

# Object Oriented Methodology Lab

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# Operator

We can divide all the Java operators into the following groups :

- ▶ Arithmetic Operators
- ▶ Relational Operators
- ▶ Bitwise Operators
- ▶ Logical Operators
- ▶ Assignment Operators
- ▶ Misc Operators

# Arithmetic Operators

Operator	Example
<b>+</b> (Addition)	A + B will give 30
<b>-</b> (Subtraction)	A - B will give -10
<b>*</b> (Multiplication)	A * B will give 200
<b>/</b> (Division)	B / A will give 2
<b>%</b> (Modulus)	B % A will give 0
<b>++</b> (Increment)	B++ gives 21
<b>--</b> (Decrement)	B-- gives 19

# Relational Operators

Operator	Example
<code>==</code> (equal to)	<code>(A == B)</code> is not true.
<code>!=</code> (not equal to)	<code>(A != B)</code> is true.
<code>&gt;</code> (greater than)	<code>(A &gt; B)</code> is not true.
<code>&lt;</code> (less than)	<code>(A &lt; B)</code> is true.
<code>&gt;=</code> (greater than or equal to)	<code>(A &gt;= B)</code> is not true.
<code>&lt;=</code> (less than or equal to)	<code>(A &lt;= B)</code> is true.

# Bitwise Operators

Operator	Example
& (bitwise and)	(A & B) will give 12 which is 0000 1100
(bitwise or)	(A   B) will give 61 which is 0011 1101
^ (bitwise XOR)	(A ^ B) will give 49 which is 0011 0001
~ (bitwise compliment)	(~A) will give -61 which is 1100 0011 in 2's complement form due to a signed binary number.
<< (left shift)	A << 2 will give 240 which is 1111 0000
>> (right shift)	A >> 2 will give 15 which is 1111
>>> (zero fill right shift)	A >>> 2 will give 15 which is 0000 1111

# Logical Operators

Operator	Example
&& (logical and)	(A && B) is false
(logical or)	(A    B) is true
! (logical not)	!(A && B) is true

# Assignment Operators

*var = expression;*

int x, y, z;

x = y = z = 100;

## Misc Operators

- ▶ Java includes a special *ternary* (three-way) *operator* that can replace certain types of if-then-else statements.
- ▶ *expression1 ? expression2 : expression3*
- ▶ `int k = i < 0 ? -i : i;`



# Source Code

Variable Naming convention

# Questions?