Python Ka Chila with Baba Ammar

How to use Jupyter Notebook

1 First Program

```
In [1]:   print(2+3)
          print("Hello World")
          print("We are Learning Python with Ammar")
```

```
5
Hello World
We are Learning Python with Ammar
```

2 Operators

```
In [2]:   # 4 basic operators
          print(5+3)
          print(4-1)
          print(3*4)
          print(7/2)

          # remove decimal and divide
          print(7//2)

          # Check Remainder
          print(7%2)

          # Exponent
          print(3**2)

          # Merging all operators - PEDMAS rule
          print(4**3*5/3-8+19)
```

```
8
3
12
3.5
3
1
9
117.66666666666667
```

3 Strings

```
In [3]:   print (' Test Single Quote')
          print (" Test Double Quotes")
          print ( ''' Test Triple Quotes ''')
```

```
Test Single Quote
Test Double Quotes
Test Triple Quotes
```

4 Comments

```
In [4]:  # This '#' is used for comments
         #  Use Cntrl + / for commenting line

         # print ("Print")
         print ('Print line')
         print (3+99)
```

```
Print line
102
```

5 Variables

```
In [5]:  x=5
         print (x)

         # changing x value, by adding 10
         x=x+10
         print (x)

         y='Learning Variables'
         print (y)

         # Checking Type of Varibles:
         print(type(x))
         print(type(y))

         # Delete a variable
         basket='Mangoes'
         print(basket)
         del basket
         # If we print(basket), it will give error
         # print(basket)
```

```
5
15
Learning Variables
<class 'int'>
<class 'str'>
Mangoes
```

6 Input Variables

```
In [6]:  #simple variable assignment
         basket='mangoes'
         print (basket)
```

```
mangoes
```

```
In [7]:  #Asking from user by Using input function
         basket=input("What's your favourite fruit?  ")
         print(basket)
```

```
What's your favourite fruit?  Apple
Apple
```

```
In [8]:  #Advance input function: Type 1
```

```
name=input("What's your name? ")
greetings='Hello '
print(greetings, name)
```

```
What's your name? Zain
Hello  Zain
```

In [9]:
```
#Advance input function: Type 2
name=input("What's your name? ")
age = input ("What's your age? ")
greetings='Hello '
print(greetings, name, ", You're still young.")
```

```
What's your name? Zain
What's your age? 26
Hello  Zain , You're still young.
```

7 Conditional Logics

In [10]:
```
# Logical Operator is True/False , O/1 or Yes/No.

# Equal to                     ==
# not equal to                 !=
# less than                    <
# greater than                 >
# less than and equal to       <=
# greater than and equal to    <=

print(4==4)
print(5!=5)
print(78>55)
print(44<=40)
```

```
True
False
True
False
```

In [11]:
```
#Checking age is greater than or equal to the limit
age=20
limit=15
print(age>= limit)
```

```
True
```

In [12]:
```
#Cheking age limit by entering age
age= int (input("Enter Age: "))
limit= 15
print (age>= limit)
```

```
Enter Age: 26
True
```

8 Type Coversion

In [13]:
```
x= 3        # type int
y= 3.2      # type float
z= 'Hi '    # type string
```

```python
# Implicit Coversion
x= y*x    # type will be float
print(x, " Type of x: ", type(x))
```

```
9.600000000000001  Type of x:  <class 'float'>
```

In [14]:
```python
# Explicit Conversion
age= input("Enter your age: ")
age= int(age) # Changing type
print (age, "Type: ", type(age))
```

```
Enter your age: 26
26 Type:  <class 'int'>
```

9 If Else Elif

In [15]:
```python
age= 4
required = 6

if age == required:
    print('You can join school.')
elif age < required:
    print ('You cannot join the school.')
elif age <= 2:
    print ('You should Take Care of him, because he is a baby.')
else:
    print ('You can join higher classes.')
```

```
You cannot join the school.
```

10 Functions

In [16]:
```python
# Defining Function Methord: 1

def code():
    print(" We are Learning Python")
    print(" We are Learning Python")

code() # calling function
```

```
We are Learning Python
We are Learning Python
```

In [17]:
```python
# Defining Function Methord: 2

def code():
    text= " We are Learning Python"
    print(text)
    print(text)

code() # calling function
```

```
We are Learning Python
We are Learning Python
```

In [18]:
```python
# Defining Function Methord: 3

def code(text):
```

```
    print(text)
    print(text)

code(" We are Learning Python") # calling function
```

```
We are Learning Python
We are Learning Python
```

In [19]:
```
# Defining School Age Calculation Using Function and if,else,elif Statements

def school_calculation(age):

    if age == 5:
        print("The Kid can go to school.")
    elif age > 5:
        print("The Kid should go to higher class.")
    else:
        print ("The Kid is still a baby.")

school_calculation(7)
```

```
The Kid should go to higher class.
```

In [20]:
```
# Finding future age

def FutureAge (age):
    NewAge= age + 20
    return (NewAge)

FuturePredictedAge = FutureAge (25)
print(FuturePredictedAge)
```

```
45
```

11 Loops

In [21]:
```
# Loop 1: While

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

```
0
1
2
3
4
5
```

In [22]:
```
# Loop 2: For

for x in range (5,10):
    print(x)   # The data in range will be printed, [included 5 in some IDEs].
```

```
5
6
7
8
9
```

```
In [23]:   # Working with Arrays

           days= ['Mon','Tues','Wed','Thu','Fri','Sat','Sun']

           for d in days:
               print (d)
```

```
Mon
Tues
Wed
Thu
Fri
Sat
Sun
```

```
In [24]:   # Using break in Array

           days= ['Mon','Tues','Wed','Thu','Fri','Sat','Sun']

           for d in days:
               if d == 'Fri':
                   break          # break means stoping the loop
               print (d)
```

```
Mon
Tues
Wed
Thu
```

```
In [25]:   # Using continue in Array

           days= ['Mon','Tues','Wed','Thu','Fri','Sat','Sun']

           for d in days:
               if d == 'Fri':
                   continue        # continue means skiping value in the loop
               print (d)
```

```
Mon
Tues
Wed
Thu
Sat
Sun
```

```
In [26]:   # Using pass in Array

           days= ['Mon','Tues','Wed','Thu','Fri','Sat','Sun']

           for d in days:
               if d == 'Fri':
                   pass        # pass means to do nothing in the loop
               print (d)
```

```
Mon
Tues
Wed
Thu
Fri
Sat
Sun
```

12 Import Libraries

```python
In [27]:  # Print value of pi, by importing library

          import math
          print("Value of pi is : ", math.pi)

          import statistics
          x=[123,45,67,89,98]
          print("Average of array is :", statistics.mean(x))
```

```
Value of pi is :  3.141592653589793
Average of array is : 84.4
```

13 Trouble Shooting

```python
In [28]:  # syntax error
          # print ("go)  #  Here the comma is missing

          # Run-Time Error
          # print(25/0) # Error in the value

          # Semantic Error
          name = 'Ammar'
          # print (" Hello name") # It will print the command without showing error
          print (" Hello", name)
```

```
Hello Ammar
```