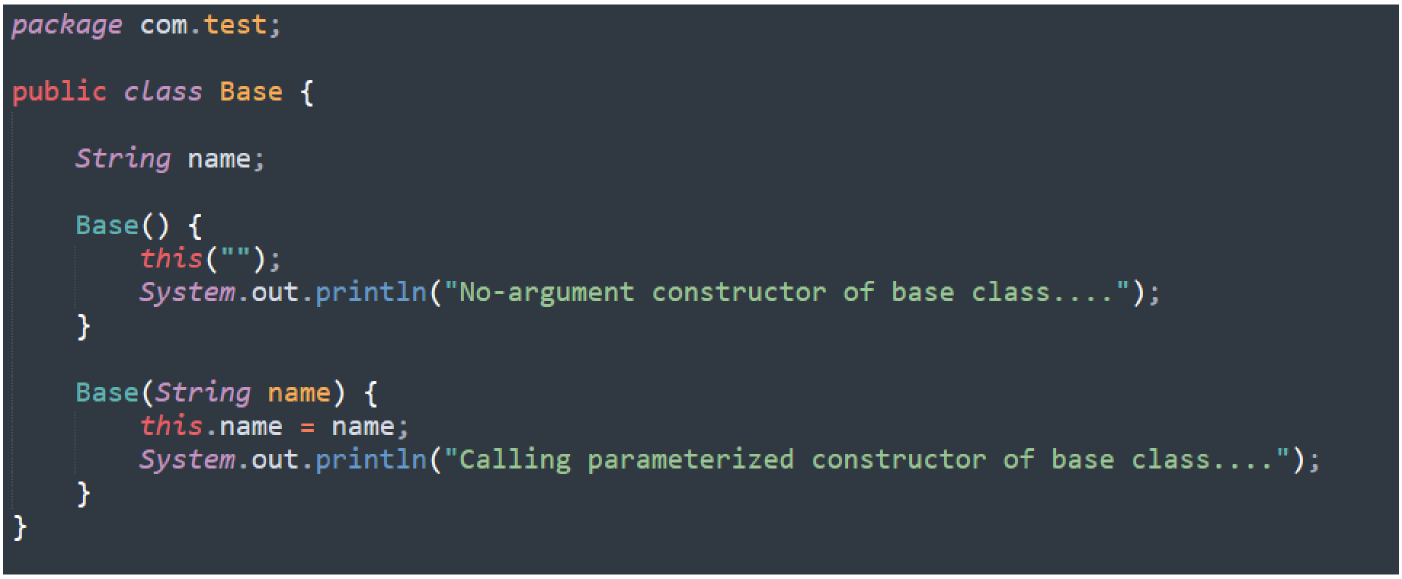
   If the constructor belongs to different classes (parent and child classes), we use the super keyword to call the constructor from the parent class.

#Program-1: Program for constructor chaining within same class

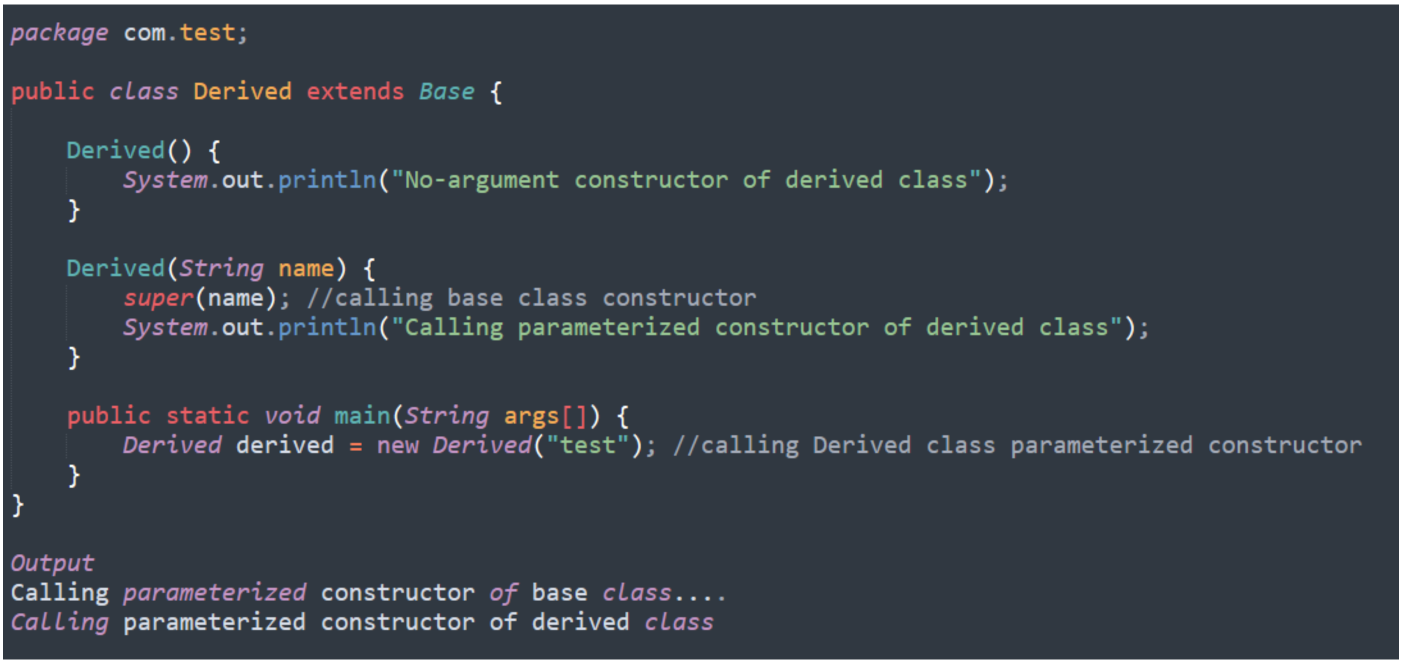


```java
package com.velocity;

public class Chaining {

    Chaining() {
        this(5);
        System.out.println("This is Default constructor");
    }

//this is parameterized constructor with int
    Chaining(int x) {
        this("Java");
        System.out.println(x);
    }

//this is parameterized constructor with string
    Chaining(String str) {
        System.out.println(str);
    }

    public static void main(String args[]) {
        //calling default constructor here
        Chaining chaining=new Chaining();
    }

}
```

#Program-2: Program for constructor chaining within super and sub class



```
package com.test;

public class Base {

    String name;

    Base() {
        this("");
        System.out.println("No-argument constructor of base class....");
    }

    Base(String name) {
        this.name = name;
        System.out.println("Calling parameterized constructor of base class....");
    }
}
```



```
package com.test;

public class Derived extends Base {

    Derived() {
        System.out.println("No-argument constructor of derived class");
    }

    Derived(String name) {
        super(name); //calling base class constructor
        System.out.println("Calling parameterized constructor of derived class");
    }

    public static void main(String args[]) {
        Derived derived = new Derived("test"); //calling Derived class parameterized constructor
    }
}

Output
Calling parameterized constructor of base class....
Calling parameterized constructor of derived class
```