

Lecture 22

Java – Increment / Decrement Operators

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| Increment / Decrement operator

- Java provides two **unary operators** for **adding 1 to or subtracting 1** from the value of a numeric variable
 - The **increment** operator **++** adds 1 to its operand,
 - The **decrement** operator **--** subtracts 1

| Increment / Decrement operator

- **Assignments** like `i = i + 1` don't often appear in **loops**, because Java provides a **more concise way** to add and subtract by one
- If you want to **increment or decrement a variable by an amount other than 1**, you can use `+=` and `-=`. For example, `i += 2` increments `i` by 2:

| Increment / Decrement operator

- `++` and `--` may be used either as **prefix** operators (before the variable, as in `++n` or **postfix** (after the variable `n++`) — in both cases, the effect is to increment `n`
- But the expression `++n` increments `n` before its value is used
- While `n++` increments `n` after its value has been used.

| Increment / Decrement operator

- Attempting to use the **increment or decrement operator on an expression** other than one to which a value can be assigned is a syntax error. For example, writing **`++(x + 1)`** is a **syntax error**, because $(x + 1)$ is not a variable

| References

- Java: How to Program, 9th Edition (Deitel) 9th Edition by Paul Deitel , Harvey M. Deitel
- Head First Java, 2nd Edition 2nd Edition by Kathy Sierra, Bert Bates
- Think Java: How to Think Like a Computer Scientist 1st Edition by Allen B. Downey, Chris Mayfield