

Glossary

Building Blocks of Java Programming

Welcome! This alphabetized glossary contains many terms used in this module. Understanding these terms is essential when working in the industry, participating in user groups, and participating in other certificate programs.

Term	Definition
Abstract class	A class that cannot be instantiated and is meant to be subclassed.
Abstraction	The concept of hiding implementation details and exposing only essential features.
ArrayList	A resizable implementation of the list interface in Java.
break statement	A statement that exits a loop or switch statement immediately.
catch block	A block of code that handles exceptions thrown in a try block.
charAt method	A method that returns the character at a specific index in a string.
Checked exception	An exception that must be handled using try-catch or declared using throws.
Child class	A class that inherits from another class.
Clarity	A benefit of comments that clarify complex logic, making it easier to understand.
Class	A blueprint for creating objects, containing attributes and methods that define behaviors.
Class attribute	A variable that is declared within a class and used to store object data.
Collaboration	A benefit of comments that helps team members understand each other's work in a team environment.
Comment	A note in the code that is not executed by the program and is used to explain, clarify, or annotate parts of the code for developers.
Constructor	A special method in a class that initializes new objects.
continue statement	A statement that skips the current iteration of a loop and moves to the next one.
Documentation comment	A comment that is used for generating documentation using tools such as Javadoc.
do-while loop	A loop that executes at least once before checking the condition.
Encapsulation	A principle of restricting access to certain details of a class and exposing only necessary parts.
Entry point	A starting method of a Java application, typically the main method.
equals method	A method that compares the values of two strings or objects for equality.
Exception	An event that disrupts the normal flow of a program.
extends keyword	A keyword used by a class to indicate that it is inheriting from another class.
final keyword	A keyword used to declare constants, prevent method overriding, or prevent inheritance.
Folder structure for packages	A directory structure on the filesystem that should match the package declaration.
for loop	A loop that executes a block of code a specific number of times.
Garbage collection	A process by which Java automatically deallocates unused objects to free memory.
implements keyword	A keyword used by a class to indicate that it is implementing an interface.
Import statement	A statement that is used to include classes from other packages in a Java source file.
Inheritance	A process by which a class acquires properties and methods of another class.
Interface	A collection of abstract methods that a class can implement.
length method	A method that returns the length of a string or an array.
List	An ordered collection that allows duplicate elements and provides indexed access.
main class	A class in a Java application that contains the main method, serving as the entry point.
Maintenance	A benefit of comments that provides context, making it easier to understand the code when revisiting it later.
Math class	A class in Java that provides mathematical functions such as sqrt, pow, and abs.
Method	A function that is defined inside a class and performs a specific action.
Method signature	A unique identifier of a method, consisting of its name and parameter list.
Multi-line comment	A comment that spans multiple lines.
nextInt method	A method that reads an integer input using Scanner.
nextLine method	A method that reads an entire line of input using Scanner.
null keyword	A keyword that represents an absence of value in an object reference.

Term	Definition
Object	An instance of a class that represents a specific entity with attributes and behaviors.
Object instantiation	A process of creating an instance of a class using the new keyword.
Overloading	A process of defining multiple methods with the same name but different parameters.
Override	A process of defining a method in a subclass that replaces a method in the parent class.
Package	A way to group related classes and interfaces together to avoid naming conflicts and manage large projects.
Package declaration	A statement that uses the package keyword at the top of a Java source file to define a package.
Parameter	A variable passed into a method to provide input values.
Parent class	A class that is extended by another class in inheritance.
parseDouble method	A method that converts a string to a double.
parseInt method	A method that converts a string to an integer.
Polymorphism	A concept that allows an object to take on multiple forms, usually through method overriding and overloading.
Private access modifier	A modifier that restricts access to a class member so it can only be accessed within the same class.
Public access modifier	A modifier that allows a class, method, or variable to be accessible from anywhere in the application.
Random class	A class that is used to generate random numbers.
replace method	A method that replaces occurrences of a substring within a string.
return type	A data type of the value that a method returns.
Scanner class	A class that is used to take input from the user.
Single-line comment	A comment that starts that applies only to the text following it on that line.
Source file naming	A rule that states each public class should be in its own source file, named exactly after the class with a .java extension.
split method	A method that splits a string into an array based on a given delimiter.
Static method	A method that belongs to a class rather than an instance and can be called without creating an object.
Static variable	A variable that belongs to a class rather than any specific instance.
String	A sequence of characters that represents textual data.
substring method	A method that extracts a portion of a string based on the given indexes.
super keyword	A keyword that is used to refer to the parent class of the current object.
System.out.println	A method that is used to print output to the console.
this keyword	A keyword that is used to reference the current instance of a class.
throw keyword	A keyword that is used to manually raise an exception.
throws keyword	A keyword that is used in a method signature to declare that the method may throw exceptions.
toLowerCase method	A method that converts a string to lowercase.
toUpperCase method	A method that converts a string to uppercase.
try block	A block of code where exceptions are checked.
Unchecked exception	An exception that does not require explicit handling.
while loop	A loop that continues executing as long as a condition is true.



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