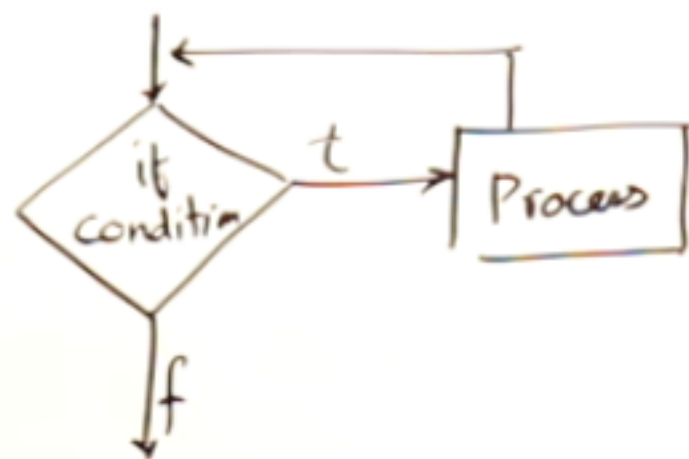


# Loops.



```
int n=0;
```

```
while (n != 0)
{
```

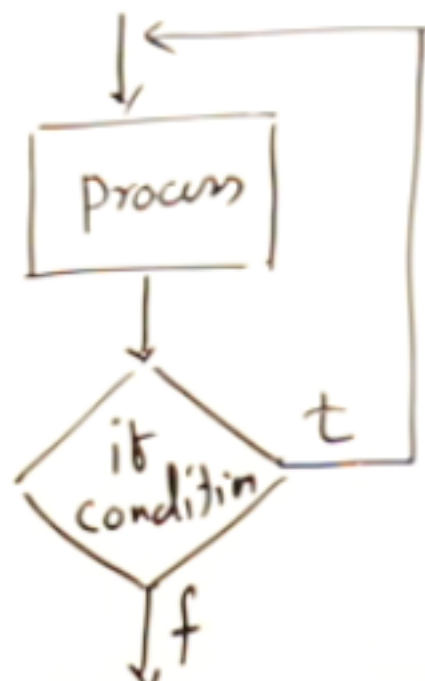
```
    == process
```

```
}
```

```
==
```

1. First check condition then execute the program.

2. If condition wrong, then ya loop chlaga hi nahi.



```
int n=0;
```

```
do
{
```

```
    == process
```

```
} while (n != 0);
```

1. First execute program then check the condition.

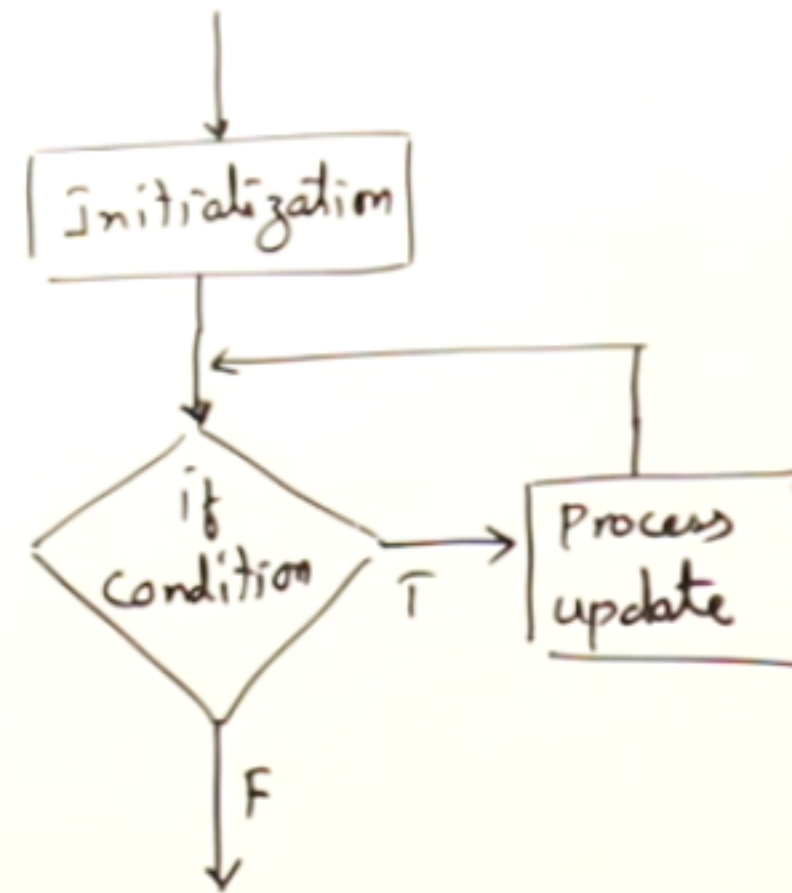
2. Ek minimum ek baar to chlti hi chlti hai, phir as per condition, kaam karta hai.

