Bank Soal OFSE Programming

# Java Class and Methods

## What is meant by garbage collection?

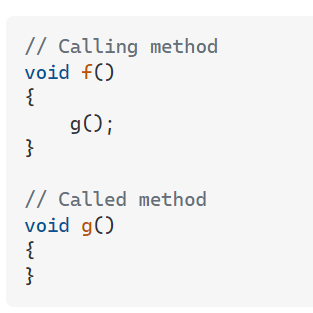
Garbage collection is the process of deconstructing unused objects or objects without reference to save memory. In Java, this process is automatically done by having the virtual machine of Java constantly checking for objects with no reference. Objects with no reference, will automatically be deconstructed.

## What are methods and how are they defined?

A method in Java is a block of code that, when called, performs specific actions mentioned in it. For instance, if you have written instructions to draw a circle in the method, it will do that task. You can insert values or parameters into methods, and they will only be executed when called.

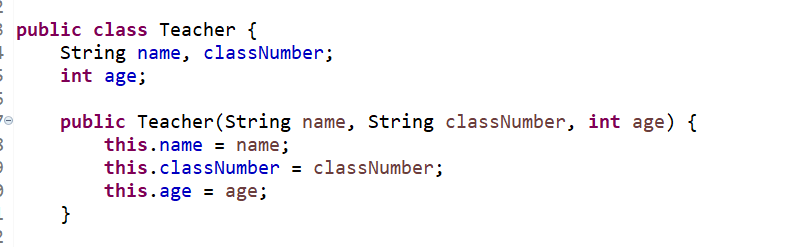
## What is calling method? Give an example!

The calling method is the method that is being called. The callee is the method that calls the method.



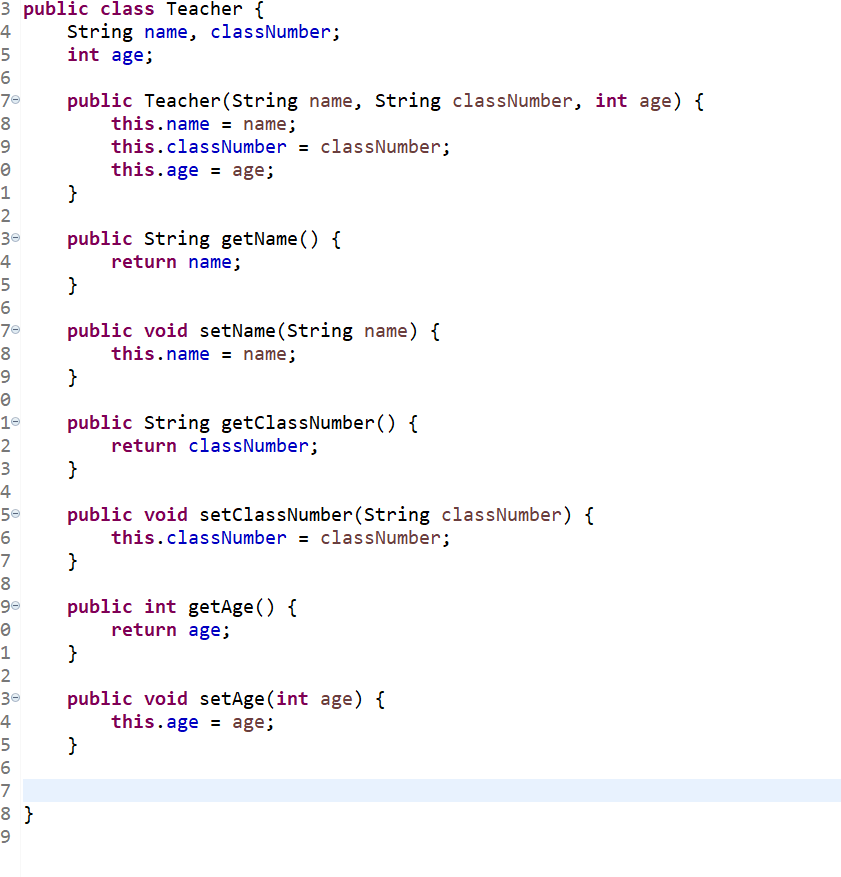
## What is a constructor? Give an example!

It is a method that is used to initialize an object. The constructor is called when an object of a class is created.



## Suppose a given instance variable has been declared private. Can this instance variable manipulated by methods outside its class? Explain your answer. (a.yes, b.no)

No, private methods cannot be directly be manipulated from outside of its class. However, it can be manipulated from a method from inside its class. For example, using a “setter” and “getter” methods.



