

Python Learning

How to use jupyter Note Book

Basiscs of Python

01 - My fist program

In [1]:

```
print(2+6)
```

8

02-Operators

In [2]:

```
print (8+9) #add
print (9-6) #sub
print (5*3) #mul
print (7/5) #div_points/float
print (7//5) #div_whole_number
print (9%2) #mod_/_remainder
print (3**5) #power_operator
```

```
17
3
15
1.4
1
1
243
```

PEMDAS //operators priority// Parenthesis, Exponents, Multiply, Divide, Addition, Subtraction left to right sequence for M D & A S

03&04_strings and comments

In [3]:

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

print('test for single')
print("test for double")
print(''''test for tripple quote''')

# to comment out use CTRL + /
```

```
Hello World
test for single
test for double
test for tripple quote
```

05_variables

In [4]:

```
# variables : Objects containing specific values
```

```

x = 3 + 2
print ("X = ", (x))
print (type(x))

# print_type_class

# Rules to a variable
# 1 - the variable should contain letters, numbers or underscores
# 2 - do not start with numbers
# 3 - spaces are not allowed
# 4 - do not use keywords used in functions
# 5 - short and descriptive
# 6 - case sensitivity (lowercase letters preferred)

fruit_basket = "Apples"
quantity = 8

print ("fruit basket has ", fruit_basket, "the quantity is ", quantity)

```

```

X = 5
<class 'int'>
fruit basket has Apples the quantity is 8

```

input_variables

In [5]:

```

# fruit_basket = "Mangoes"
# print(fruit_basket)

# # input function _simple
# fruit_basket = input("which is your fav fruit? ")
# print (fruit_basket)

# input function of 2nd stage
name = input("What is your name? ")
greet = "Hello! "
print(greet,name)

# input function of 3rd stage
name = input("What is your name? ")
age = input ("How old are you? ")
greet = "Hello!"

print (greet, name, "You are still young")

```

```

What is your name? Moeed
Hello! Moeed
What is your name? Moeed
How old are you? 15
Hello! Moeed You are still young

```

07_conditional_logics

In [6]:

```

# LOGICAL OPERATORS (true/false , 0/1, yes/no)
# equal to ==
# not equal to !=
# Less than <
# greater than >
# Less than & greater than <= & >=

```

```
# example for logical operators
ali_age = int(input ("What is your age? "))
age_for_school = 5
print(ali_age >= age_for_school)
```

What is your age? 6

True

08_type_conversion

In [7]:

```
x= 5
y= 6.6
z= "Hello"

# implicit type conversion
x= x*y

print (type(x))

# explicit type conversion
age= input("What is your age? ")
print ("Your age is: ", age, type(int(age)))
```

<class 'float'>

What is your age? 5

Your age is: 5 <class 'int'>

09_if_elif_else

In [8]:

```
Ali_age = int (input ("What is the age of Ali? "))
Kg_school = 5
Higher_school = 6
min_age = 4

if Ali_age >= min_age or Ali_age == Kg_school:
    print("Ali can go to KG School!")
elif Ali_age >=6:
    print("Ali can go to Higher School!")
else:
    print ("Ali is still a baby! Take care of him!")
```

What is the age of Ali? 5

Ali can go to KG School!

10_functions

In [9]:

```
# defining a function
# 1st way of doing it
# def print_msg ():
#     print ("Learning Python!")
# print_msg()

# # 2nd way
# def print_msg2():
#     text = "Learning with ammar"
#     print(text)
# print_msg2()
```

```
#

# defining a function for future

def age_perdiction (value):
    new_age = value + 20
    return (new_age)
enter_age = int (input("Enter your age? "))
perdicted_age = age_perdiction(enter_age)
print("Your perdicted age is: ",perdicted_age)
```

Enter your age? 5
Your perdicted age is: 25

11_loops

In [10]:

```
# Two types
# While loop and For loop

x = 0
while(0<=x<=10):
    print (x)
    x= x+1

# For loop

days = ['Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat', 'Sun']
for i in days:
    # if i=='Fri': break #to skip the specific index in list.
    if i == 'Wed':continue
    print(i)
```

0
1
2
3
4
5
6
7
8
9
10
Mon
Tue
Thu
Fri
Sat
Sun

12_import_library

In [11]:

```
# if you want to calculate the value of pi

import math
print("the value of pi is:",math.pi)
```

```
import statistics
num_array = [100,220,330,440,550]
print("the mean of the above array is:", statistics.mean(num_array))

# numpy, pandas are important library for visualization of data
```

the value of pi is: 3.141592653589793

the mean of the above array is: 328