If..elif..else (if..else ladder)
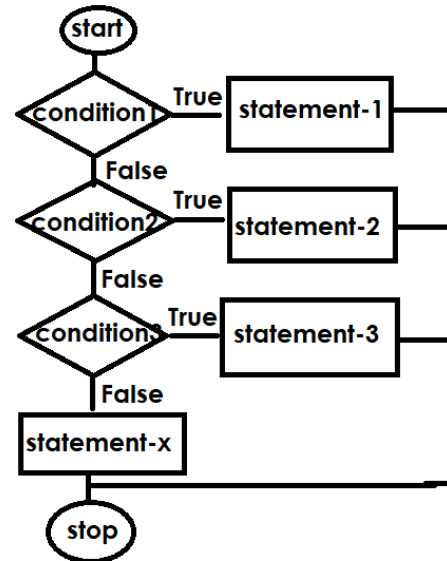
This syntax is used for checking more than one condition or multiple condition.

Syntax:	

if condition1:
    statement-1
elif condition2:
    statement-2
elif condition3:
    statement-3
…
else:
    statement-x
 	
if condition1 is True, python executes statement-1
if condition1 is False and condition2 is True, python executes statement-2
if condition1,condition2 and condition3 True, python executes statement-3
if all conditions are False it executes optional else block contains statement-x	

Example:
Write a program to find input number is +ve,-ve,zero

num=int(input("Enter any integer number "))

```python
if num>0:
    print("+ve number")
elif num<0:
    print("-ve number")
else:
    print("zero")
```

Output

Enter any integer number 9
+ve number

Enter any integer number -9
-ve number

Enter any integer number 0
Zero

Example:

```python
# Write a program to find input character is
# alphabet,digit or special character

ch=input("Single Character ")

if (ch>='A' and ch<='Z') or (ch>='a' and ch<='z'):
    print("Alphabet")
elif ch>='0' and ch<='9':
    print("Digit")
else:
    print("Special Character")
```

Output
Single Character 0
Digit

Single Character $
Special Character

Single Character B
Alphabet

Example:
Write a program to input a single character
if character is alphabet and uppercase convert into lowercase
if character is alphabet and lowercase convert into uppercase

```
ch=input("Enter Single Character ")
if ch>='A' and ch<='Z':
    ch=chr(ord(ch)+32)
    print(ch)
elif ch>='a' and ch<='z':
    ch=chr(ord(ch)-32)
    print(ch)
else:
    print("input character is not alphabet")
```

Output
Enter Single Character b
B

Enter Single Character $
input character is not alphabet

Enter Single Character 5
input character is not alphabet

Example:
Write a program to input 3 integer numbers
and find maximum number

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 max")
elif n2>n1 and n2>n3:
    print(n2,"is max")
elif n3>n1 and n3>n2:
    print(n3,"is max")

Output
Enter First Number10
Enter Second Number20
Enter Third Number 30
30 is max

Enter First Number10
Enter Second Number30
Enter Third Number 20
30 is max

Q8. Write a program to calculate the electricity bill (accept number of unit from user) according to the following criteria :

Unit	Price
First 100 units	no charge
Next 100 units	Rs 5 per unit
After 200 units	Rs 10 per unit

(For example if input unit is 350 than total bill amount is Rs2000)
Show Answer

```
units=int(input("Units :"))
if units<=100:
    bill=0
elif units>100 and units<=200:
    bill=(units-100)*5
else:
    bill=0+500+(units-200)*10

print(bill)
```

Q1. Write a program to accept percentage from the user and display the grade according to the following criteria:

Marks	Grade
> 90	A
> 80 and <= 90	B
>= 60 and <= 80	C
below 60	D

Show Answer

```
p=int(input("Percentage :"))
if p>90:
    print("A Grade")
```

```python
elif p>80 and p<=90:
    print("B Grade")
elif p>=60 and p<=80:
    print("C Grade")
else:
    print("D Grade")
```

Q2. Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria :

Cost price (in Rs)	Tax
> 100000	15 %
> 50000 and <= 100000	10%
<= 50000	5%

Show Answer

```python
price=int(input("Bike Price :"))
if price>100000:
    tax=price*15/100
elif price>50000 and price<=100000:
    tax=price*10/100
else:
    tax=price*5/100

print(price)
print(tax)
```

https://www.hackerrank.com/challenges/py-if-else/problem?isFullScreen=false

```python
n=int(input())
if n%2!=0:
```

```python
    print("Weird")
elif n>=2 and n<=5:
    print("Not Weird")
elif n>=6 and n<=20:
    print("Weird")
else:
    print("Not Weird")
```

https://www.codechef.com/practice-old/topics/basic-programming-concepts

https://www.codechef.com/problems/RCBCSK

```python
X=int(input("RCB Total Score :"))
Y=int(input("CSK Total Score :"))
if X-Y>18:
    print("RCB Qualify Playoffs")
else:
    print("CSK Qualify Playoffs")
```


Why 10%-3 is -2?
```
>>> 10%3
1
>>> 10%-3
-2
>>> -10%3
2
>>> 10//-3
-4
```

```
>>> -4*-3
12
>>> 12-10
2
>>> -10%3
2
>>> 10%3
1
```