

## practice

boolean ans =  $\overbrace{(3 > 2)}^T \&\& \overbrace{(4 > 3)}^T$ ; // true

boolean ans =  $(40 > 3) \&\& (40 < 5)$ ; // false

boolean ans =  $(40 \geq 40) \parallel (50 \geq (2 * 3))$ ; // true

boolean ans =  $((2 * 3 == 4) \&\& (6 * 4 == 24)) \parallel (4 > 2)$ ; // true

boolean ans =  $!(2 * 5 != 10)$

$\Rightarrow !(10 != 10)$

$\Rightarrow !(\text{false}) = \underline{\underline{\text{True}}}$

# ⇒ Unary Operator

int a = 5;

a++ :- post inc. :- will increment value later  
++a :- pre inc. :- will increment value first

Note:-

a = 5

print(a++); ⇔ print(a); → 5  
a++; // 6

print(++a); ⇔ a++;  
print(a); → 6

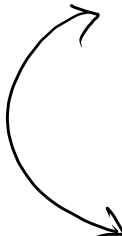
Ques Print value of a, b, c

|    | int a = 5 | a = 5 | b | c |
|----|-----------|-------|---|---|
| 1) | b = a++;  | 6     | 5 | - |
| 2) | c = b++;  | 6     | 6 | 5 |
| 3) | a = ++b;  | 7     | 7 | 5 |
| 4) | b = ++c;  | 7     | 6 | 6 |
| 5) | c = ++a;  | 8     | 6 | 8 |
| 6) | a = b++;  | 6     | 7 | 8 |
| 7) | b = ++c;  | 6     | 9 | 9 |
| 8) | c = a++;  | 7     | 9 | 6 |

a = 7, b = 9, c = 6

Note:-

$$a = 5, b = 6$$


$$\begin{aligned} & \underline{\underline{a = a + b ;}} \quad // \downarrow \downarrow \\ & \underline{\underline{a += b}} \quad // \downarrow \downarrow \end{aligned}$$

Ques Print a, b, c

|     | a = 5   | a = 5 | b  | c |
|-----|---------|-------|----|---|
| 1)  | b = ++a | 6     | 6  | - |
| 2)  | c = ++b | 6     | 7  | 7 |
| 3)  | a = b++ | 7     | 8  | 7 |
| 4)  | b = c++ | 7     | 7  | 8 |
| 5)  | c = ++a | 8     | 7  | 8 |
| 6)  | a += b  | 15    | 7  | 8 |
| 7)  | b -= c  | 15    | -1 | 8 |
| 8)  | c += b  | 15    | -1 | 7 |
| 9)  | b--     | 15    | -1 | 7 |
| 10) | a++     | 15    | -2 | 7 |
| 11) | c--     | 16    | -2 | 7 |

a = 16, b = -2, c = 6

↙ b = -2  
↙ a = 16  
↙ c = 6

# ⇒ Conditions

## 1) if condition

syntax

```
if (conditions) {  
    // statement  
}
```

ex:-

```
if ( 5 > 3 ) {  
    System.out.print("Hi");  
}
```

Ques print the given no. if it is greater than 10

n = 9  
n = 15

code

```
int n = scn.nextInt();  
if (n > 10) {  
    print(n);  
}
```

2) `if ( condition ) {  
    // statement 1  
} else {  
    // statement 2  
}`

(both can never execute)

ex:-

```
if ( 5 > 7 ) {  
    print ("Hi");  
} else {  
    print ("Hello");  
}
```

Ques Print a given no. if it is +ve, otherwise print double of its value.

$n = 7 \Rightarrow 7$

$n = -4 \Rightarrow -8$

$n = 0 \Rightarrow 0$

```
int n = scn.nextInt();  
if ( n > 0 ) {  
    print (n);  
} else {  
    print (2 * n);  
}
```

# Adult or not 1

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int age = scn.nextInt();  
  
    if ( age >= 18 ) {  
        System.out.println("Adult");  
    } else {  
        System.out.println("Below age");  
    }  
}
```



# Shop Discount

`int units = 15 ;`

`totalCost = 15 * 100 = 1500`

`discount = 1500 *  $\frac{10}{100}$  = 150`

`finalCost = 1500 - 150  
= 1350`

Code

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int units = scn.nextInt();  
  
    int totalCost = units * 100;  
    if ( totalCost > 1000 ) {  
        int discount = (totalCost * 10) / 100;  
        totalCost = totalCost - discount;  
        // totalCost -= discount;  
    }  
  
    System.out.println(totalCost);  
}
```

# High Sum or Low Sum

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt();  
    int y = scn.nextInt();  
  
    int sum = x + y;  
    if ( sum >= 100 ) {  
        System.out.println("High Sum");  
    } else {  
        System.out.println("Low Sum");  
    }  
}
```