Python ka chilla with baba aammar

How to use jupyter note book

Basics of python

01A_1.1_First line code

In [1]:
```
print(2+3)
print("hellow world")
print("we are learning python with ammar")
print(2+3)
print("Allah, Muhammad SAW")
```

```
5
hellow world
we are learning python with ammar
5
Allah, Muhammad SAW
```

02A_2.2_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)
print(3**3)
```

```
3
2
3.0
6
1
3
8
6.5
27
```

PEMDAS Paranthesis, Exponents, Multiply, Divide, addition, substraction sequence for multiplication, division, addition and substraction will be from left to right double star is used for power

03A_2.3_Strings

In [3]:
```
print("Hellow world")
print("we are learning with ammar")
```

```
print('Test for single quotes')
print("test for double quotes")
print('''test for tripple quotes''')
print("what's up?")
```

```
Hellow world
we are learning with ammar
Test for single quotes
test for double quotes
test for tripple quotes
what's up?
```

04A_2.4_Comments (cntrl+/)

In [4]:
```
print("how are you?")                # make it coment, (ctrl+/)
print("We are learning with Ammar")  # print the string
print(2+3)                           # run the operator with addition
```

```
how are you?
We are learning with Ammar
5
```

05A_2.5_Variables

In [5]:
```
# #Variables: Objects containing specific values
x= 5 # Numeric varible
print(x)
y= "We are learning python with Ammar" # string variable
print(y)
x=x+10 # or x=15
print(x)
```

```
5
We are learning python with Ammar
15
```

Types/class of variables

In [6]:
```
print(type(x))
print(type(y))
# further details
fruit_baskit="mangoes"
print(fruit_baskit)
#---
fruit_baskit="mangoes, oranges"
print(type(fruit_baskit))
print(fruit_baskit)
# #---
fruit_baskit=8
print(fruit_baskit)
print(type(fruit_baskit))
print (fruit_baskit)
```

```
<class 'int'>
<class 'str'>
mangoes
<class 'str'>
mangoes, oranges
8
<class 'int'>
8
```

06A_2.6_Input function

In [7]:
```
#input funstion simple
fruit_baskit=input("what is your favourit? ")
print(fruit_baskit)
```

```
what is your favourit? applles
applles
```

input function 2nd stage

In [8]:
```
name=input("What is your name? ") # The input function is used to ask some informatin
greetings="Hello!"
print (greetings, name)

#2nd way of "input function 2nd stage"
name = input("what is your name? ")
print ("Hello!", name)
```

```
What is your name? zia
Hello! zia
what is your name? zia
Hello! zia
```

3rd stage of input function

In [9]:
```
name=input("What is your name? ")
age=input("How old are you? ")
greetings= "Hello dear"
print (greetings, name, ", Amazing! you are still quite young")
```

```
What is your name? zia
How old are you? 23
Hello dear zia , Amazing! you are still quite young
```

07A_2.7_conditional logical operator

comments

In [10]:
```
#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?

In [11]:
```
print (4==4)
print (4!=4)
print (4>3)
print (3<4)
print (3>6)
print (3<=5)
print (5>=4)
```

```
True
False
True
True
False
True
True
```

application of logical operators

In [12]:
```
hammad_age=6
age_at_school=5
print(hammad_age>=age_at_school)
```

```
True
```

input function and logical operator

In [13]:
```
age_at_school=5
applicant_age = input ("what is the age of applicant? ") # input function is used for
# from user.
print(type(applicant_age))
applicant_age=int(applicant_age)
print(type(applicant_age))
print(applicant_age==age_at_school) #logical operator
```

```
what is the age of applicant? 7
<class 'str'>
<class 'int'>
False
```

08A_2.8_Types conversion

In [14]:
```
x=7                # int
y=10.2             # float
z="Hellow"         # str
print(type(x))
print(type(y))
print(type(z))

# # implicit type conversion

x=x+y
print(x, ", Type of x :", type(x))
```

```
<class 'int'>
<class 'float'>
<class 'str'>
17.2 , Type of x : <class 'float'>
```

