In [1]:
```
# python ka chilla with baba ammar
## how to use jupyter notebook
### our basics of python
01. my first program
```

```
  File "<ipython-input-1-6f718708d3cf>", line 4
    01. my first program
        ^
SyntaxError: invalid syntax
```

In [ ]:
```
print (2+3)
print ("hello world")
print ("we are learning python with ammar")
print ("it going quite good so far")
```

02-Operators

In [7]:
```
print(1+3)
print(2-5)
print(9/3)
print(3*3)
print(7%3)
```

```
4
-3
3.0
9
1
```

03-Strings

In [13]:
```
print (2+3)
print ("hello world")
print ("we are learning python with ammar")
print ('test for single quote')
print ("test for double quote")
print ('''test for tripple quotes''')
```

```
5
hello world
we are learning python with ammar
test for single quote
test for double quote
test for tripple quotes
```

04-Comments in python

1. The shortcut key to comment out is ctrl+/

In [20]:
```
print("how are you") #press ctrl + / to comment out
print("we are learning python with ammar") #print a string
print(6+2) #print operators function in numbers
```

```
how are you
we are learning python with ammar
```

```
8
```

05-Variables

In [59]:

```
x=5
print(x)
print (type(x))

y=("we are learning python")
print (y)
print(type(y))
print(2+8)

fruit_basket = "mangoes"
# del fruit_basket
print(fruit_basket)
print(type(fruit_basket))
```

```
5
<class 'int'>
we are learning python
<class 'str'>
10
mangoes
<class 'str'>
```

06-Input Function

In [22]:

```
fruit_basket=("mangoes")
print(fruit_basket)
fruit_basket=input("what is your favourite fruit?")
print(fruit_basket)


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

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

```
mangoes
what is your favourite fruit?mangoes
mangoes
what is your name? Rizwan
Hello! Rizwan
what is your name? Rizwan
Hello! Rizwan
what is your name? Rizwan
```

```
how old are you? 18
Hello! Rizwan , you are still young
```

07-Conditional Logics

In [58]:

```
# logical operators are either 'true' or 'false' 'yes' or 'no' '0' or '1'
# equals to                   ==
# less than                   <
# greater than                >
# less than and equal to      <=
# greater than and equal to   >=
# not equal to_filename       !=

print(4==4)
print(4!=4)
print(4>3)
print(4<6)
print(3<=5)
print(5>=4)

# application of logical operators


hammad_age=5
age_at_school=5
print(hammad_age==age_at_school)

#input function and logicals operators
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
True
True
True
True
how old is hammad? 5
<class 'int'>
True
```

08-Type Conversion

In [56]:

```
x=10.2
y=10
z="Hello!"

x=x+y

print(type(x))
print(type(y))
print(type(z))

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

```
#explicit conversion
age=input("what is your age? ")
age=int(age)
print(type(age))

name
name=input("what is your name? ")
age=int(age)
print(type(int(name)))
```

```
<class 'float'>
<class 'int'>
<class 'str'>
30.2 type of x is: <class 'float'>
what is your age? 18
<class 'int'>
what is your name? Rizwan
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-56-da8f85768a97> in <module>
     21 name=input("what is your name? ")
     22 age=int(age)
---> 23 print(type(int(name)))

ValueError: invalid literal for int() with base 10: 'Rizwan'
```

09-If Else Elif

In [54]:

```
hammad_age=5
required_age_at_school=5
#question:can hammad join the school?
if hammad_age==required_age_at_school:
    print("Congratulations! hammad can join the school")
elif hammad_age > required_age_at_school:
    print("hammad can not go to school or should join the higher classes")
elif hammad_age < 4:
    print("Hammad is still a baby")
else:
    print("hammad can not join the school")
```

```
Congratulations! hammad can join the school
```

10-Functions

In [51]:

```
#defining a function
#1
def print_codanics():
    print("we are learning python with ammar")
    print("we are learning python with ammar")
    print("we are learning python with ammar")
print_codanics()

#2
def print_codanics():
    text = "we are learning python with ammar"
    print(text)
    print(text)
```

```
    print(text)

#print_codanics()
#3
def print_codanics(text):
    print(text)
    print(text)
    print(text)
print_codanics("we are learning codanics with ammar in youtube channel")

#4 defining a function with if, elif and else statements

def school_calculator(age, text):
    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, please take care of him")
school_calculator(3,"hammad")

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, please take care of him")
school_calculator(3)

#defining a function of future

def future_age(age):
    new_age=age+20
    return new_age
    print(new_age)
future_predicted_age=future_age(20)
print(future_predicted_age)
```

```
we are learning python with ammar
we are learning python with ammar
we are learning python with ammar
we are learning codanics with ammar in youtube channel
we are learning codanics with ammar in youtube channel
we are learning codanics with ammar in youtube channel
hammad is still a baby, please take care of him
hammad is still a baby, please take care of him
40
```

11-Loops

In [42]:

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

for x in range(4,11):
    print(x)
```

```
days =("mon", "tue", "wed", "thu", "fri", "sat","sun")
for d in days:
        if (d=="fri"):break
        if (d=="thu"):continue
        print(d)
```

```
0
1
2
3
4
4
5
6
7
8
9
10
mon
tue
wed
```

12-Import Libraries

In [30]:

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

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

import statistics

x=(250,260,240,210,220)

print(statistics.mean(x))

#names of important libraries= numpy, pandas
```

```
value of pi is 3.141592653589793
236
```

13-Import Libraries

In [31]:

```
# print(we are learning python with ammar)
#this is called syntax error, we have forgot to insert commas etc

print(25/0)
this is called run time error

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

#symentic error

#trouble shooting is easy
```

```
  File "<ipython-input-31-4aecf90a3d12>", line 5
    this is called run time error
                  ^
SyntaxError: invalid syntax
```