7-Day Java Beginner Challenge

This 7-day challenge introduces beginners to core Java concepts through daily practice. Each day includes a goal, tasks to complete, and a mini challenge to reinforce your learning.

Day 1: Java Basics & Hello World

Goal: Set up your Java environment and write your first program.

Tasks:

- Install Java and a text editor or IDE (e.g., VSCode, IntelliJ)
- Write and run your first Java program with main()
- Use System.out.println() to print messages

Mini Challenge:

Create a Java program that prints your name and favorite quote.

Day 2: Variables and Data Types

Goal: Learn about Java's primitive data types and how to use them.

Tasks:

- Declare variables of type int, double, boolean, char, and String
- Assign values and print them

Mini Challenge:

Write a Java program that stores and prints your age, height, and whether you're a student.

Day 3: Conditionals (if, else, else if)

Goal: Write programs that make decisions using conditions.

Tasks:

- Use if, else, and else if blocks
- Compare numbers and strings using ==, !=, >, <, etc.

Mini Challenge:

Ask for a user's age and print whether they are a child, teen, or adult.

Day 4: Loops (for, while)

Goal: Use loops to repeat actions in Java.

Tasks:

- Use for loops to print a range of numbers
- Use while loops for repeated conditions

Mini Challenge:

Print all even numbers from 1 to 50 using a loop.

Day 5: Methods (Functions)

Goal: Write and call reusable methods in Java.

Tasks:

- Create methods using static void or static return types
- Pass arguments to methods and return values

Mini Challenge:

Create a method that takes two numbers and returns their sum.

Day 6: Arrays

Goal: Store and access multiple values using arrays.

Tasks:

- Declare and initialize arrays
- Loop through arrays using for loops

Mini Challenge:

Create an array of 5 numbers and print each number with its square.

Day 7: Mini Project Student Grade System

Goal: Combine your knowledge to build a simple application.

Tasks:

- Use variables, conditionals, arrays, and methods
- Read student name and marks, determine grade

Mini Challenge:

Write a program that takes student marks and prints the grade (A, B, C, etc.).