

Preincrement / Postincrement

Predecrement / Postdecrement

++ --

a++ → postincrement

++a → Preincrement

a-- → Postdecrement

--a → Predecrement

int a = 10; a 10

~~first result = a++~~

a++ vs ++a ?

a++ → 11

++a → 11

a-- → 9

--a → 9

= a++ → use value of a first then increase

++a → Increase the value first then use it

= a-- → use value of a first then decrease it

--a → Decrease the value first then use it.

```
int a = 10;      a 10
int b = a++;     b 10
printf("a is %d", a); ← 11
printf("b is %d", b); ← 10
```

```
int a = 10;      a 10
int b = ++a;     b 11
printf("a is %d", a); → 11
printf("b is %d", b); → 11
```

```
int a = 10;      a 10
int b = a--;     b 10
printf("a is %d", a); ← 9
printf("b is %d", b); ← 10
```

```
int a = 10;      a 10
int b = --a;     b 9
printf("a is %d", a); → 9
printf("b is %d", b); → 9
```

DA#12.2

Tuesday, June 9, 2026 8:46 PM

++ -- (pre-increment / pre-decrement) RIGHT to LEFT

++ -- (post-increment / post-decrement) LEFT to RIGHT

int a=10;

a++ = a=a+1

a-- = a=a-1

++a = a=a+1

--a = a=a-1

~~int~~ int a=0; 0 → 1

if (a++) 0 / false

{ printf("Hello");

}

→ else

{ printf("bye"); ✓

{ printf("a is %.d", a); → 1

}

int a=0; 0 → 1

if (++a)

{ printf("Hello"); ✓

{ printf("a is %.d", a); → 1

}

else

{ printf("bye");

}

int a=5; 5 → 6 → 7

int x = ++a; x 6

int y = a++;

printf("a=%d, x=%d, y=%d", a, x, y)

5 6 5
5 6 6

a=7, x=6, y=6

int a=10; 10 → 11 → 12

int b = a++;

int c = ++a;

printf("a=%d, b=%d, c=%d", a, b, c);

a=12, b=10, c=12

11 10 11
12 10 11

++ --

int a=5; 5 → 4 → 3

printf("a=%d", --a); 4 4 a=4

printf("a=%d", a--); 4 4 a=4

printf("a=%d", a); 3 3 a=3

==

int a=5; a 5 6

int x = a++ + a; 5+5=10, 11, 12 5+6=11

printf("x is %d", x); 10

Note:- In one expression we cannot modify and read same variable "Undefined"

C, C++

Java ✓

Python ++ -- X

DAY #12.4

Tuesday, June 9, 2026 9:13 PM

```
int i=1; 1 2  
printf("%d %d %d", 1i, 2++i, 2i++); // not good practice in C 1 2 2
```

↑↑↑

$a++ + a$ undefined behavior
 $++a + a$ "
 $--a + a$ "
 $a-- + a$ "
 $a++ + a++$ "
 $a-- + a--$ "

if else statement with `{ }` braces.

```
if (condition)
{
    printf("Hello");
}
else
{
    printf("Bye");
}
```

Note:- if if() & else have single statement
then we don't need brace `{ }`
braces are optional.

```
if (condition)
    printf("Hello");
else
    printf("Bye");
```

```
if (condition)
    printf("Hello");
printf("How are you"); X compilation error
else
    printf("Bye");
    printf("I hate you");
```