Conditional statements (Control flow statements) in python

```
* if
* if-elif
* if-else
* if-elif-else
* nested if
```

Block Structure

- The code that is executed when a specific condition is met is defined in a "block."
- Statements preceding blocks generally end with a colon (:)
- In Python, the block structure is signalled by changes in indentation.
- Each line of code in a certain block level must be indented equally and indented more than the surrounding scope.
- The standard is to use 4 spaces for each level of block indentation.

If:

- 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.

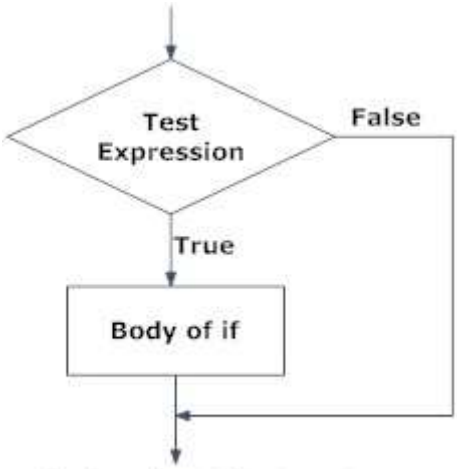

Fig: Operation of if statement

In [1]:
```
if (1<2):
    print('Hi!')
    print("Welcome")
```

```
Hi!
Welcome
```

In [2]:
```
if (1>2):
    print('Hi!')
```

In [3]:
```
if 1>2:
    print('Hi!')

print("siva")
```

```
siva
```

If-else Syntax:

```
if test expression:

    Body of if

else:

    Body of else
```

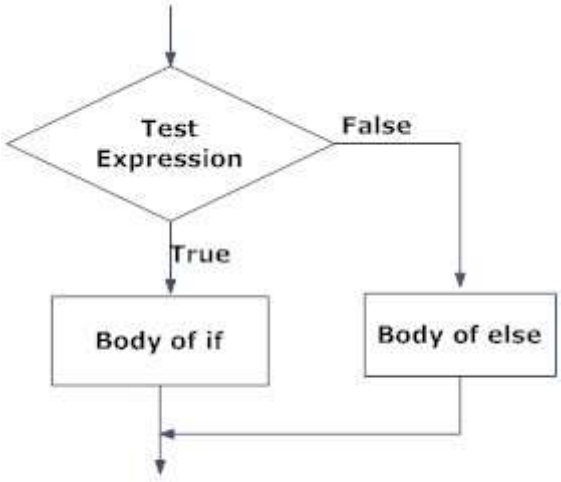

Fig: Operation of if...else statement

In [4]:
```
if 1 < 2:
    print('first')
else:
    print('last')
```

```
first
```

In [5]:
```
# Take a variable x and print "Even" if the number is divisible by 2, otherwise p

x=int(input('enter a number'))

if (x%2==0):
    print(x,' is even number')
else:
    print(x,' is odd number')
```

```
enter a number5
5  is odd number
```

In [6]:
```
a=2
b=2
c=3
d=4

if (a==b or c==d):
    print("abc")
```

```
abc
```

if -elif-else Syntax:

```
if test expression:
        Body of if

elif test expression:
        Body of elif

else:
        Body of else
```

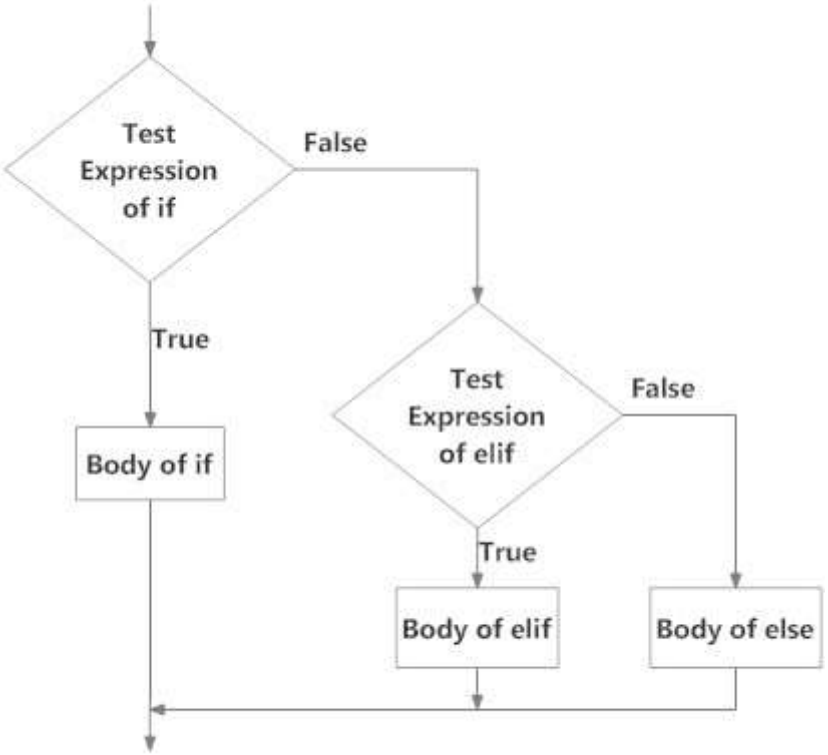

Fig: Operation of if...elif...else statement

In [7]:
```
if 2 != 2:
    print('first')
elif 3 == 3:
    print('middle')
```

```
middle
```

In [8]:
```
if 1 == 3:
    print("How did that happen?")
elif 1 > 3:
    print("Yikes")
else:
    print("All is well with the world")
```

```
All is well with the world
```

Take a variable y and print "Grade A" if y is greater than 90, "Grade B" if y is greater than 60 but less than or equal to 60 "Grade F".

In [9]:
```
y=58

if y>90:
    print("Grade A")
elif(y>60):
    print("Grade B")
```

Write a Program to find largest of given 2 Numbers from the input console?

In [10]:
```
n1=int(input("Enter First Number:"))
n2=int(input("Enter Second Number:"))
if n1>n2:
    print("Largest Number is:",n1)
elif n1<n2:
    print("Largest Number is:",n2)
else :
    print("Both are equal")
```

```
Enter First Number:5
Enter Second Number:40
Largest Number is: 40
```

Write a Program to find largest of given 3 Numbers from the input console?

In [11]:
```
n1=int(input("Enter First Number:"))
n2=int(input("Enter Second Number:"))
n3=int(input("Enter Third Number:"))
if n1>n2 and n1>n3:
    print(n1,"is the Largest")
elif n2>n3:
    print(n2,"is the Largest")
else:
    print(n3,"is the Largest")
```

```
Enter First Number:5
Enter Second Number:10
Enter Third Number:15
15 is the Largest
```

Nested if Statements

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

In [12]:
```
num = 10

if num >= 0:
    if num == 0:
        print("not")
    else:
        print("Positive Number")

else:
    print("Negative number")
```

```
Positive Number
```

In [13]:
```
# next progrm on bank transction using conditional statements
amount=20000

pin=1234

if (int(input('enter your pin'))==1234):
    with_draw=int(input('with draw amount:'))
    if (with_draw<=amount):
        print(with_draw,' successfully tranasaction complted')
    else:
        print(with_draw,' not sufficiant funds in your account')
else:
    print('invalid pin number')
```

```
enter your pin1234
with draw amount:10000
10000  successfully tranasaction complted
```