Constructor and Constructor overloading

In Java, a constructor is a special type of method that is called when an object of a class is created. The purpose of a constructor is to initialize the object's data members and provide an initial state for the object. In this tutorial, we will discuss constructors and constructor overloading in Java with appropriate examples.

Constructor in Java In Java, a constructor is declared with the same name as the class and has no return type. Here is the basic syntax of a constructor in Java:

```
public class ClassName {
        ClassName() {
        // constructor code
        }
}
```

The constructor code is where the object's data members are initialized.

Example of Constructor in Java

```
public class Person {
        String name;
        int age;
        Person(String n, int a) {
        name = n;
        age = a;
        }
}
```

In the above example, we have a Person class with two data members: name and age. The constructor of the Person class takes two parameters, name and age, and initializes the data members of the object.

Constructor Overloading in Java Constructor overloading is a technique in Java where a class can have multiple constructors with different parameter lists. Each constructor can initialize the object's data members in a different way. Here is the basic syntax of constructor overloading:

```
public class ClassName {

        ClassName() {

        // constructor code

        }

        ClassName(parameters) {

        // constructor code

        }

}
```

Example of Constructor Overloading in Java

```
public class Person {
        String name;
        int age;
        Person() {
        name = "Unknown";
        age = 0;
        }
        Person(String n) {
        name = n;
        age = 0;
        }
        Person(String n, int a) {
        name = n;
        age = a;
        }
}
```

In the above example, we have three constructors for the Person class. The first constructor initializes the name and age to default values, the second constructor initializes the name to a

specified value and age to default value, and the third constructor initializes both name and age to specified values.

Conclusion Constructors are an essential part of Java classes, and they are used to initialize the data members of an object. Constructor overloading is a powerful technique that allows a class to have multiple constructors with different parameter lists. By understanding constructors and constructor overloading, you can create more robust and flexible Java classes.