

1 Variable: In Java, a variable is a container for storing data values. Variables must be declared with a type, which defines what kind of data they can hold.

2 Identifier: An **identifier** in Java is a name used to identify a variable, method, class, or other user-defined item in a program.

class and objects

Class: A **class** in Java is a blueprint for creating objects, defining their properties and behaviors.

Objects: An **object** is an instance of a class, representing a specific entity with its own state and behavior.

4. Literals: A **literal** in Java is a fixed value that is directly represented in the code. Literals can be of various types, including integer literals, floating-point literals, character literals, string literals, and boolean literals.

5. Java Conditional Statements:

1. **if Statement:** Executes a block of code if a specified condition is true.
2. **if-else Statement:** Executes one block of code if a condition is true and another block if it is false.
3. **else-if Ladder:** A chain of if-else statements that allow multiple conditions to be checked sequentially.
4. **switch Statement:** A multi-way branch statement that selects one of many code blocks to execute based on the value of a variable or expression.

6. Java Loops:

1. **for Loop:** Repeats a block of code a specified number of times based on a counter.(Entry Control)
2. **while Loop:** Repeats a block of code as long as a specified condition is true. (Entry Control)
3. **do-while Loop:** Similar to the while loop, but guarantees that the block of code is executed at least once before the condition is checked. (Exit Control)

8. **Access modifiers** in Java are keywords that determine the visibility or accessibility of classes, methods, and variables. They control how the members of a class can be accessed from other classes or packages. The four main access modifiers are:

1. **public:** Members are accessible from any other class.
2. **protected:** Members are accessible within the same package and by subclasses.
3. **default (no modifier):** Members are accessible only within the same package.
4. **private:** Members are accessible only within the same class.

9. **Constructor:** A **constructor** in Java is a special method used to initialize objects. It has the same name as the class, does not have a return type, and is called when an object is created. Constructors can be parameterized or no-argument.

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12. **Packages:** A **package** in Java is a namespace that organizes a set of related classes and interfaces. It helps in avoiding name conflicts, controlling access, and making it easier to locate and use classes. Packages can be built-in (like `java.util`) or user-defined.

String

A **String** in Java is a sequence of characters used to represent text. Strings are immutable, meaning once created, their values cannot be changed. The `String` class provides various methods for string manipulation, such as concatenation, substring extraction, and searching.