if statement

In [1]:
```python
inp = input('Enter Nationality : ')
```

```
Enter Nationality : french
```

In [2]:
```python
if inp == "French":
    print('Préférez vous parler français ?') # if block
print('Thank You!!')
```

```
Thank You!!
```

In [3]:
```python
inp = input('Enter Nationality : ')
if inp == "French":
    print('Préférez vous parler français ?') # if block
print('Thank You!!')
```

```
Enter Nationality : French
Préférez vous parler français ?
Thank You!!
```

if else

In [4]:
```python
num = int(input('Enter a number : '))
```

```
Enter a number : 3
```

In [5]:
```python
if num > 0 :
    print(num, ' is a positve number')
else :
    print(num, ' is a negative number')
```

```
3  is a positve number
```

if elif

In [1]:
```python
marks =  float(input('Please enter marks : '))
if marks >=90 :
    print('Grade A')
elif marks >=75 :
    print('Grade B')
elif marks >= 55 :
    print('Grade C')
elif marks >= 35 :
    print('Grade D')
else :
    print('Grade F')
print('Thank you !!')
```

```
Please enter marks : 87
Grade B
Thank you !!
```

Nested if

In [7]:
```python
a = int(input('Enter a number :'))
b = int(input('Enter a number :'))
c = int(input('Enter a number :'))
```

```
Enter a number :20
Enter a number :44
Enter a number :5
```

In [8]:
```python
if (a > b):
    if (a > c):
        print('a (', a, ') is greatest')
    else :
        print('c (', c, ') is greatest')
else :
    if (b > c):
        print('b (', b, ') is greatest')
    else :
        print('c (', c, ') is greatest')
```

```
b ( 44 ) is greatest
```

Loops

for loop

In [9]:
```python
string = 'Python'
for s in string:
    print(s)
print('Thank You!!')
```

```
P
y
t
h
o
n
Thank You!!
```

while loop

In [10]:
```python
counter = 0
while counter < 5:
    print(counter)
    counter += 1
print('Thank You!!')
```

```
0
1
2
3
4
Thank You!!
```

while loop never executed

In [11]:
```python
counter = 5
while counter < 5:
    print(counter)
    counter += 1
print('Thank you')
```

```
Thank you
```

Range function

range(n)

In [1]:
```python
obj = range(10)
print(obj)
```

```
range(0, 10)
```

In [2]:
```python
print(list(obj))
```

```
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

range(start, stop)

In [3]:
```python
obj = range(5, 15)
print(list(obj))
```

```
[5, 6, 7, 8, 9, 10, 11, 12, 13, 14]
```

step in range

In [4]:
```python
obj = range(2, 50, 2)
print(list(obj))
```

```
[2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48]
```

Nested Loops

In [5]:
```python
# outer loop
for j in range(2,11):
    print('Table of :', j)
    # inner loop
    for i in range(1,11):
        # print multiplication
        print('{:2d} X {:2d} = {:2d}'.format(j,i, 2*i).center(20))
    print('\nEnd of multiplication table of ', j, '\n')
print('Thank You')
```

```
Table of : 2
     2 X  1 =  2
     2 X  2 =  4
     2 X  3 =  6
     2 X  4 =  8
     2 X  5 = 10
     2 X  6 = 12
     2 X  7 = 14
     2 X  8 = 16
     2 X  9 = 18
     2 X 10 = 20

End of multiplication table of  2

Table of : 3
     3 X  1 =  2
     3 X  2 =  4
     3 X  3 =  6
     3 X  4 =  8
     3 X  5 = 10
     3 X  6 = 12
     3 X  7 = 14
     3 X  8 = 16
     3 X  9 = 18
     3 X 10 = 20

End of multiplication table of  3

Table of : 4
     4 X  1 =  2
     4 X  2 =  4
     4 X  3 =  6
     4 X  4 =  8
     4 X  5 = 10
     4 X  6 = 12
     4 X  7 = 14
     4 X  8 = 16
     4 X  9 = 18
     4 X 10 = 20

End of multiplication table of  4

Table of : 5
     5 X  1 =  2
     5 X  2 =  4
     5 X  3 =  6
     5 X  4 =  8
     5 X  5 = 10
     5 X  6 = 12
     5 X  7 = 14
     5 X  8 = 16
     5 X  9 = 18
     5 X 10 = 20

End of multiplication table of  5

Table of : 6
     6 X  1 =  2
     6 X  2 =  4
     6 X  3 =  6
     6 X  4 =  8
     6 X  5 = 10
     6 X  6 = 12
     6 X  7 = 14
     6 X  8 = 16
     6 X  9 = 18
     6 X 10 = 20

End of multiplication table of  6

Table of : 7
     7 X  1 =  2
     7 X  2 =  4
     7 X  3 =  6
     7 X  4 =  8
     7 X  5 = 10
     7 X  6 = 12
     7 X  7 = 14
     7 X  8 = 16
     7 X  9 = 18
     7 X 10 = 20

End of multiplication table of  7

Table of : 8
     8 X  1 =  2
     8 X  2 =  4
     8 X  3 =  6
     8 X  4 =  8
     8 X  5 = 10
     8 X  6 = 12
     8 X  7 = 14
     8 X  8 = 16
     8 X  9 = 18
     8 X 10 = 20

End of multiplication table of  8

Table of : 9
     9 X  1 =  2
     9 X  2 =  4
     9 X  3 =  6
     9 X  4 =  8
     9 X  5 = 10
     9 X  6 = 12
     9 X  7 = 14
     9 X  8 = 16
     9 X  9 = 18
     9 X 10 = 20

End of multiplication table of  9

Table of : 10
    10 X  1 =  2
    10 X  2 =  4
    10 X  3 =  6
    10 X  4 =  8
    10 X  5 = 10
    10 X  6 = 12
    10 X  7 = 14
    10 X  8 = 16
    10 X  9 = 18
    10 X 10 = 20

End of multiplication table of  10

Thank You
```

Loop Control Statements

In [6]:
```python
for s in 'Python':
    if s == 'h':
        break
    print(s)
print('End of Loop')
```

```
P
y
t
End of Loop
```

In [7]:
```python
for s in 'Python':
    if s == 'h':
        continue
    print(s)
print('End of Loop')
```

```
P
y
t
o
n
End of Loop
```

Loop Else Statements

In [8]:
```python
for i in range(5):
    food = input('Enter edible item :')
    if food == 'spam':
        print('No more spam please !!')
        break
    print('Great Delicious ')
else :
    print('I am so glad !! No Spam')
print('Finally finshed stuffing myself!!')
```

```
Enter edible item :
Great Delicious
Enter edible item :spam
No more spam please !!
Finally finshed stuffing myself!!
```

In [9]:
```python
for i in range(5):
    food = input('Enter edible item :')
    if food == 'spam':
        print('No more spam please !!')
        break
    print('Great Delicious ')
else :
    print('I am so glad !! No Spam')
print('Finally finshed stuffing myself!!')
```

```
Enter edible item :Chocolate
Great Delicious
Enter edible item :strawberry
Great Delicious
Enter edible item :spam
No more spam please !!
Finally finshed stuffing myself!!
```