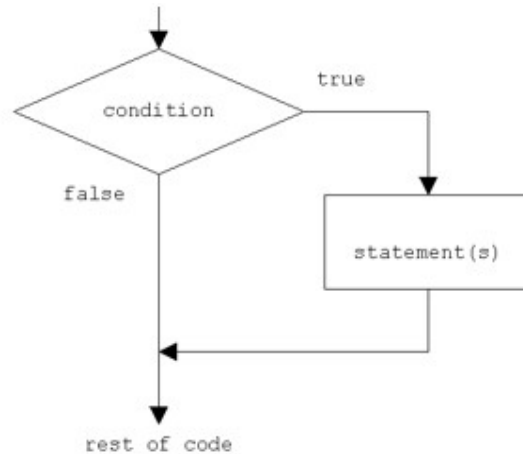# CONDITIONAL STATEMENTS IN PYTHON

- if statements
- if....else statements
- if..elif..else statements
- nested if statements

Python if statements

Syntax: if expression

        statements**:**

In Python, if statement evaluates the test expression inside parenthesis. If test expression is evaluated to true (nonzero) , statements inside the body of if is executed. If test expression is evaluated to false (0) , statements inside the body of if is skipped.

example:

```
a=20
b=10
if a > b :
    print(" X is bigger ")
```
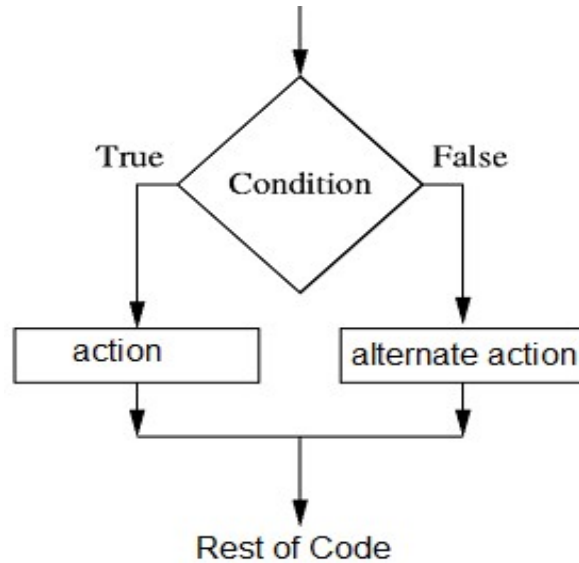
output:
X is bigger

In this program we have two variables x and y. x is assigned as the value 20 and y is 10. In next line, the if statement evaluate the expression (x>y) is true or false. In this case the x > y is true because x=20 and y=10, then the control goes to the body of if block and print the message "X is bigger". If the condition is false then the control goes outside the if block.

Python if..else statements

The else statement is to specify a block of code to be executed, if the condition in the if statement is false. Thus, the else clause ensures that a sequence of statements is executed.

Syntax:

if expression:

    statements

else:

    statements

example1*: check whether the person is eligible to vote or not*

sita = 20

if sita>18:

        print("sita is eligible to vote")

else:

        print("sita is not eligible to vote")

output:
sita is eligible to vote

example2*: check whose age is greater*

```
Ram=10

Shyam=20

if Ram> Shyam :

 print(" Ram's  age  is greater")

else :

 print(" Shyam's age is greater")
```

output:
Shyam's age is greater

if..elif..else statements

Syntax:

if expression:

      statements

elif expression:

      statements

else:

      statements

example:

```
x=500

if x > 500 :

        print(" X is greater than 500 ")

elif x < 500 :

        print(" X is less than 500 ")

elif x == 500 :

        print(" X is 500 ")

else :

        print(" X is not a number ")
```

output:
X is 500

example2:

```
a = 20

b = 40

c = 10

if a>b:

    print("a is greater")

elif b>c:

    print("b is greater")

else:

    print("c is greater")
```

output:
b is greater

Nested if statements

In some situations you have to place an if statement inside another statement.

Syntax:

if condition:

if condition:

statements

else:

statements

else:

statements

example:

```
mark = 72
if mark > 50:
    if mark >= 80:
        print ("You got A Grade !!")
    elif mark >=60 and mark < 80:
        print ("You got B Grade !!")
    else:
        print ("You got C Grade !!")
else:
    print("You failed!!")
```

output:
You got B Grade

example2:

```
x = 41

if x > 10:
  print("Above ten,")
  if x > 20:
    print("and also above 20!")
  else:
    print("but not above 20.")
```

output:

Above ten,

and also above 20!