**Note:** Ham kabhi bhi kisi ka bhi use kar sakta hai koi compulsion nahi hai ki kiska use karna hai. Waise dono same hi hai bas minor change kar ka ek dusra form mai convert kar sakta hai.

# Loops.

counter  
↓

```
for(initialization; condition; updation)
{
    ①          ②⑤⑧          ④⑦
    _____
    ③⑥ . . .
}
```



- It is known as counter-control loop.
- Ise ka use tab hota hai jab hama pta hota hai ki loop ko kitna no. of time chlana hai.



2.50

# FOR ANY PATTERNS:

1) No. of lines

2) In each line what is happening

hmasa koi relation find karo row and column mai.

✖ Outer loop -> no. of rows  
✖ Inner loop -> no. of column (no. of element in each loop)



## Ques : Print the given pattern

n = 4  
\*\*\*\*\*  
\*\*\*\*  
\*\*\*  
\*\*  
\*

n = 4  
1 1 \* \* \* \*  
2 2 \* \*  
3 3 \*  
4 4 \*

Star Triangle Ula

for(int i=1; i<=n; i++)

{ for(int j=

→ \n

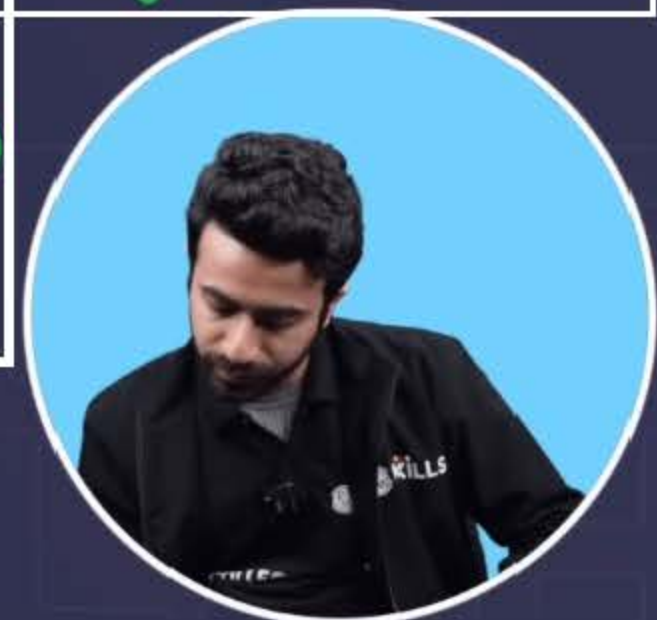
3  
4  
3  
2  
1

-> jaisa ise case mai i+j=5 hua hai.

-> In general form;  
 $i+j = n+1$

$$i+j = 5$$

$i+j=4+1$  (as  $n=4$ )  
 $j=4-i+1;$





## Decrementing for loop

```
for(i = 7; i != 0; i--) {  
    System.out.println(i);  
}
```

This for loop keeps running until  $i$  becomes 0.

Quick Quiz: Write a program to print first  $n$  natural numbers in reverse order.

## break statement

The break statement is used to exit the loop irrespective of whether the condition is true or false.

Whenever a "break" is encountered inside the loop, the control is sent outside the loop.

## Continue statement

The continue statement is used to immediately move to the next iteration of the loop.

The control is taken to the next iteration thus skipping everything below "Continue" inside the loop for that iteration.

In a Nut Shell...

- 1> break statement completely exits the loop
- 2> continue statement skips the particular iteration of the loop.