

Python a Chilla with #baba_aammar

How to use Jupyter Note Book

Basics of Python

01 - My First Program

In [1]:

```
print(2+3)
print("Hello World")
print("We are learning Python wth Ammar")
```

```
5
Hello World
We are learning Python wth Ammar
```

02 - Operators

In [2]:

```
print(2+1)
print(3-1)
print(6/2)
print(2*3)
print(13%2)
print(6//2)
print(2**3)

print(3**2/2*3/3+6-4)

#PEMDAS
# Parenthesis Exponents Multiply Divide Addition Substraction
# Left to right sequence for M D & A S
```

```
3
2
3.0
6
1
3
8
6.5
```

03 - Strings

In [3]:

```
print("Hello World")
print("We are learning Python with Ammar")
print('Test for single quotes')
print("Test for double quotes")
print(''''test for triple quotes''')
print("Whats up?")
```

```
Hello World
We are learning Python with Ammar
Test for single quotes
Test for double quotes
```

test for triple quotes
Whats up?

04 - Comments

```
In [4]: print("How are you?")           #press these to comment out (Ctrl+/)
        print("We are learning Python with Ammar") #print a string

        print(2+6) # print operators function with numbers
```

How are you?
We are learning Python with Ammar
8

05 - Variables

```
In [5]: # Variables: objects containing specific values
        x = 5 #numeric or integer variable
        print(x)

        y="We are learning Python with Ammar" #string variable
        print(y)

        x=x+10 #or x=15
        print(x)

        #types/class of variables
        type(x)
        print(type(x))

        print(type(y))

        #print_type_class

        #Rules to assign 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 function (break, mean, median, test etc.)
        # 5- Short and descriptive
        # 6- Case sensitivity (Lowercase, uppercase letters. Lowercase should be used)

        fruit_basket=8
        fruit_basket=15
        print(type(fruit_basket))
        print(fruit_basket)
```

5
We are learning Python with Ammar
15
<class 'int'>
<class 'str'>
<class 'int'>
15

06 - Input Variables

```
In [6]: fruit_basket="Mangoes"
        print(fruit_basket)
```

```

#input function simple
fruit_basket=input("What is your favorite fruit? ")
print(fruit_basket)

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

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

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

print(greetings, name, ", You are still young")
# input_ammam_You are still young

```

Mangoes
 What is your favorite fruit? MAnGo
 MAnGo
 What is your name? NAsir
 Hello! NAsir
 What is your name? NAsir
 How old are you? 13
 Hello! NAsir , You are still young

07- Conditional Logics

In [7]:

```

#Logical operators are either "true or false" or "yes or no" or "0 or 1"
# equal to ==
# not equal to !=
# Less than <
# greater than >
# Less than and equal to <=
# greater than and equal to >=

#is 4 equal to 4?
print(4==4)
print(4!=4)
print(4>3)
print(3>6)
print(3<=5)
print(5>=4)

# applcation of logical operators
hammad_age = 4
age_at_school = 5
print(hammad_age==age_at_school)

#input operator and logicals
age_at_school=5
hammad_age=input("How old is hammad? ") #input function
hammad_age=int(hammad_age)

```

```
print(type(hammad_age))
print(hammad_age==age_at_school)    #Logical operator
```

```
True
False
True
False
True
True
False
How old is hammad? 4
<class 'int'>
False
```

08 - Type Conversion

```
In [8]: # x = 10          #integer
        # y = 10.2      #float
        # z = "Hello"   #string

        # implicit type conversion
        # x = x+y
        # print(x, "Type of x is : ", type(x))

        #Explicit type conversion
        age = input("What s your age? ")
        # age = int(age)
        print(age, type(int(age)))

        #name
        name=input("What isyour name? ")
        print(name, type(str(name)))
```

```
What s your age? 15
15 <class 'int'>
What isyour name? NAsir
NAsir <class 'str'>
```

09 - If Else Elif

```
In [9]: hammad_age = 1
        required_age_at_school = 5
        # question: can hammad go to school?

        if hammad_age==required_age_at_school:
            print("Congratulations! Hammad can join the school.")
        elif hammad_age > required_age_at_school:
            print("Hammad should join higher secondary school")
        elif hammad_age <= 2:
            print("You should take care of Hammad, he is still a baby!")
        else:
            print("Hammad can not go to school")
```

```
You should take care of Hammad, he is still a baby!
```

10 - Functions

```
In [10]:
```

```

# defining a function
# 1
#from typing import Text

# def print_codanics():
#     print("We are Learning with Ammar")
#     print("We are Learning with Ammar")
#     print("We are Learning with Ammar")

# print_codanics()

# 2
def print_codanics():
    text = "We are learning with Ammar"
    print(text)
    print(text)
    print(text)
print_codanics()

# defining a function with if, elif and else statements

def school_calculator(age):
    if age==5:
        print("Hammad can join the school")
    elif age>5:
        print("Hammad should go to higher school")
    else:
        print("Hammad is still a baby")

school_calculator(2)

# defining a function of future

def future_age(age):
    new_age=age+20
    return new_age

future_predicted_age = future_age(18)
print(future_predicted_age)

```

We are learning with Ammar
 We are learning with Ammar
 We are learning with Ammar
 Hammad is still a baby
 38

11 - Loops

In [11]:

```

#while and For Loops

#while Loops
# x=0
# while (x<=5):
#     print(x)
#     x=x+1

#for Loop

for x in range(4,11):

```

```
print(x)

# array
days = ["Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun"]

for d in days:
    # if (d=="Fri"):break #Loop stops
    if (d=="Fri"): continue #Skips d
    print(d)
```

4
5
6
7
8
9
10
Mon
Tue
Wed
Thu
Sat
Sun

12 - Import Libraries

In [12]:

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

import math
print("The value of pi is ", math.pi)

import statistics
x = [150,250,350,450]
print(statistics.mean(x))

# numpy, pandas
```

The value of pi is 3.141592653589793
300

13 - Trouble Shooting

In [13]:

```
# print(we are Learnning python with Ammar) #Syntax error

# print(25/0) # runtime error

name = "Ammar"
print("Hello", name)

#trouble shooting is easy
```

Hello Ammar