

Java Day 4 Cheat Sheet – Operators & Control Flow

1■■ Operators

Java provides different types of operators to perform various operations:

- 1 Arithmetic: +, -, *, /, %
- 2 Comparison: ==, !=, >, <, >=, <=
- 3 Logical: &&, ||, !
- 4 Assignment: =, +=, -=, *=, /=, %=
- 5 Unary: ++, --, +, -, !
- 6 Ternary: condition ? valueIfTrue : valueIfFalse

■■ Example:

```
int a = 10, b = 3;  
System.out.println(a + b); // 13  
System.out.println(a > b); // true
```

2■■ Control Flow

- 1 Conditional Statements: if, else if, else
- 2 Switch Statements: switch (value) { case 1: ... break; default: ... }
- 3 Loops: for, while, do-while
- 4 Flow Control Keywords: break, continue

■■ Example:

```
if (score >= 90) { System.out.println('A'); } else { System.out.println('B'); }  
for (int i = 1; i <= 5; i++) { System.out.println(i); }
```

3■■ Mini Project – Guess the Number Game

- 1 Uses Random to generate a number (1–100)
- 2 Uses Scanner to read user input
- 3 Applies loop and if/else to compare guesses
- 4 Demonstrates practical use of operators and control flow

4■■ Key Takeaways

- 1 Mastering operators and control flow is essential for logic building.
- 2 These concepts form the base for collections, streams, and automation testing.
- 3 Practice short-circuit logic (&&, ||) and nested loops.
- 4 Always write clean and readable code with meaningful variable names.