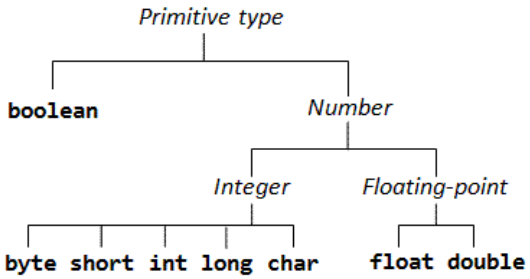


TYPE	DESCRIPTION
byte	8-bit signed integer. Range [-128, 127]
short	16-bit signed integer. Range [-32768, 32767]
int	32-bit signed integer. Range [-2147483648, 2147483647]
long	64-bit signed integer. Range [-9223372036854775808, 9223372036854775807]
float	32-bit single precision floating-point number. Range ±[≈ 10^ -45, ≈ 10^ 38]
double	64-bit double precision floating-point number. Range ±[≈ 10^ -324, ≈ 10^ 308]
char	Character, Represented in 16-bit Unicode '\u0000' to '\uFFFF'
boolean	Binary (0 or 1). Basically, either true or false.

boolean (1 bit)

0

byte (8 bits)

0	1	0	0	1	1	0	1

Short (16 bits)

0	1	0	0	1	1	0	1	0	1	0	0	1	1	0	1

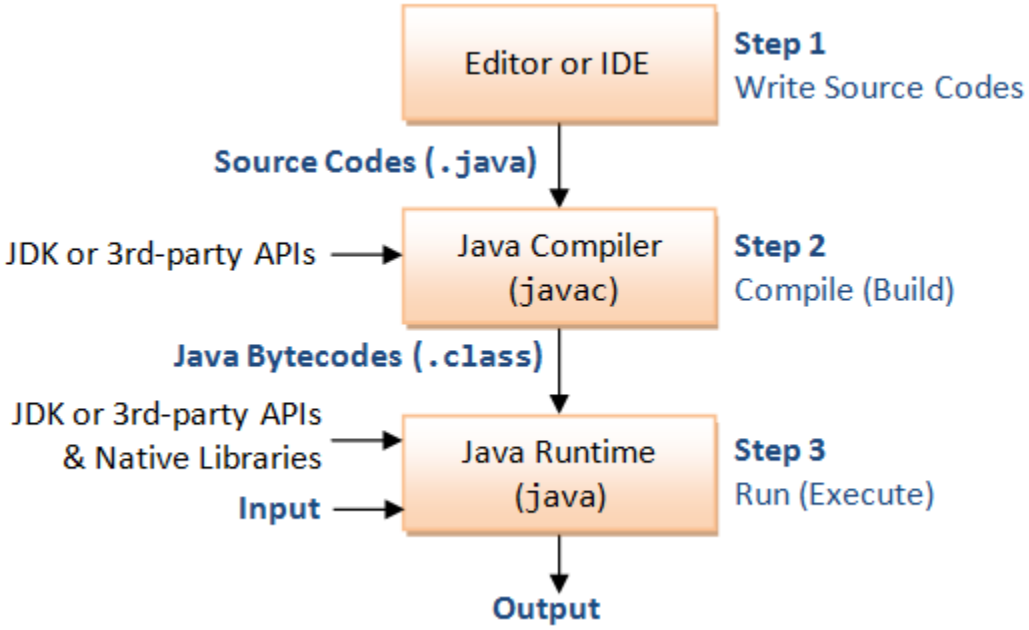
Java supports the following arithmetic operators:

Operator	Description	Usage	Example
*	Multiplication	*expr1 * expr2*	2 * 3 = 6
/	Division	*expr1 / expr2*	4 / 2 = 2
-	Subtraction	*expr1 – expr2*	2 – 1 = 1
+	Addition	*expr1 + expr2*	1 + 2 = 3
%	Modulus (Remainder)	*expr1 % expr2*	5 % 2 = 1

Compound Assignment Operators

Operation	Description	Usage	Example
=	Assign the value of LHS to the RHS	var = expr	x = 5;
+=	Compound addition and assignment	var += expr same as var = var + expr	x += 5; same as x = x + 5;
-=	Compound subtraction and assignment	var -= expr same as var = var - expr	x -= 5; same as x = x - 5;
*=	Compound multiplication and assignment	Var *= expr same as var = var * expr	x *= 5; same as x = x * 5;
/=	Compound division and assignment	var /= expr same as var = var /expr	x /= 5; same as x = x / 5;
%=	Compound remainder (Modulus) and assignment	var %= expr same as var = var % expr	x %= 5; same as x = x % 5;

Steps in writing a Java program is illustrated as follows:



Step 1: Write the source codes (.java) using a programming text editor (such as Notepad++, Textpad, gEdit) or an IDE (such as Eclipse or NetBeans).

Step 2: Compile the source codes (.java) into Java portable bytecode (.class) using the JDK compiler ("javac").

Step 3: Run the compiled bytecode (.class) with the input to produce the desired output, using the Java Runtime ("java").