

In [1]:

```
print("Hello World")
```

Hello World

This is Python Programming in Jupyter Notebook

Hello World

Shift - Enter - will execute the selected cell

Esc --> a - inserts one empty cell above the current cell

Esc --> b - inserts one empty cell below the current cell 

Esc --> m - converts code cell into markdown cell

Esc --> y - converts markdown cell into code cell

Esc --> dd - deletes the selected cell

Esc --> p - will display all the shortcuts available in jupyter

In []:

Introduction python

list of keywords

Operators in python

Type conversion

Conditional Statements on Python

Loops in Python

Strings

Conditional Statements on Python

syntax

```
if condition:
    statement1
    statement2
    statementn
```

```
if (condition)
{
statement1
statement2
.
.
.
.
.
.
.
statementn
}
```

In [2]:

```
x = 5
if x == 5:
    print("X is having value of 5")
```

X is having value of 5

In [3]:

```
x = 10
if x == 5:
    print("X is having value of 5")
    print("X is equal to 5")
else:
    print("X is not equal to 5")
```

X is not equal to 5

```
if condition:
    statement1
    statement2
elif condition:
    statement1
    statement2
else:
    statement1
    statement2
```

In [4]:

```
a = 5
b = 10
c = 15
if a > b and a > c:
    print("a is largest number")
elif b > c:
    print('b is largest')
else:
    print("C is the largest")
```

C is the largest

input() --> used to take the input from the user

In [5]:

```
inp = input()
```

55

In [6]:

```
print(inp)
```

55

In [7]:

```
print(type(inp))
```

<class 'str'>

In [8]:

```
inp = int(input())
print(inp, type(inp))
```

77

77 <class 'int'>

In [9]:

```
a = input()
b = input()
```

```
789
123
```

In [10]:

```
a = input('Enter a value')
b = input('Enter b value')
```

```
Enter a value5889
Enter b value3364
```

In [11]:

```
print(a,b)
```

```
5889 3364
```

In [12]:

```
print(type(a), type(b))
```

```
<class 'str'> <class 'str'>
```

In [13]:

```
print(type(inp))
```

```
<class 'int'>
```

In [14]:

```
print("Hello World", 'Hello World2')
```

```
Hello World Hello World2
```

In [15]:

```
print("Hello World", 'Hello World2', sep = '\n')
```

```
Hello World
Hello World2
```

In [16]:

```
print("Hello World", 'Hello World2', sep = '\t')
```

```
Hello World    Hello World2
```

In [17]:

```
print("Hello World", 'Hello World2', sep = '*****')
```

```
Hello World*****Hello World2
```

In [18]:

```
a = 5
b = 10
print("a value is",a)
print("b value is ",b)
print("c value is",input("Enter c value"))
```

```
a value is 5
b value is 10
Enter c value785
c value is 785
```

In [19]:

```
a = int(input())
print("Value is {} using format".format(a))
```

```
598
Value is 598 using format
```

In [20]:

```
print("Value is {} using format {} another is".format(10,20))
```

```
Value is 10 using format 20 another is
```

In [21]:

```
print("Value is {0} using format {1} another is same firt value {0}".format(10,20))
```

```
Value is 10 using format 20 another is same firt value 10
```

In [22]:

```
print("Value is {0} using format {1} another is same firt value {0}".format(10.00759,20))
```

```
Value is 10.00759 using format 20 another is same firt value 10.00759
```

Loops in Python

one thing multiple times

1. instialize
2. condition
3. increment/decrement

1. for

2. while

Syntax for for loop

```
for iterate_variable in groupOfElements:  
    statement1  
    statement2  
    statement3
```

In [23]:

```
for i in range(10):  
    print(i, i*2, end = ' ', sep='-')
```

0-0 1-2 2-4 3-6 4-8 5-10 6-12 7-14 8-16 9-18

In [24]:

```
for i in range(5, 50):  
    print(i, end = " ")
```

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 3
1 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

In [25]:

```
for i in range(5, 50, 2):  
    print(i, end = " ")
```

5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49

In [27]:

```
initial = 0  
increment = 1  
cond = 1 < 51  
for i in range(0, 51):  
    if i % 10 == 0:  
        print(i)  
    else:  
        print(i, end = " ")
```

0
1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30
31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

range(initial_value, var > condition, incre/decrement)

In [28]:

```
for j in range(100 , 1, -2):  
    print(j, end = ' ')
```

```
100 98 96 94 92 90 88 86 84 82 80 78 76 74 72 70 68 66 64 62 60 58 56 54 5  
2 50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2
```

In [29]:

```
s1 = 'Hello'  
s2 = "World"  
s3 = '''Hello  
world  
again'''  
  
s4 = """worlds  
hello  
again  
and  
again"""
```

In [30]:

```
s = 'Hello World'  
for char in s:  
    print(char)
```

```
H  
e  
l  
l  
o
```

```
W  
o  
r  
l  
d
```

In [31]:

```
li = ['ldsnkv',6546,'sfds','fds','scd']  
for element in li:  
    print(element)
```

```
ldsnkv  
6546  
sfds  
fds  
scd
```

While loop in python

```
i = 0
while condition:
    statement1
    statement2
    statement3
    .
    .
    .
    .
    statementn
    increment/decrement
```

In [32]:

```
i = 0
while i < 11:
    print(i)
    i += 1
```

```
0
1
2
3
4
5
6
7
8
9
10
```

1. break --> if we stop the execution of the loop
2. continue --> if we stop current iteration of the loop

In [33]:

```
for i in range(1, 11, 1):
    if i % 2 == 0:
        continue
    else:
        print(i, end = ' ')
```

```
1 3 5 7 9
```


In [34]:

```
for i in range(1, 11, 1):
    if i == 5:
        print("Fault occurred")
        break
    else:
        print(i)
```

```
1
2
3
4
Fault occurred
```

simple calculator

In [35]:

```
num1 = int(input('please give number'))
num2 = int(input('please give another number'))
op = int(
    input('give 1 for addition\n give 2 for sub \n give 3 for multiplicatin \n give 4 f
or div')
)

if op == 1:
    print("addition of {} and {} = {}".format(num1,num2,num1+num2))
elif op==2:
    print("sub of{} and {} = {}".format(num1,num2,num1-num2))
elif op == 3:
    print("multiplication of {} and {} = {}".format(num1, num2, num1*num2))
elif op == 4:
    if num2!= 0:
        print("division of {} and {} = {}".format(num1,num2,num1/num2))
    else:
        print("ZeroDivisionError")
else:
    print("You are selected wrong option")
```

```
please give number5
please give another number55
give 1 for addition
give 2 for sub
give 3 for multiplicatin
give 4 for div4
division of 5 and 55 = 0.09090909090909091
```

simple another task

implement calculator to perform add/sub/mul/div everytime

In [36]:

```
while True:  
    print("1000")  
    break
```

1000

to open notebook file in our system

1. download the .ipynb file into current working directory
2. Open the notebook software and move to the current working directory
3. open the downloaded file and verify name should endwith '.ipynb' if not rename
4. reopen the file.