## Which of the following statements can be used to describe a public method? (It is accessible to all other classes in the hierarchy, It is accessible only to subclasses of its parent class, It represents the public interface of its class the only way to gain access to this method is by calling one of the public class methods)

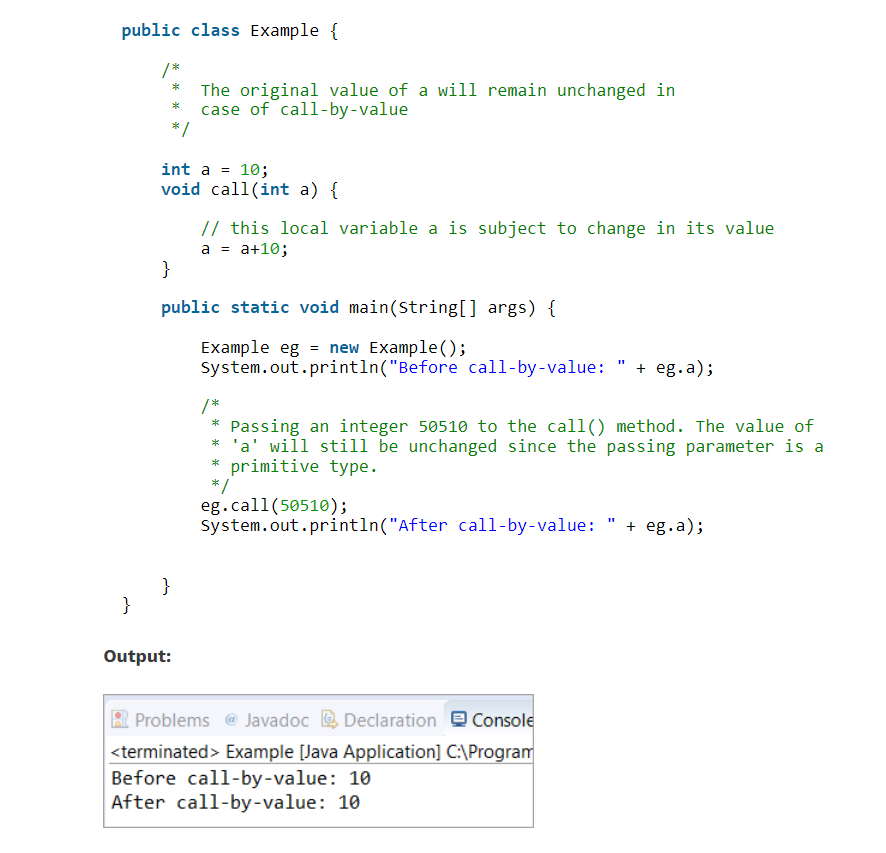
It is accessible to all other classes in the hierarchy.

## What is meant by "Passing by value" and " Passing by reference"?

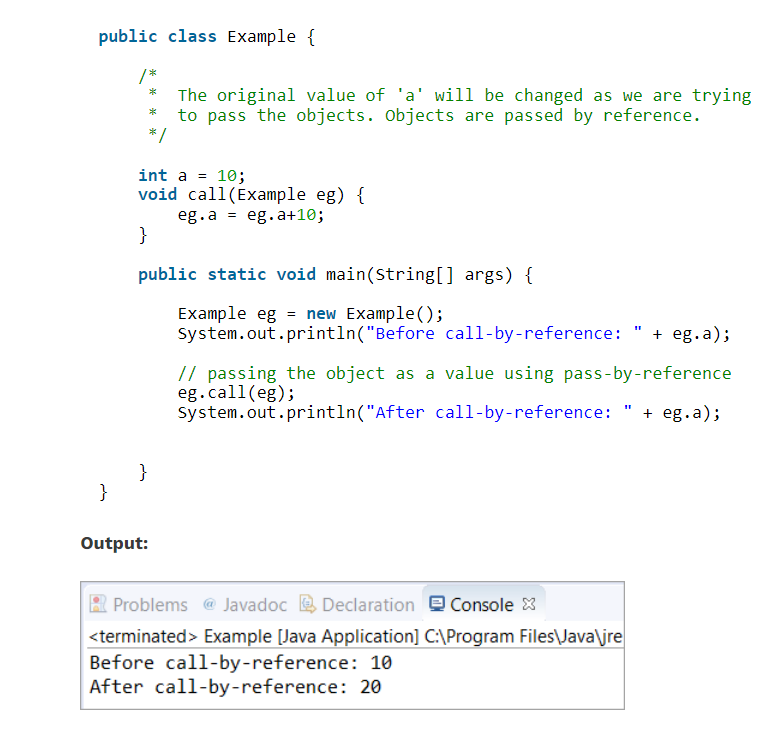
Pass by Value: It is a process in which the function parameter values are copied to another variable and instead this object copied is passed. This is known as call by Value.

