

Relational opⁿ

<, >, ==, <=, >=

Ternary opⁿ (Shortcut) (Rarely used)
(cond) ? true : false

Logical operator :

&&, ||, !

AND (*)

username	password	Result
true	true	true
true	false	false
false	true	false
false	false	false

{ true - valid
false - invalid }

OR (+)

true	true	true
true	false	true
false	true	true
false	false	false

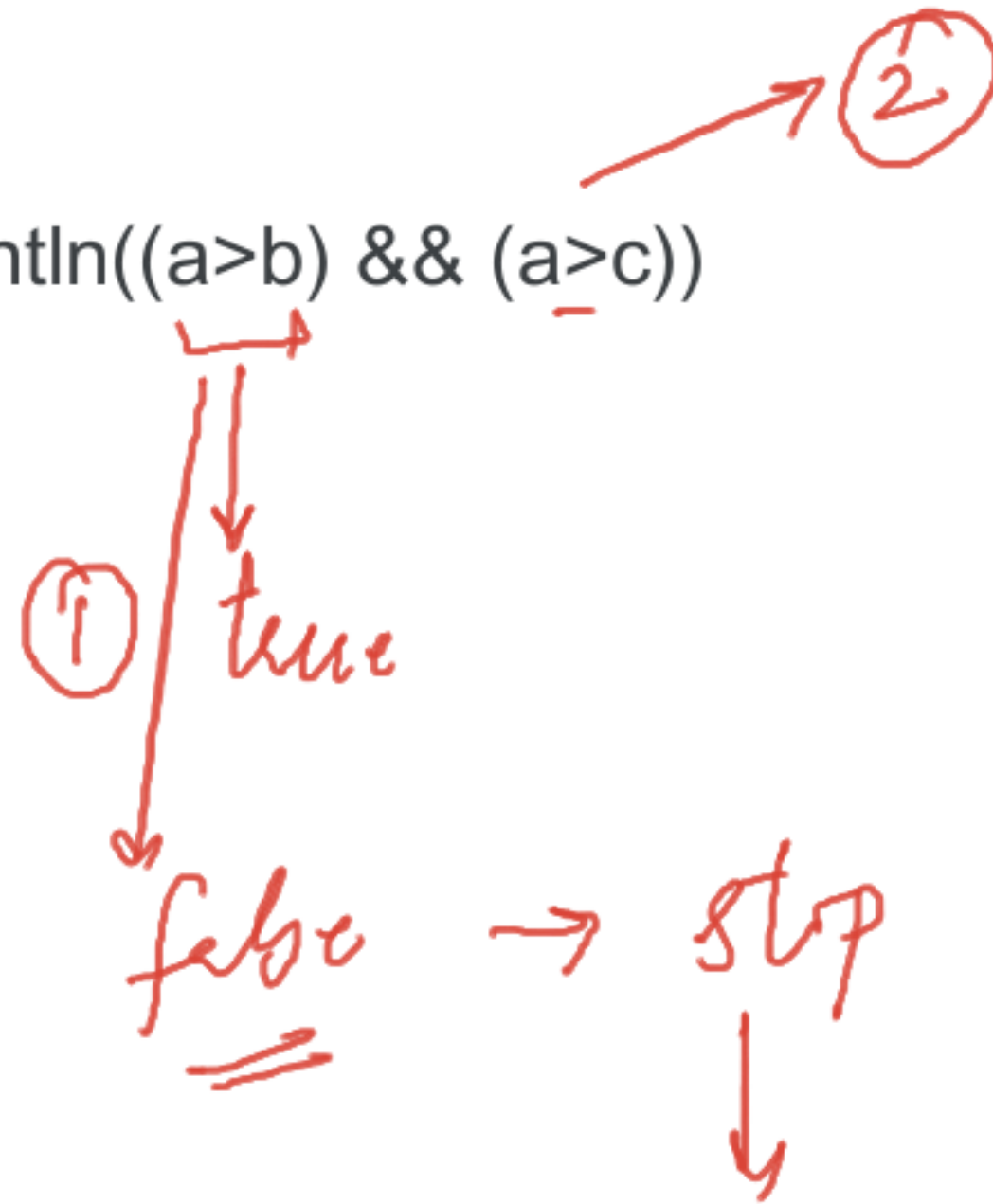
NOT

username
or
email

AND

(2) { pwd.
or
dob.

System.out.println((a>b) && (a>c))



Control Statements

- Conditional / Statements → if, if-else, Ladder if-else if, Nested if else, switch case
- Looping → for, while, do while, foreach (Arrays) or for
- Jumping → break, continue

Largest No out of 3 Numbers :-

→
 $a = 10;$
 $b = 5;$
 $c = 20;$

$a = 10$

$b = 20$

$a > b$

$a < b$

if-else
⇒ ↓

③

Ladder-if-else → Logical

Nested if, else =

$a=1, b=2, c=5$

Way 1 :-

① ✓ if($(a>b) \ \&\& \ (a>c)$){
 ~~System.out.println("a is largest number");~~
 } else if($(b>a) \ \&\& \ (b>c)$){ $2 > 1 \rightarrow \text{true}$
 System.out.println("b is largest number");
 } else {
 System.out.println("c is largest number");
 }

Ladder else-if

truth table for $(a>b) \ \&\& \ (a>c)$

$a > b$	$a > c$	$(a > b) \ \&\& \ (a > c)$
1	1	1
1	0	0
0	1	0
0	0	0

Annotations:
- $1 > 2$ is false, $1 > 5$ is false, so $1 \ \&\& \ 1 = 1$ (true).
- $1 > 2$ is false, $1 > 5$ is false, so $0 \ \&\& \ 1 = 0$ (false).
- $2 > 1$ is true, $2 > 5$ is false, so $1 \ \&\& \ 0 = 0$ (false).
- $5 > 1$ is true, $5 > 2$ is true, so $1 \ \&\& \ 1 = 1$ (true).

if(a>b){

1 > 2 → false

7 > 3 → true

7 > 1 → true

if(a>c){

System.out.println("a is largest number");

}else{

System.out.println("c is largest number");

}

}else{

if(b>c){

System.out.println("b is largest number");

}else{

System.out.println("c is largest number");

}

}

2 > 3 → false

a = 1
b = 2
c = 3

