

# Python if ... else Statement

The **if...elif...else** statement is used in Python for decision making.

## if statement syntax

```
if test expression:  
  
    statement(s)
```

The program evaluates the test expression and will execute statement(s) only if the text expression is True.

If the text expression is False, the statement(s) is not executed.

Python interprets non-zero values as True. None and 0 are interpreted as False.

## Flow Chart

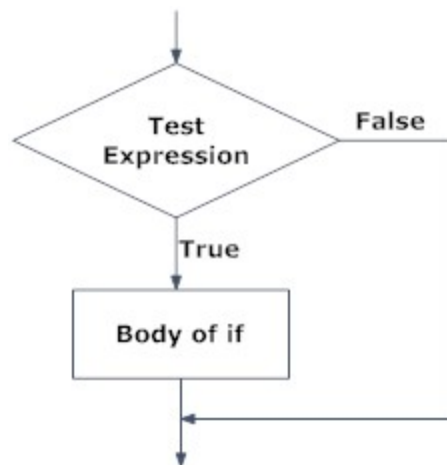


Fig: Operation of if statement

## Example

In [1]:



```
num = 10

# try 0, -1 and None
if None:
    print("Number is positive")
print("This will print always")      #This print statement always print

#change number
```

This will print always

## if ... else Statement

### Syntax:

```
if test expression:
```

```
    Body of if
```

```
else:
```

```
    Body of else
```

## Flow Chart

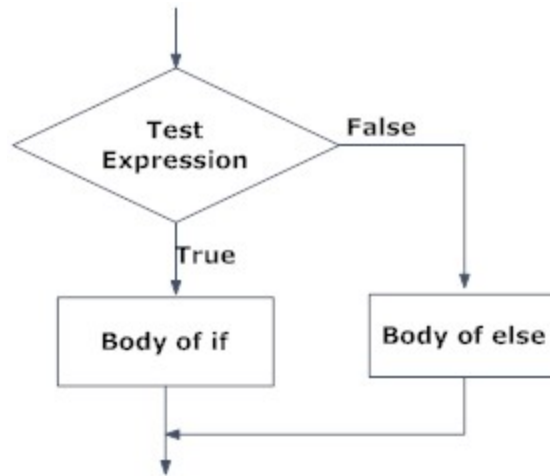


Fig: Operation of if...else statement

## Example

In [2]:



```
num = 10
if num > 0:
    print("Positive number")
else:
    print("Negative Number")
```

Positive number

## if...elif...else Statement

### Syntax:

```
if test expression:
```

```
    Body of if
```

```
elif test expression:
```

```
    Body of elif
```

```
else:
```

Body of else

## Flow Chart

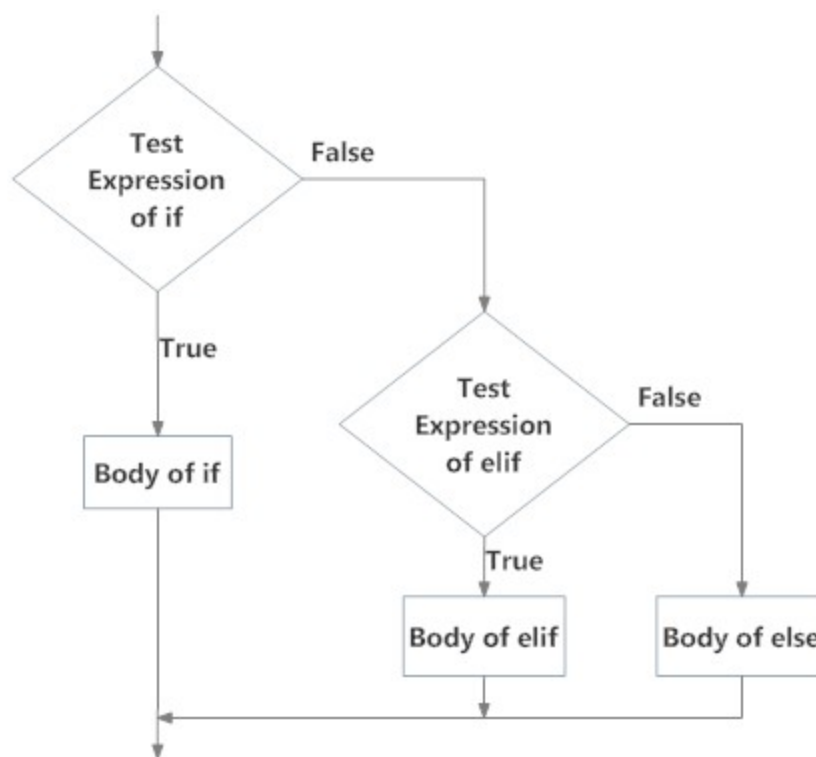


Fig: Operation of if...elif...else statement

## Example:

In [3]:



```
num = 0

if num > 0:
    print("Positive number")
elif num == 0:
    print("ZERO")
else:
    print("Negative Number")
```

ZERO

## Nested if Statements

We can have a if...elif...else statement inside another if...elif...else statement. This is called nesting in computer programming.

## Example:

In [4]:



```
num = 10.5

if num >= 0:
    if num == 0:
        print("Zero")
    else:
        print("Positive number")
else:
    print("Negative Number")
```

Positive number

## Python program to find the largest element among three Numbers

In [5]:



```
num1 = 10
num2 = 50
num3 = 15

if (num1 >= num2) and (num1 >= num3):           #Logical operator and
    largest = num1
elif (num2 >= num1) and (num2 >= num3):
    largest = num2
else:
    largest = num3
print("Largest element among three numbers is: {}".format(largest))
```

Largest element among three numbers is: 50