Java Beginner Teaching Plan

This plan helps beginners learn Java step by step with clear weekly goals and practical exercises. Each week introduces one major concept and includes simple code examples and exercises.

Week 1: Getting Started with Java

- Concepts: What is Java, how it runs (compiler, JVM), installing JDK, IDE setup.
- Example: HelloWorld.java — print your first message.
- Exercise: Modify the message and print your favorite hobby.

Week 2: Variables and Data Types

- Concepts: int, double, char, boolean, String.
- Example: Print a sentence describing yourself using variables.
- Exercise: Create variables for your pet (name, age, weight, species) and print a sentence.

Week 3: Operators & Expressions

- Concepts: Arithmetic (+, -, *, /, %), Relational (>, <, ==, !=), Logical (&&, ||, !).
- Example: Compare two numbers and display the result.
- Exercise: Calculate the average of 3 test scores and print Pass/Fail.

Week 4: Control Flow

- Concepts: if, else if, else, switch, loops (for, while, do-while).
- Example: Check if a number is even or odd.
- Exercise: Grading system using if statements; print numbers 1–10 using loops.

Week 5: Methods (Functions)

- Concepts: Define and call methods, parameters, and return values.
- Example: Create a greet() method and add() method.
- Exercise: Create isEven() and square() methods.

Week 6: Arrays & Loops

- Concepts: Declaring arrays, accessing elements, using loops to process arrays.
- Example: Calculate average test score from an array.

- Exercise: Store 5 favorite movies in a String array and print them.

Week 7: Classes & Objects (OOP Intro)

- Concepts: class, object, constructor, fields, methods.
- Example: Car class with brand, year, and start() method.
- Exercise: Student class with name, grade, and printDetails() method.

Week 8: Mini Project

- Combine all skills into one small project.
- Ideas: Bank Account Simulator, Student Grade Manager, or Guess-the-Number Game.

Teaching Tips

- Keep sessions short (~45 mins).
- Have the student run code themselves every time.
- Give a small challenge after each lesson.
- Use visual metaphors (variables = boxes).
- Introduce Scanner input later for interactivity.