In [2]:
```
print("Hello World")
```

```
Hello World
```

In [ ]:
```
#Commenting in python
#single Line Commenting
"""This is for multi line commenting"""

```

Literate Programming

- It is a combination of both coding and documentation

Jupyter notebook

Markdown Formats

- Order list
  1. Item 1
  2. Item 2
     - Subitem 1
     - Subitem 2
  3. Item 3

Python Basics

Keywords In python

Variables/literals in python

In [4]:
```
# Keywords In python
import keyword

print(keyword.kwlist)
print(len(keyword.kwlist))
```

```
['False', 'None', 'True', 'and', 'as', 'assert', 'async', 'await', 'break', 'cl
ass', 'continue', 'def', 'del', 'elif', 'else', 'except', 'finally', 'for', 'fr
om', 'global', 'if', 'import', 'in', 'is', 'lambda', 'nonlocal', 'not', 'or',
'pass', 'raise', 'return', 'try', 'while', 'with', 'yield']
35
```

In [2]:
```
#pyhon variables
#data types
#     int,float,str
#         list,set,tuple
#int a=4
a=9
print(type(a))
a=5.7
print(type(a))
s="apssdc"
print(type(s))
```

```
<class 'int'>
<class 'float'>
<class 'str'>
```

In [10]:
```
b=6
c=3
b+c
```

Out[10]: 9

In [4]:
```
x,y,z=10,20,40
x*z
```

Out[4]: 400

In [5]:
```
y-z
```

Out[5]: -20

In [6]:
```
a=6
b=3
print("addition of a and b is ",a+b)
```

```
addition of a and b is  9
```

In [8]:
```
print("addition of ",a," and ",  b, "is ",a+b)
```

```
addition of  6  and  3 is  9
```

In [4]:
```
#input
firstnumber=input("Enter the first number ")
v1=int(firstnumber)
secondnumber=input("Enter the second number ")
v2=int(secondnumber)
print("Addition is ",v1+v2)
```

```
Enter the first number 5
Enter the second number 9
Addition is  14
```

In [3]:
```
print(type(firstnumber))
print(type(secondnumber))
```

```
<class 'str'>
<class 'str'>
```

In [6]:
```
fv=int(input("first number"))
sv=int(input("second number"))
fv+sv
```

```
first number4
second number5
```

Out[6]:
```
9
```

In [7]:
```
#greet a friend
mygreeting=input("Enter the greetings:")
name=input("Enter your friend name:")
print("hello",name,mygreeting)
```

```
Enter the greetingsgood afternoon
Enter your friend namevijay
hello vijay good afternoon
```

In [10]:
```
print("hello",name , mygreeting)
```

```
hello vijay good afternoon
```

Statements in python

- Two types 1.Conditional statements

1.if
    syntax:
        if(){
            ...stms   #in other languages

        }
       else{
       ..stmts
       }
2.if else
3.if elif else

2.Control Statements/loops/iteartors

1. for loop
    1. break
    2. continoue
2. while
     1. break
     2. continoue

In [ ]:
```
#if syntax in python
# if condition:
#     ..stms
```

In [12]:
```
#if else syntax in python
# if condition:
#     ..stms
# else:
#     ...stms
```

In [14]:
```
#if
x=4
y=8
if x<y:
    print("True")
```

```
True
```

In [15]:
```
if x<y
    print("True")
```

```
  File "<ipython-input-15-7bafabe29952>", line 1
    if x<y
         ^
SyntaxError: invalid syntax
```

In [16]:
```
if x<y:
print("True")
```

```
  File "<ipython-input-16-a5818e98b88c>", line 2
    print("True")
        ^
IndentationError: expected an indented block
```

In [17]:
```
if x>y:
    print("True")
```

In [19]:
```
#if else
if x>y:
    print(True)
else:
    print(False)
```

```
False
```

In [21]:
```
d=13
if d%2==0:
    print("even")
else:
    print("odd")
```

```
odd
```

