

## \* Decision making statements

Decision making statement used to control the flow of execution of program depending upon condition means, if the condition is True then the block will execute and if condition is false then block will not execute.

### • Types of Decision Making Statement in Python.

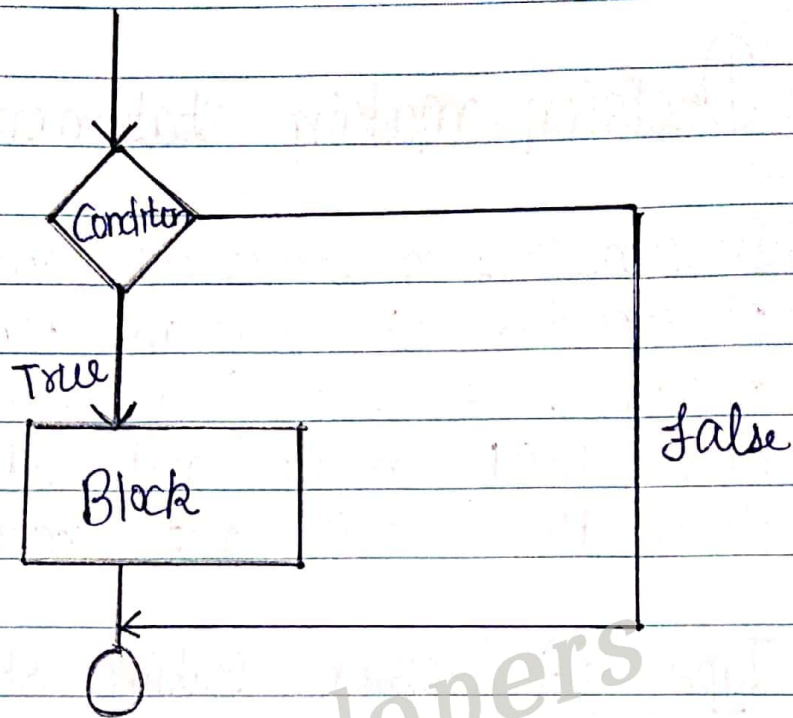
1. if statements
2. if-else statements
3. elif statement
4. Short Hand if Statement
- 5- Short Hand if-else statement
1. if Statement

If statement will execute block of statements only if the condition is true.

Syntax

```
if (condition):  
    statements
```

## flowchart



### Example

a = 15

if(a > 10):

print("a is greater")

Output

a is greater

## 2 if else statement

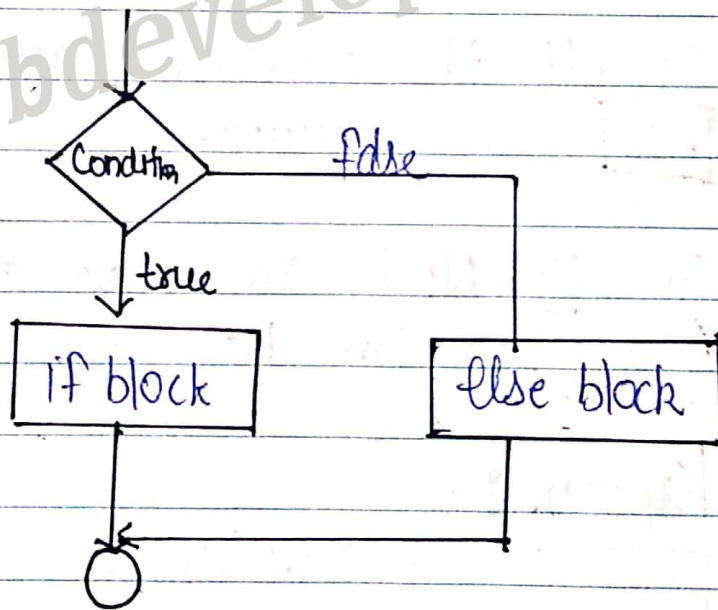
- if-else statement checks the expression and executes the if block when the expression is True otherwise it will execute the else block of code

The else block should be right after if block and it is executed when the expression is false.