Pass by Reference: It is a process in which the actual copy of reference is passed to the function.

Pass by value example:



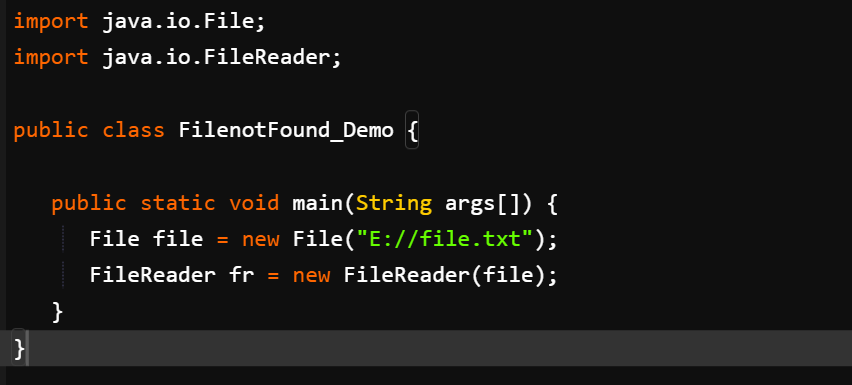
Pass by reference example:

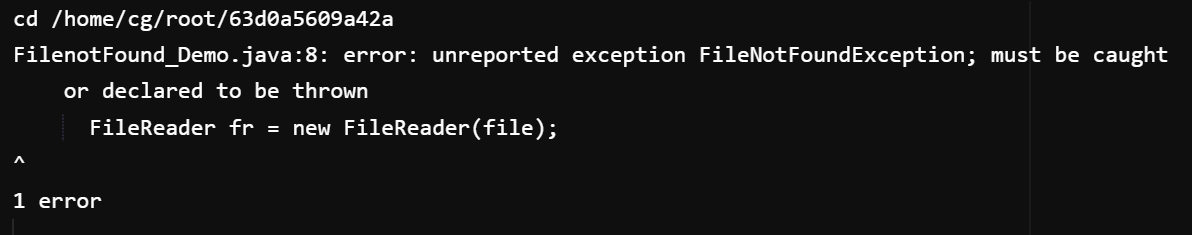


## What is an “unchecked runtime exception”?

A checked exception is an exception that occurs at the compile time, these are also called as compile time exceptions. These exceptions cannot simply be ignored at the time of compilation, the programmer should take care of (handle) these exceptions.

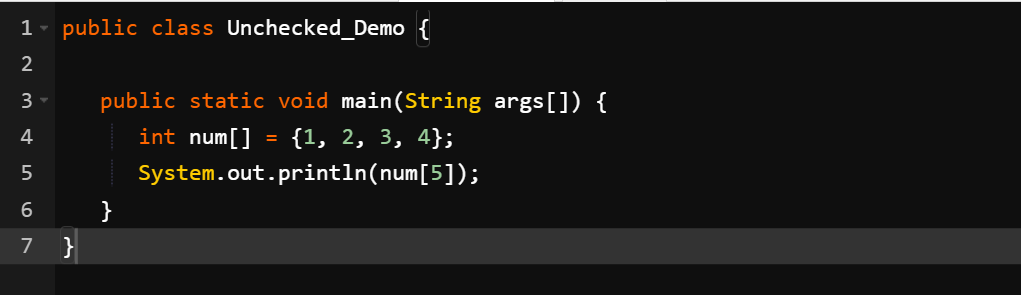
Checked exception example:

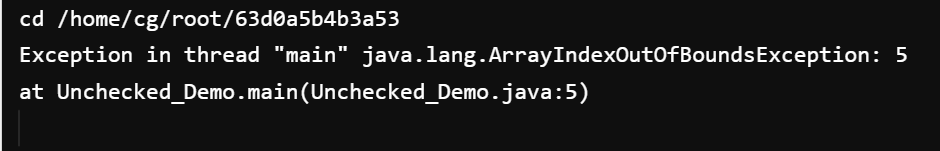




An unchecked exception is an exception that occurs at the time of execution. These are also called as Runtime Exceptions. These include programming bugs, such as logic errors or improper use of an API. Runtime exceptions are ignored at the time of compilation.

Unchecked runtime exception example:





## What are identifiers and what is naming convention?

Identifiers in Java are a sequence of characters to identify something in a program. They are names given to a class, variable, package, method, or interface and allow the programmer to refer to the specific item from any place in the program.

Java naming convention is a rule to follow as you decide what to name your identifiers such as class, package, variable, constant, method, etc. But it is not forced to follow. So, it is known as convention not rule. These conventions are suggested by several Java communities such as Sun Microsystems and Netscape.

