

Documentation

The Java™ Tutorials

Trail: Learning the Java Language

Lesson: Language Basics

Section: Operators

The Java Tutorials have been written for JDK 8. Examples and practices described in this page don't take advantage of improvements introduced in later releases and might use technology no longer available.

See [Java Language Changes](#) for a summary of updated language features in Java SE 9 and subsequent releases.

See [JDK Release Notes](#) for information about new features, enhancements, and removed or deprecated options for all JDK releases.

Summary of Operators

The following quick reference summarizes the operators supported by the Java programming language.

Simple Assignment Operator

= Simple assignment operator

Arithmetic Operators

+ Additive operator (also used
for String concatenation)
- Subtraction operator
* Multiplication operator
/ Division operator
% Remainder operator

Unary Operators

+ Unary plus operator; indicates
positive value (numbers are
positive without this, however)
- Unary minus operator; negates
an expression
++ Increment operator; increments
a value by 1
-- Decrement operator; decrements
a value by 1
! Logical complement operator;
inverts the value of a boolean

Equality and Relational Operators

== Equal to
!= Not equal to
> Greater than
>= Greater than or equal to
< Less than
<= Less than or equal to

Conditional Operators

&& Conditional-AND
|| Conditional-OR
?: Ternary (shorthand for
if-then-else statement)

Type Comparison Operator

<code>instanceof</code>	Compares an object to a specified type
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Bitwise and Bit Shift Operators

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

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