### Syntax

```
if (expression):  
    statement  
else:  
    statement
```

### Flow chart



### Example

a = 5

b = 3

```
if (a > b):
```

```
    print("a is greater than b")
```

```
else:
```

```
    print("b is greater than a")
```

### 3. elif statement (if...elif...else Statement)

- The **elif** is short for else if.
- It allows us to check for multiple expressions.
- If the condition for **if** is false, it check the condition of the next elif block and so on.
- If all the conditions are false, the body of **else** is executed.
- The **if** block can have only one **else** block. But it can have multiple **elif** blocks.

Syntax :-

```
if (condition) :
```

```
    statement 1
```

```
elif (condition) :
```

```
    statement 2
```

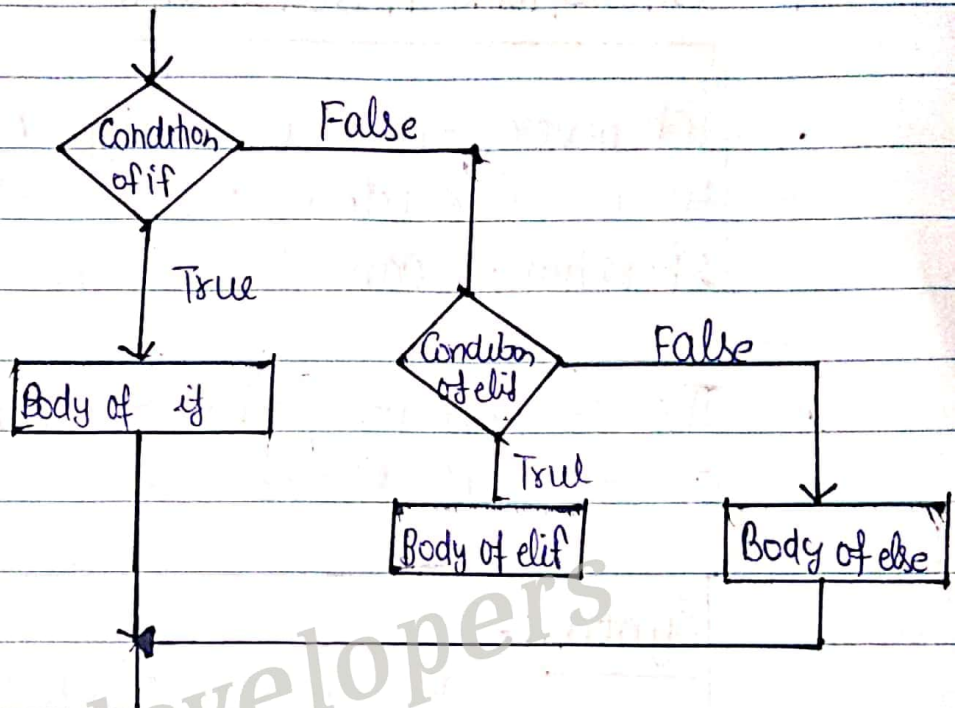
```
    :
```

```
    :
```

```
else :
```

```
    statement 3
```

## Flowchart



Example:-

num = 3.4

if num > 0 :

print("positive number")

elif num == 0 :

print("zero")

else :

print("Negative number")

- When variable `num` is positive, positive number is printed.
- if `num` is equal to 0, zero is printed.
- if `num` is negative, negative number is printed.

#### 4. Shorthand if statement

- Whenever there is only a single statement to be executed inside the if block then shorthand can be used.

- The statement can be put on the same line as the if statement.

Syntax:-

if condition: statement

Example:-

i = 10

if i < 15 : print("i is less than 15")

#### 5. Shorthand if-else statement

- This can be used to write if-else statement in a single line.

Syntax:-

statement\_when\_True if condition else statement\_when\_false

Example:- i = 10

print(True) if i < 15 else print(False)

Output: True