Phyton ka chilla with ammar

How to use jupyter note book

Basics of python

01_My first program

In [4]:
```python
print(2+3)
print("Hello Awais")
print("I am learning python with aammar")
```

```
5
Hello Awais
I am learning python with aammar
```

02_operators

In [5]:
```python
print(2+2)
print(3**2)
print(4-2)
print(8/4)
```

```
4
9
2
2.0
```

python follows PEMDAS rules Paranthesis Exponent Multiply Divide Addition Subtraction follows left to right sequence for M D & A S

03_strings

In [6]:
```python
print('Hello')
print("Hello")
print('''Hello''')
```

```
Hello
Hello
Hello
```

In [7]:
```python
print("Hello Awais")
print("I am learning python with aammar")
```

```
Hello Awais
I am learning python with aammar
```

scripts written in '. "", '" ", known as strings

04_Comments

In [8]:
```python
print("i am learning python with ammar")
print(2+3)
```

```
i am learning python with ammar
5
```

commenting helps in determining the function of script/string

05_variables

In [10]:
```python
x=5 #intiger variable
print(x)
y="I am learning python" #string variable
print(y)
```

```
5
I am learning python
```

In [11]:
```python
fruit_basket= "mangoes"
print(fruit_basket)
```

```
mangoes
```

types of variables

rules to assign a variable

*1-the variable should contain letters, numbers or underscores2- do not strat with numbers 3- spaces arent allowed4- do not use keywords used in functions (mean, median, test etc) 5- must be short and descriptive6- case sensitivity (always use lower case letters)**

06_input variables

In [12]:
```python
fruit_basket=("what is your favourite fruit? ")
print(fruit_basket) #input function simple
```

```
what is your favourite fruit?
```

In [13]:
```python
#input function of 2nd stage
name=input("what is your name? ")
greetings="hello!"
print(greetings, name)
```

```
what is your name? awais
hello! awais
```

In [14]:
```python
#another way of stage 2 input function
```

```
name=input("what is your name? ")
print("hello!", name)
```

what is your name? awais
hello! awais

```
#3rd stage of input function

name=input("what is your name? ")
age=input("how old are you? ")
greetings="Hello!"
print(greetings, name, ", you are still young")
```

what is your name? awais
how old are you? 30
Hello! awais , you are still young

07_conditional_logics

*Logical operators are either yes or no, true or false, 0 or 1 equal to == not equal to != less then <
greater then > less then and equal to <= greater then and equal to >=*

```
print(4==4) #will code true, single equal (=) will not work
```

True

```
print(4!=4)
print(4>3)
88print(3<6)
print(3>6)
```

False
True
True
False

application of logical operators

```
awais_age=4
age_at_school=5
print(awais_age==age_at_school)
```

False

input function and logicals operators

```
awais_age=4
age_at_school=5
awais_age=input("how old is awais? ") #input function
awais_age=int(awais_age) #int means integer
print(type(awais_age))
print(awais_age==age_at_school) #logical operators
```

how old is awais? 30
<class 'int'>
False
```

# 08_type_conversion

*x=10 #integer, y=10.2 #float/decimal, z="hello" #string*

**implicit type of conversion**

In [21]:
```python
x=10
y=10.2
x=x+y
print(x, "type of x is:", type(x))
```

```
20.2 type of x is: <class 'float'>
```

explicit type conversion

In [22]:
```python
age=input("what is your age? ")
age=int(age)
print(type(age))
```

```
what is your age? 30
<class 'int'>
```

09_if, else or elif

In [23]:
```python
awais_age= 1
required_age_at_school= 5 #can awais go to school?
if awais_age==required_age_at_school :
    print("congratulations! awais can join the school.")
elif awais_age > required_age_at_school:
    print("awais should join higher secondary school")
elif awais_age<=2:
    print("you should take care of awais he is still baby!")
else:
    print("awais cant go to school")
```

```
you should take care of awais he is still baby!
```

10_functions

defining a function for any mistake within a string

In [24]:
```python
def print_codanics():
    print("i am learning with ammar")
    print("i am learning with ammar")
    print("i am learning with ammar")
print_codanics()
```

```
i am learning with ammar
i am learning with ammar
i am learning with ammar
```

Second way

In [25]:
```python
def print_codanics():
```

```
    Text = "i am learning with ammar"
    print(Text)
    print(Text)
    print(Text)
print_codanics()
```

```
i am learning with ammar
i am learning with ammar
i am learning with ammar
```

third way

In [26]:
```
def print_condanics(text):
    print(text)
    print(text)
    print(text)
print_condanics("i am learning with ammar")
```

```
i am learning with ammar
i am learning with ammar
i am learning with ammar
```

fourth way, defining a function with if, elif and else statements

In [28]:
```
def school_calculator(age, text):
    if age==5:
        print("awais can join the school")
    elif age>5:
        print("awais should go to higher school")
    else:
        print("awais is still a baby")
```

defining a function of future

In [29]:
```
def future_age(age):
    new_age=age+20
    return new_age
    print(new_age)

future_predcited_age=future_age(5)
print(future_predcited_age)
```

```
25
```

11_loops

In [30]:
```
for x in range(4,11):
    print(x)
```

```
4
5
6
7
8
9
10
```

array

```
days=["mon","tue","weds","thurs","firday","saturd","sund"]
for d in days:
    if (d=="friday"): break
    if(d=="friday"): continue
    print(d)
```

```
mon
tue
weds
thurs
firday
saturd
sund
```

12_import_libraries

how to import already defined functions, Exanple, print the value of pi

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

the value of pi is 3.141592653589793

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

300

Important libraries, numpy, pandas, important libraries

13_troubleshooting

```
print("i am learning with ammar) #syntax error (python language error)
```

```
  File "C:\Users\AWAISI~1\AppData\Local\Temp/ipykernel_9696/457020196.py", line 1
    print("i am learning with ammar) #syntax error (python language error)
                                                                         ^
SyntaxError: EOL while scanning string literal
```

```
print(25/0) #runtime error (mathematical error)
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
C:\Users\AWAISI~1\AppData\Local\Temp/ipykernel_9696/1964406738.py in <module>
----> 1 print(25/0) #runtime error (mathematical error)

ZeroDivisionError: division by zero
```

```
name="awais"
print("hello", name) #symantic error (our mistake, typing or coding error)
```

hello awais

hello awais