Agenda

1. Java
   a. Origins and OOP
   b. IDE - IntelliJ
   c. Hello, World program
2. Variables
   a. Data types
   b. Declaring a variable
   c. Naming conventions
3. Expressions
4. Arithmetic Operators
5. Type Conversion
6. Literal suffixes

Hello, World

```java
package com.techelevator;

public class HelloWorld {
    public static void main(String[] args) {
        // Prints out Hello World
        System.out.println("Hello World");
    }
}
```

Applications have DATA and BEHAVIORS

JAVA IS IS NOT JAVASCRIPT

JVM - Java Virtual Machine

IDE -

What is the value of 10

Primitives

Data Types

Java data type	Range
boolean	true or false
byte	-128 to 127 or -2^7 to 2^7-1
short	-32,768 to 32,767 or -2^{15} to $2^{15}-1$
int	-2,147,483,648 to 2,147,483,647 or -2^{31} to $2^{31}-1$
long	-2^{63} to $2^{63}-1$
float	-3.4×10^{38} to 3.4×10^{38}
double	-1.798×10^{308} to 1.798×10^{308}
char	\u0000 to \uffff ('a', 'b', etc.)

Arithmetic Operators

Operator	Description	Example
+	Adds two operands	15 + 2 = 17
−	Subtracts two operands	15 - 2 = 13
*	Multiplies two operands	15 * 2 = 30
/	Divides two operands	15 / 2 = 7
%	Finds the remainder after division	15 % 2 = 1

/* This is a comment */
// int x = 2;

/*
This is a longer
Multi-line comment
*/

// camelCase
// PascalCase
// snake_case
// kebab-case

Primitives (int, double, boolean, etc.) are stored on the *stack*
Reference variables (String) are stored on the *heap*