Glossary: Object-Oriented Programming in Java

Estimated time: 7 minutes

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 modifiers	Used for classes and methods. Abstract classes cannot be instantiated and must be extended, while abstract methods must be implemented in subclasses.
Access modifiers	Keywords that control the visibility and accessibility of classes, methods, and variables.
Buffer overflow	Vulnerability that occurs when a program writes more data to a buffer than it can hold, potentially causing security issues.
Class	Serves as a blueprint for creating objects.
Constructor	Initializes objects by assigning values to their attributes when it is created.
Data hiding	Hides private data, preventing unauthorized access and maintaining security.
Declaration	Defines a reference variable.
Default constructor	Automatically provided by Java when no constructors are explicitly defined in a class. It takes no parameters and is used to initialize the object with default values.
Default access modifier	Used when no access modifier is specified. It allows an element to be accessible only within the same package.
Encapsulation	Bundling an object's data and the methods that operate on that data into a single unit, typically a class.
Final modifiers	Keyword in Java that makes a variable, method, or class immutable, so that its value or behavior cannot be modified once it has been initialized.
Getter method	Enables other classes to read values.
Inheritance	A way to create new classes based on existing ones.
Initialization	Assigns values to the object's attributes.
Instantiation	Creates a new object.
Method call	Process of invoking a method on an object or class to execute its defined behavior.
Methods	Actions performed by an object.
No-arg constructor	Type of default constructor that does not accept any arguments or parameters. It allows the creation of an object without requiring any initial values to be provided by the user.
Non-access modifiers	Keywords that add extra details about elements, influencing their behavior while ensuring access levels remain unaffected.
Object	Instance of a class that represents a real-world entity or concept.
Parameterized constructor	Allows values to be passed to an object at the time of creation, enabling specific initialization of the object's attributes.
Polymorphism	Allows objects to be treated as instances of their parent class, meaning different objects can be accessed through the same interface.
Private modifier	Restricts access to an element, allowing it to be accessed only within the same class where it is declared.
Properties	Characteristics or attributes of an object.
Protected modifier	Allows access to a class member within the same package and by subclasses, even in different packages.
Public modifier	Allows elements such as classes, methods, or variables to be accessible from any other class in any package, making the element globally accessible throughout the program.
Setter method	Allows modification with validation.
Static modifier	Implies that a member belongs to the class, not to instances, allowing access without creating an object.
Subclass	Inherits properties and methods from a larger class known as a superclass, allowing the creation of a new class with added or modified features.

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