Python - Flow Control Statements

1. IF Statement
2. Else Statement
3. Elif Statement

PFCS - IF Statement

If staatments are the statement which will execute if the conitiion of the statement are `True` . If statement consists of -

1. If keyword
2. A condition
3. A colon
4. Starting on the next line, indented Block

> Syntax if test expression :

```
statements
```

In [2]:

```
word = 'Jacob'
if word == 'Jacob':
    print('HI', word)
```

```
HI Jacob
```

In [4]:

```
# positive testing
num1 = 5
num2 = -6
if num1 >0:
    print('pos')
if num2 < 0:
    print('neg')
```

```
pos
neg
```

PFCS - Else Statement

Else statments are the statement which will execute the written codes. If statement consists of -

1. Else keyword
2. A colon
3. Starting on the next line, indented Block

> Syntax else:

```
statements
```

In [6]:

```
num1 = 5
num2 = -6
if num1 > 0:
    print('pos')
else:
    print('neg')
```

```
pos
```

PFCS - ELIF Statement

ELIf staatments are the statement which will execute if the conitiion of the statement are `True` . If statement consists of -

1. Elif keyword
2. A condition
3. A colon
4. Starting on the next line, indented Block

> Syntax elif test expression :

```
statements
```

In [10]:

```
num1 = int(input('Enter a number : '))
if num1 > 0:
    print(num1,'is positive')
elif num1 == 0:
    print('zero')
else:
    print(num1, 'is negative')
```

```
Enter a number : 0
zero
```

In [11]:

```
import sympy as sp
```

In [14]:

```
pr = int(input('Enter a num ber: '))
if sp.isprime(pr) == True:
    print(pr,'is a prime Number')
else:
    print(pr,'is a non prime number')
```

```
Enter a num ber: 2789
2789 is a prime Number
```

In [18]:

```
stain = int(input('Enter a Starting Number:  '))
stoin = int(input('Enter a stopping Number:  '))
print('Prime Numbers fom range of',stain,'to',stoin)
print(list(sp.primerange(stain, stoin)))
```

```
Enter a Starting Number:  100
Enter a stopping Number:  129
Prime Numbers fom range of 100 to 129
[101, 103, 107, 109, 113, 127]
```

Check teh divisibility of an integer by another integer

In [23]:

```
a = int(input('enter no : '))
b = int(input('Enter on : '))
if a %b ==0:
    print('number divisible')
else:
    print('doesnot divisible as remainder comes',a%b)
```

```
enter no : 3
Enter on : 4
doesnot divisible as remainder comes 3
```

In [28]:

```
files = ['pdf','jpg']
user = input('Enter file name: ').split('.')
if user[-1] in files:
    print('Thank you for uploading your docu.')

else:
    print('upload failed.. XXXXExtension ErrorXXXXX')
```

```
Enter file name: fild.csv
upload failed.. XXXXExtension ErrorXXXXX
```

In [29]:

```
from random import randrange
otp = randrange(123456,987654)
otp
```

Out[29]:

```
938427
```

In [37]:

```
from random import randrange
no = input('Enter your 10 digit Mobile Number :')
if len(no) != 10:
    no = None
    print('Input 10 digit Number.You may missed or have exceeded.')
else:
    print('Verify OTP')
    otp = randrange(123456,987654)
    otp = str(otp)
    print(otp)
    OTP = input('Enter OTP received on '+str(no[:2])+'xxxx' + str(no[-4:])+ ' :
    if len(OTP) != 6:
        print('Invlid OTP')
        OTP = None
    elif OTP == otp:
        print('OTP Verified')
    else:
        print('Invalid OTP')
    print('Thank you for using my program')
```

```
Enter your 10 digit Mobile Number :6263332517
Verify OTP
762191
Enter OTP received on 62xxxx2517 : 762191
OTP Verified
Thank you for using my program
```

Year - Leap

In [52]:

```
year = int(input())
if year % 4 != 0:
    print('usual year')
elif year % 100 == 0:
    if year % 400 == 0:
        print(year,'is a leap year.')
    else:
        print(year,'is not a leap year')
else:
    print(year, 'is a leap year')
```

```
2021
usual year
```

Indexing & Slicings

Left ---) 0 to ∞

Right ----) -1 to -∞

In [53]:

```
word = 'Ethical Hacking'
```

In [54]:

```
1 len(word)
```

Out[54]:

```
15
```

In [55]:

```
1 word[0]
```

Out[55]:

```
'E'
```

In [56]:

```
1 word[1]
```

Out[56]:

```
't'
```

In [60]:

```
1 word[0:2] , word [:2]
```

Out[60]:

```
('Et', 'Et')
```

In [65]:

```
1 '6263332517'[-6:-1]
```

Out[65]:

```
'33251'
```

In [66]:

```
1 import random
2 "".join(random.sample('6263332517',5))
```

Out[66]:

```
'32631'
```

In [67]:

```
1 name = 'SumitKumarShukla'
2 numb = '6263332517'
```

In [71]:

```
1 password = "".join(random.sample(name+numb,12))
```

In [72]:

```
1 password
```

Out[72]:

```
'kSi5h6m7uuS3'
```

In [84]:

```
1 name = 'JacobDaniel'
2 dob  = '151945'
3 num  = '16453324875'
4 spc =  '#@%'
```

In [74]:

```
1 "".join(random.sample(name+dob+num,16))
```

Out[74]:

```
'5ao8c515a621Db5-'
```

In [86]:

```
1 name[:5]+"".join(random.sample(dob+num+spc,6))
```

Out[86]:

```
'Jacob1@3255'
```