**JAVA KEYWORDS**

| **Keyword** | **Use / Description** |
| --- | --- |
| byte | Defines an 8-bit integer (range: -128 to 127). |
| short | Defines a 16-bit integer. |
| int | Defines a 32-bit integer (most common integer type). |
| long | Defines a 64-bit integer. |
| float | Defines a 32-bit floating-point number. |
| double | Defines a 64-bit floating-point number. |
| boolean | Stores either true or false. |
| char | Stores a single 16-bit Unicode character. |

**B. Access Control Modifiers**

| **Keyword** | **Use / Description** |
| --- | --- |
| public | Makes a class, method, or variable accessible from anywhere. |
| private | Restricts access to within the same class only. |
| protected | Accessible within the same package and by subclasses. |
| static | Belongs to the class instead of a specific instance. |
| final | Used to declare constants, prevent inheritance, or override. |
| abstract | Defines an abstract class or method (must be implemented later). |
| synchronized | Ensures only one thread can access a method/block at a time. |
| transient | Prevents a variable from being serialized. |
| volatile | Ensures variable changes are visible to all threads. |

**C. Control Flow Statements**

| **Keyword** | **Use / Description** |
| --- | --- |
| if | Starts a conditional statement. |
| else | Executes a block if the if condition is false. |
| switch | Allows multiple conditional branches based on a value. |
| case | Defines a branch inside a switch. |
| default | Defines the fallback branch in a switch. |
| for | Used for looping with an initialization, condition, and increment. |
| while | Loops while a condition is true. |
| do | Executes a loop at least once before checking condition. |
| break | Exits from a loop or switch block. |
| continue | Skips the current iteration and moves to the next loop iteration. |
| return | Exits from a method and optionally returns a value. |
| yield | Returns a value from a switch expression (Java 14+). |

**D. Class, Object, and Interface**

| **Keyword** | **Use / Description** |
| --- | --- |
| class | Declares a class. |
| interface | Declares an interface (a contract for classes to implement). |
| extends | Indicates inheritance from a superclass. |
| implements | Indicates that a class implements an interface. |
| new | Creates a new object or instance. |
| this | Refers to the current object instance. |
| super | Refers to the superclass of the current object. |
| enum | Defines a fixed set of constants (enumeration). |
| record | Declares an immutable data class (Java 16+). |

**E. Exception Handling**

| **Keyword** | **Use / Description** |
| --- | --- |
| try | Defines a block of code to test for exceptions. |
| catch | Handles exceptions thrown in a try block. |
| finally | Executes code after try-catch, regardless of outcome. |
| throw | Used to explicitly throw an exception. |
| throws | Declares exceptions that a method might throw. |

**F. Package and Import**

| **Keyword** | **Use / Description** |
| --- | --- |
| package | Defines a namespace for classes. |
| import | Imports other packages or classes. |
| module | Declares a module (Java 9+ modular system). |
| open | Marks a module/package as open for reflection. |
| requires | Specifies module dependencies. |
| exports | Makes a package visible outside its module. |
| provides | Declares a service provider in module system. |
| uses | Declares a service used in a module. |
| opens | Opens a package to specific modules. |
| to | Used in module directives (e.g., exports ... to). |
| with | Used with provides directive. |

**G. Logical & Type Keywords**

| **Keyword** | **Use / Description** |
| --- | --- |
| instanceof | Tests whether an object is an instance of a class/interface. |
| typeof | ❌ *Not in Java* (exists in JavaScript). |
| null | Represents no object reference. |
| true | Boolean literal for true. |
| false | Boolean literal for false. |

**H. Variable and Method Behavior**

| **Keyword** | **Use / Description** |
| --- | --- |
| void | Specifies that a method returns no value. |
| var | Infers variable type automatically (Java 10+). |
| const | Reserved but unused (legacy). |
| goto | Reserved but unused (legacy, not implemented). |

**I. Concurrency (Multithreading)**

| **Keyword** | **Use / Description** |
| --- | --- |
| synchronized | Locks code so only one thread can execute it at a time. |
| volatile | Ensures variable updates are visible across threads. |

**J. Contextual Keywords (Modern Java Additions)**

| **Keyword** | **Use / Description** |
| --- | --- |
| sealed | Restricts which classes can extend or implement another (Java 17+). |
| permits | Lists the classes allowed to extend a sealed class. |
| non-sealed | Declares that a subclass of a sealed class is open for extension. |