

Java Programming Nanodegree Glossary



Course 1: Java Fundamentals

Access modifier

A keyword (e.g., public, private) that determines how other classes are allowed to access your variables and methods.

Array

A fixed-sized data structure that is used to store multiple values of a single type.

Calendar

An abstract class that provides methods for manipulating date and time.

Class

A block of code that works as a blueprint for all objects created (instantiated) from it, defining those objects' state and behavior.

Collection

A framework that consists of different data structures and utility classes.

Date

A class that represents a specific instance in time.

Enums

A special data type of constants that allows a variable to be set from an enumerated list.

Error

A class that is used to indicate a serious problem that the application should **not** try to handle.

Exception

A class that is used when there is a less catastrophic event that the application **should** try to handle.



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Function

Any block of reusable/callable code; note that a method is simply a function that is associated with an object.

Garbage collection

A background process that removes unused objects from the heap.

Generics

Classes and that allow us to write methods to handle a whole group of different data types.

Heap memory

Memory that is used to store objects and object data.

Inheritance

One class acquiring properties and methods from another class.

Instantiate

To create an instance of a class.

Integrated Development Environment (IDE)

An application (or integrated set of applications) for writing code and developing software.

IntelliJ

A popular Integrated Development Environment (IDE) for Java made by JetBrains.

Interface

An abstract type used to group related methods that a subclass must implement.

JavaDoc

Documentation generator that produces a searchable HTML document defining the classes and interfaces of an application.



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Keyword

A word that has a predefined meaning in the Java language. Java has 51 keywords that have a predefined meaning within the language. These words are reserved and cannot be used as identifiers for naming variables, methods or classes.

Layering

Layers are used to support modularization and decoupling in an application. Layering is achieved by ensuring there are no cross-communication calls from one layer to another.

Map

A key-value pair data structure that implements the Collection interface.

Method

A block of reusable/callable code that is attached to a class or object.

Object

A data structure (created or instantiated from a class) that bundles together and encapsulates state and behavior.

Packages

A grouping (analogous to a namespace) used to organize and manage Java files.

Polymorphism

The ability for an object to take on many forms.

Primitive value

Simply a value stored in memory, by itself, with no additional data.

Queue

A data structure that implements the Collection interface and supports First-In, First-Out order, so that we can process elements in the order they arrive.



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Reference value

A value that refers to an object stored in another location in memory.

RegEx

An expression used to match or find strings based on a specialized syntax

Scanner

A class that reads text and parses simple text.

Set

A data structure that implements the Collection interface and allows no duplicate values.

Stack memory

Memory that used to store primitives and references to objects (but not the objects themselves, which are instead stored in the heap).

State data

Data related to the current state of the program as it is running.

Truncation

Loss of precision when going from one to type to another.

Type casting

Changing one type into another type

Variable

A variable is a combination of (1) a location in the computer's memory and (2) an associated name that we can use in our code to refer to the data in that memory location.