

Constructors

1.What is a 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.

2.What is Constructor chaining?

constructor chaining is a sequence of invoking constructors upon initializing an object. It is used when we want to invoke a number of constructors, one after another by using only an instance.

3.Can we call a subclass constructor from superclass constructor?

No. We cannot call a subclass constructor from a superclass constructor. The reason being, that an instance of a subclass is a instance of the superclass while the vice-a-versa is not true.

4.What happens if you keep a return type for a constructor?

One of the main difference between constructor and method is that constructors do not return any value. In simpler terms, the constructor cannot use the return type. The reason is that you don't need to return any value.

The purpose of a constructor is to initialize an object. It assigns value to the data members, not return them.

5.What is No-arg constructor?

A constructor is also called "Default Constructor" when it doesn't have any parameter.

6.How is No-argument constructor different from the default constructor?

Default Constructor(No-arg)

- A default constructor is a 0 argument constructor which contains a no-argument call to the super class constructor.
- To assign default values to the newly created objects is the main responsibility of default constructor.
- Compiler writes a default constructor in the code only if the program does not write any constructor in the class.
- The access modifier of default constructor is always the same as a class modifier but this rule is applicable only for "public" and "default" modifiers.

Parameterized Constructors

- The parameterized constructors are the constructors having a specific number of arguments to be passed.

- The purpose of a parameterized constructor is to assign user-wanted specific values to the instance variables of different objects.
- A parameterized constructor is written explicitly by a programmer.
- The access modifier of default constructor is always the same as a class modifier but this rule is applicable only for “public” and “default” modifiers.

7. When do we need constructor overloading?

Sometimes there is a need of initializing an object in different ways. This can be done using constructor overloading. Different constructors can do different work by implementing different line of codes and are called based on the type and no of parameters passed.

8. What is default constructor explain with an example

The default constructor is also called the Empty Constructor. This constructor is inserted by the Java compiler into the class code where there is no constructor implemented by the programmer. Default constructor is inserted during compilation and hence it will appear only in ‘.class’ file and not in the source code.

Example:

```
class Main {

    int num;
    boolean flag;
    public static void main(String[] args) {

        // A default constructor is called
        Main obj = new Main();

        System.out.println("num:default value = " + obj.num);
        System.out.println("flag:default value = " + obj.flag);
    }
}
```