

#Operators in Java

Symbols that tell compiler to perform some Operation.

operator expression
 $sum = a + b$
operands

#Types of Operators

- *Arithmetic Operators (Binary/Unary)*
- *Relational Operators*
- *Logical Operators*
- *Bitwise Operators*
- *Assignment Operators*

#Arithmetic Operators

BINARY

$+$ $\rightarrow A+B = 10+5 = 15$

$-$ $\rightarrow A-B = 10-5 = 5$

$*$ $\rightarrow A*B = 10*5 = 50$

$/$ $\rightarrow A/B = 10/5 = 2$

$\%$ (modulo) $\rightarrow A\%B = 10\%5 = 0$

UNARY

(increment) $++ \rightarrow a = a+1 = a++, ++a$

(decrement) $-- \rightarrow a = a-1 = a--, --a$

Pre Increment (++a)

1. *value change*
2. *value use*

Pre Decrement (--a)

1. *value change*
2. *value use*

Post Increment (a++)

1. *value use*
2. *value change*

Post Decrement (a--)

1. *value use*
2. *value change*

#RelationalOperators

$== \rightarrow$ equal (True or False)

$!= \rightarrow$ not equal (True or False)

$> \rightarrow A(10)>B(5) \rightarrow \text{True}, A(5)>B(10) \rightarrow \text{False}$

$< \rightarrow A(10) < B(5) \rightarrow \text{False}, A(5) < B(10) \rightarrow \text{True}$

$>= \rightarrow \text{greater than or equal to}$

$<= \rightarrow \text{less than or equal to}$

#Logical Operators $St \rightarrow \text{Statement}$

$\&\&(\text{Logical AND}) \rightarrow (St1) \&\& (St2) \rightarrow \text{True}$
 $(St1) \&\& (St2) \rightarrow \text{False}$
 TF, FT, FF

$\|\text{(Logical OR)} \rightarrow (St1) \|\ (St2) \rightarrow \text{False}$
 $(St1) \|\ (St2) \rightarrow \text{True}$
 TT, TF, FT

$!(\text{Logical NOT}) \rightarrow \text{True} \rightarrow \text{False}$
 $\text{False} \rightarrow \text{True}$

#Assignment Operators

$=$ $A=B$ $A(10)=B(5)$ $\text{int } A=10$

$+=$ $A=A+10 \rightarrow A+=10 \rightarrow 20$

$-=$ $A=A-10 \rightarrow A-=10 \rightarrow 0$

$*=$ $A*=10 \rightarrow 100$

$/=$ $A/=10 \rightarrow 0$