

C15 → Operators in C - Part 3

Increment / Decrement operators ($++$, $--$):

* Prefix → $++x$, $--x$

* Postfix → $x++$, $x--$

* Prefix Increment:

* In prefix, the value of x is incremented first and used in expression.

* Then incremented value is updated in memory.

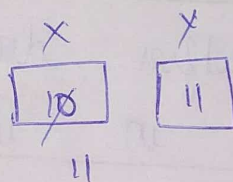
Example:

int $x=10, y;$

$y = ++x;$

printf ("%d", x); → 11

printf ("%d", y); → 11



* Postfix Increment:

* In postfix, the value of x is used in expression first.

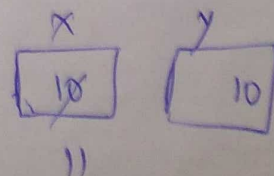
* After that x value is incremented and updated in memory.

Example: int $x=10, y;$

$y = x++;$

printf ("%d", x); → 11

printf ("%d", y); → 10.



* Prefix Decrement:

* In prefix decrement, the value of x is documented first and used in expression.

* Then documented value is updated in the memory.

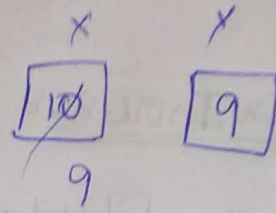
Example:

```
int x = 10, y;
```

```
y = --x;
```

```
printf("%d", x); → 9
```

```
printf("%d", y); → 9
```



* Postfix Decrement:

* In postfix decrement, the value of x is used in the expression first.

* After that x value is decremented and updated in the memory.

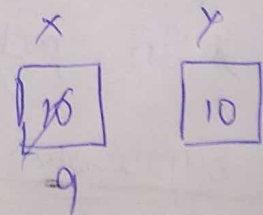
Example:

```
int x = 10, y;
```

```
y = x--;
```

```
printf("%d", x); → 9
```

```
printf("%d", y); → 10
```





Example Program:

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
    int a=5, b, c, d;
```

```
    b = ++a;
```

```
    c = a++;
```

```
    d = ++a;
```

```
    printf("%d", a); → 8
}
```