In [27]:
```
# 3.if elif else
# syntax:
#     if cond:
#         ..stms
#     elif cond:
#         ...stms
#     else:
#         ...stms
#find the gratest number
a=23
b=44444
c=304
if a>b and a>c:
    print("a is Grater ")
elif b>c:
    print("b is Grater")
else:
    print("c is Grater ")

```

```
b is Grater
```

In [ ]:
```
# Tasks:
#     1.Check given year is leap year or not
#         #2020 ,2000,-->leap
#        #2019, 1900-->non leap
#     2.Take form user input .if input is lessthen 16
#         return the message "child",between 16-30 print the ,
#         "Adult",gratert 50 print the "old"

```

In [10]:
```
year=int(input())
if (year%400==0 or( year%100!=0 and year%4==0)):
    print("leap year")
else:
    print("not leap year")

```

```
2008
leap year
```

In [15]:
```
age=int(input("enter age"))
if age<16:
    print("child")
elif age>=16 and age<=30:
    print("adult")
else:
    print("old")

```

```
enter age55
old
```

In [ ]:
```
2.Control Statements/loops/iteartors
        1. for loop
            1. break
            2. continoue
        2. while
             1. break
             2. continoue
```

In [17]:
```
#for loop syntax
# for(inisze;condition;icre/decre)
# {
#     ..staments
# }

```

In [18]:
```
#in python
range(1,10)
```

Out[18]:
```
range(1, 10)
```

In [22]:
```
range?
```

In [ ]:
```
1
```

In [28]:
```
#print first 10 natural number
for naturalNumber in range(0,11):
    print(naturalNumber,end=" ")
```

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

In [ ]:
```
#task
    #print the 1-11 all even numbers

    #print the 1-11 all even numbers with out using condition
```

In [29]:
```
for even in range(1,11):
    if even%2==0:
        print(even,end=" ")
```

```
2 4 6 8 10
```

In [30]:
```
for i in range(0,11,2):
    print(i,end=" ")
```

```
0 2 4 6 8 10
```

In [31]:
```
for i in range(1,11,2):
    print(i,end=" ")
```

```
1 3 5 7 9
```

In [34]:
```
for i in range(11,0,-1):
    print(i,end=" ")
```

```
11 10 9 8 7 6 5 4 3 2 1
```

In [36]:

```
#Roll numbers generation
#182P1A0561-->182P1A0599
#input :5
# n=5
#     5 * 1 = 5
#     5 * 2 = 10
#     5 * 3 = 15
#     ....
#     ..
#     5 * 10 = 50
n=int(input())
for number in range(1,11):
    print(n,"*",number,"=",n*number)

```

```
5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

In [38]:
```
#Roll numbers generation
#182P1A0561-->182P1A0599
for rollnumber in range(560,600):
    print("182P1A0"+str(rollnumber))
```

```
182P1A0560
182P1A0561
182P1A0562
182P1A0563
182P1A0564
182P1A0565
182P1A0566
182P1A0567
182P1A0568
182P1A0569
182P1A0570
182P1A0571
182P1A0572
182P1A0573
182P1A0574
182P1A0575
182P1A0576
182P1A0577
182P1A0578
182P1A0579
182P1A0580
182P1A0581
182P1A0582
182P1A0583
182P1A0584
182P1A0585
182P1A0586
182P1A0587
182P1A0588
182P1A0589
182P1A0590
182P1A0591
182P1A0592
182P1A0593
182P1A0594
182P1A0595
182P1A0596
182P1A0597
182P1A0598
182P1A0599
```

In [ ]:

```
#Tasks
1.Check the give number is factor of 1000
2.check given number is prime number or not
    ex:2,3,5,11,13,7,17...
3.check the given number is perfect number or not
        ex:input n:6
            1,2,3,6
            1+2+3=6
            sum of the factors = n
```

In [ ]:

```

```