**Data Types in Java**

Java data types categorize variables based on the type of value they can hold and the operations that can be performed on them. There are two main categories of data types in Java:

**1. Primitive Data Types:**

* These are fundamental, built-in data types that directly store values. Java has eight primitive data types:

1. byte: 8-bit signed integer (range: -128 to 127
2. short: 16-bit signed integer (range: -32,768 to 32,767)
3. int: 32-bit signed integer (range: approx. -2 billion to 2 billion)
4. long: 64-bit signed integer (range: very large)
5. float: 32-bit single-precision floating-point number
6. double: 64-bit double-precision floating-point number
7. char: 16-bit Unicode character
8. boolean: Represents true or false values

**2. Non-Primitive (Reference) Data Types:**

These data types do not directly store values but instead store references (memory addresses) to objects. They are created by the programmer or are part of the Java API. Common non-primitive data types include:

* String: Represents a sequence of characters.
* Arrays: Used to store a collection of elements of the same data type.
* Classes: User-defined blueprints for creating objects.
* Interfaces: Blueprints of a class, defining a set of methods that a class must implement.
* Enums: A special type of class that represents a group of named constants.