

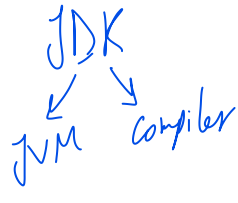
Java → High-Level
 → English Like

binary code → 01101

Assembly → Low-level
 → Commands
 → English-like

Assembler → translate commands

Platform dependent



English
 .java

compile
 javac

file name .java

byte code
 .class

run
 java

className

output

Errors:

* Syntax (compile)

خطا في القواعد

* Runtime

خطا في التنفيذ

* Logic

خطا في المنطق

Input
 Storage
 Process
 output

salary → variable
 byte, short, int, long
 float, double
 char, String

annualSalary = salary * 12

mark
 23

fullMark
 25

$$pct = \frac{mark}{fullMark} * 100$$

 92

Arithmetic Operators

- ① *, /, %
- ② +, -

اولوية التنفيذ

$2 + 3 * 3$ (9) 11

$(2 + 3) * 3$ (15) 5

$3 / 3 * 2$ (1) 2

$5 / 2 \Rightarrow 2$

$5.0 / 2 \Rightarrow 2.5$

int x = 5;

int y = 2;

(double) x / y $\Rightarrow 2.5$

$5 \% 2 \Rightarrow 1$

$11 \% 3 \Rightarrow 2$

$10 \% 2 \Rightarrow 0$

Assignment Operator

int $x = 5$;	x <u>5</u>
$x = 3$;	3 5
$x = (x + 5)$;	13 10
$x += 5$;	20
$x -= 3$;	21 21
$x *= 2$;	22 23 22

$x++$;

cout($x++$); $\Rightarrow 21$

cout($++x$); $\Rightarrow 23$

cout($x--$); $\Rightarrow 23$

Math Methods:

Math.pow(5, 2) $\Rightarrow 25$

Math.sqrt(25) $\Rightarrow 5$

Math.max(5, 2) $\Rightarrow 5$

Math.min(5, 2) $\Rightarrow 2$

Math.round(19.6) $\Rightarrow 20$

;

}

weight	height
<u>68</u>	<u>182</u>

$$bmi = \frac{\text{weight}}{(\text{height} / 100)^2}$$

\downarrow
20.52...

