

Pemrograman Berbasis Obyek

Operator dan Assignment

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Konten

- Assignment Operator
- Arithmetic operator
- Unary operator
- Equality and Relational operator
- Conditional operator

- Shift operator: <<, >>, dan >>>
- Comparison operator
- Bitwise operator: &, ^, dan |.
- Short – Circuit operator
- Operator lain : new, instanceof
- Urutan pemrosesan

Assignment Operator

- Merupakan operator yang paling sering digunakan
- Gunanya adalah
 - “ **assigns** the value on its **right** to the operand on its **left**”
- Contoh:
 - `int speed = 0;`
 - `int gear = 1;`
 - `int age = 19;`

The Unary Operators

- Operator yang hanya membutuhkan satu operan.

operator	Contoh	Keterangan
+	<code>int result = +100;</code>	unaryMenandakan nilai positif
-	<code>Int result = -50;</code>	Menandakan nilai negatif
++	<code>result++;</code> atau <code>++result;</code>	Increment, increment value by 1
--	<code>result--;</code> atau <code>--result;</code>	Decrement, decrement value by 1
!	<code>boolean success = true;</code> <code>if(!success){}</code>	Logical complement, invert the value of a boolean

Arithmetic operators

- Operator yang digunakan untuk perhitungan arithmetic

Operator	Contoh	Keterangan
+	result = 5 + 5;	Additive operator (also used for String concatenation)
-	result = 10 - 5;	Subtraction operator
*	result = 4 * 4;	Multiplication operator
/	result = 10 / 2;	Division operator
%	result = 5 % 2;	Remainder operator

Equality and Relational operator

- Operator equality dan relational menghasilkan output boolean

Operat or	Keterangan	Contoh
==	equal to	int value1 = 10; value2 = 15; If(value1 == value2)
!=	not equal to	If(value1 != value2)
>	greater than	If(value1 > value2)
>=	greater than or equal to	If(value1 >= value2)
<	less than	If(value1 < value2)
<=	less than or equal to	If(value1 <= value2)

Conditional operator

Operator	Keterangan	Contoh
&&	Conditional AND "shot-circuiting" second operand/condition is evaluated only if needed	if(condition1 && condition2)
	Conditional OR "shot-circuiting" second operand/condition is evaluated only if needed	if(condition1 condition2)
? :	Ternary operator, pengganti statement if-else-then	<pre>If(someCondition) result = value1; else result = value2;</pre> <p>Dapat diubah dengan ? :</p> <pre>result = someCondition?value1:value2</pre>



Bitwise and Bit Shift Operator

Operator	Keterangan
~	Unary bitwise complement
<<	Signed left shift
>>	Signed right shift
>>>	Unsigned right shift
&	Bitwise AND
	Bitwise inclusive OR
^	Bitwise exclusive OR

Bitwise and Bit Shift operator

	A	$\sim A$	$A \ll 2$	$A \gg 2$	$A \ggg 2$
	0011 1100	1100 0011	1111 0000	0000 1111	0000 1111
Nilai	60	195	240	15	15

Bitwise and Bit Shift operator

A	B	A & B	A && B	A ^ B	A B	A B
0	0	0	0	0	0	0
0	1	0	0	1	1	1
1	0	0	0	1	1	1
1	1	1	1	0	1	1

Logical and Bitwise

	& dan	&& dan
operan	numeric dan boolean	boolean
evaluate	Evaluate left and right operan	Right operan is evaluate only if needed
...		

Tugas

- Jelaskan perbedaan operator “&” dan “&&” !
- Jelaskan perbedaan operator “|” dan “||” !
- Buatlah ringkasan mengenai operator dalam java!

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