In [15]:
```
# explicit type conversion
age=input("what is your age? ")
print(age, type(age))
age=int(age)
print(type(int(age)))
```

```
what is your age? 31
31 <class 'str'>
<class 'int'>
```

09A_2.9_if, elsif, else

In [16]:
```
applicant_age=6
required_age_at_school=5
if applicant_age==required_age_at_school:
    print("Congratulation! Applicant eligible")
elif applicant_age>required_age_at_school:
    print("Not eligible, Recomended to join high school")
elif applicant_age<=3:
    print("not eligible, still baby")
else:
    print("Not eligible")
```

```
Not eligible, Recomended to join high school
```

use input function to ask the age from user user

In [17]:
```
required_age_at_school=5
applicant_age=input("what is the age of the applicant? ")
applicant_age=int(applicant_age)

# # question: Is hammad eligible for school admission

if applicant_age==required_age_at_school:
    print("Congratulation! Applicant eligible")
elif applicant_age>=6:
    print("Not eligible, Recomended to join high school")
elif applicant_age<=3:
    print("not eligible, still baby")
else:
    print("Not eligible")
```

```
what is the age of the applicant? 4
Not eligible
```

10A_2.10_function define

defining a function 1st method

In [18]:
```
def print_codanic():
    print("Allah, Muhammad SAW")
    print("Allah, Muhammad SAW")
    print("Allah, Muhammad SAW")

print_codanic()
```

```
Allah, Muhammad SAW
Allah, Muhammad SAW
Allah, Muhammad SAW
```

defining function 2nd method

In [19]:
```
def print_codanic():                                    # function is defined
    text = "Allah Raheem wa kareem, Muhammad SAW"       # generate string variable named
    print(text)                                         # print function for printing cal
    print(text)
    print(text)

print_codanic()
```

```
Allah Raheem wa kareem, Muhammad SAW
Allah Raheem wa kareem, Muhammad SAW
Allah Raheem wa kareem, Muhammad SAW
```

3rd method

In [20]:
```
def print_codanic(text):
    print(text)
    print(text)
    print(text)

print_codanic("Allah Raheem wa kareem, Muhammad SAW")
```

```
Allah Raheem wa kareem, Muhammad SAW
Allah Raheem wa kareem, Muhammad SAW
Allah Raheem wa kareem, Muhammad SAW
```

defining a function with if, elif and else statement

In [21]:
```
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 still baby")

print(school_calculator(3))
```

```
hammad still baby
None
```

defining a function of future

In [22]:
```
def future_age(age):
    new_age=age+20
    return(new_age)

future_predicted_age=future_age(7)
print(future_predicted_age)
```

```
27
```

11A_2.11_Loops

while and for loops

while loops

In [23]:
```
x=0
while (x<5):
    print(x)
    x=x+1
```

```
0
1
2
3
4
```

for loop

In [24]:
```
for x in range (2,7):
    print(x)
```

```
2
3
4
5
6
```

array

In [25]:
```
days=["monday", "tuesday", "wednesday","thursday", "friday", "saturday"]
for d in days:
    if (d=="friday"): break

    print(d)
```

```
monday
tuesday
wednesday
thursday
```

In [26]:
```
days=["monday", "tuesday", "wednesday","thursday", "friday", "saturday"]
for d in days:
    if (d=="wednesday"): continue

    print(d)
```

```
monday
tuesday
thursday
friday
saturday
```

12A_2.12_import_liberary

In [27]:
```
# if I want to import the value of pi:
import math
print("The value of Pi:", math.pi)
```

```
The value of Pi: 3.141592653589793
```

In [28]:
```
import statistics
x=[2, 3, 4, 5]
print("the mean:", statistics.mean(x))
```

```
the mean: 3.5
```

13A_2.13_trouble_shooting

In [29]:
```
#print("Allah") syntax error

# print(25/0) #runtime error (mathematical types of error)


#name= "zia"
# print("Hello "+name) #symentic error (human error, most dfficult)
```