Arithematic Operator

In [1]:

```
a = 5
b = 2
print(a*b)
```

```
10
```

comparison operator:-

> greater than 50 > 10

<

>=

<=

==

!=

In [2]:

```
a  != b ##
```

Out[2]:

```
True
```

In [3]:

```
a=9
b=2
c=a%b
d=a//b
print(c)   ## 1
print(d)   ## 4
print(2**5)   ##  32
a=5
b=7
a-=b     ## 5 - 7
print(a)  ##  -2
print(b)  ## 7
```

```
1
4
32
-2
7
```

In [4]:

```
name = "adnan"
```

In [5]:

```
print(type(name))
```

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

In [6]:

```
d = name[0] + name[1] + name[2]
```

In [7]:

```
print(name[ 2: ])
```

```
nan
```

Slicing of String

In [8]:

```
a = "hrkhan"
b="hello this is hrkhan"
print(a+b)
print(c)
```

```
hrkhanhello this is hrkhan
1
```

In [9]:

```
print("length of a " , len(a))
print("length of b " , len(b))
```

```
length of a  6
length of b  20
```

In [10]:

```
a=45.89
b= 45
c=a-b
print(c)        ## 0.8900000000000006




a=9
b=2
c=a%b
d=a//b
print(c)   ## 1
print(d)   ## 4
print(2**5)   ##  32
a=5
b=7
a-=b
print(a)  ##  -2
print(b)  ## 7
```

```
0.8900000000000006
1
4
32
-2
7
```

In [11]:

```
print(type(a))  ##   <class 'float'>
print(type(b))   ##   <class 'int'>
V=3.4J
```

```
<class 'int'>
<class 'int'>
```

In [12]:

```
print(type(V))   ##    <class 'complex'>
a= 3+5j
b=6+7j
print(a+b)
```

```
<class 'complex'>
(9+12j)
```

In [13]:

```
a = "this is hrkhan "
b="    hello this is hrkhan"
c= a+b
print(c)    ##this is hrkhan     hello this is hrkhan
```

```
this is hrkhan     hello this is hrkhan
```

In [14]:

```
a = "Adnan is learning"
```

In [15]:

```
print(a)
```

```
Adnan is learning
```

importing module & library math

In [16]:

```
import math
```

In [17]:

```
print(dir(math))
```

```
['__doc__', '__file__', '__loader__', '__name__', '__package__', '__
spec__', 'acos', 'acosh', 'asin', 'asinh', 'atan', 'atan2', 'atanh',
'ceil', 'copysign', 'cos', 'cosh', 'degrees', 'e', 'erf', 'erfc', 'e
xp', 'expm1', 'fabs', 'factorial', 'floor', 'fmod', 'frexp', 'fsum',
'gamma', 'gcd', 'hypot', 'inf', 'isclose', 'isfinite', 'isinf', 'isn
an', 'ldexp', 'lgamma', 'log', 'log10', 'log1p', 'log2', 'modf', 'na
n', 'pi', 'pow', 'radians', 'remainder', 'sin', 'sinh', 'sqrt', 'ta
n', 'tanh', 'tau', 'trunc']
```

In [18]:

```
math.sqrt(25)
```

Out[18]:

```
5.0
```

In [19]:

```
math.pow(2 ,   8)
```

Out[19]:

```
256.0
```

In [20]:

```
print(math.log2(32))
```

```
5.0
```

In [ ]:

```
print(math.floor(23.4))
```

In [ ]:

```
print(math.ceil(23.4))
```

In [ ]:

```
print(math.factorial(34))
```

In [ ]:

```
a = "Adnan"
```

In [ ]:

```
print(len(a))
print(a*3)
```

In [ ]:

```
print(a.capitalize())
```

In [ ]:

```
print(a.upper())
```

In [ ]:

```
print(a.lower())
```

In [ ]:

```
a = "123Df"
print(a.isupper())
print(a.islower())
print(a.isnumeric())
```

In [ ]:

```
a="python is an awesome programming language"
```

In [ ]:

```
print(a.split())
```

List

In [ ]:

```
lt= [2 , "adnan" , "abid"  ,'noumaan' ]
```

In [ ]:

```
print(type(lt))
```

In [ ]:

```
print(lt)
```

In [ ]:

```
print(lt[1][2]+lt[2][1])
```

In [ ]:

```
print(len(lt))
```

In [ ]:

```
print(lt[1:4])
```

In [ ]:

```
a = [1,4,45,6 ,19]
```

In [ ]:

```
print(a)
a.clear()
```

In [ ]:

```
print(a)
```

In [ ]:

```
a.append(34)
```

In [ ]:

```
print(a)
```

In [ ]:

```
a.insert(3 , 35)
```

In [ ]:

```
print(a)
```

In [ ]:

```
a.pop()
```

In [ ]:

```
a.sort() ## asending
```

In [ ]:

```
a.sort(reverse=True) ## desending
```

In [ ]:

```
print(a)
```

In [ ]:

```
print(min(a))
print(max(a))
```

In [ ]:

```

```

In [ ]:

```

```

In [ ]:

```

```

In [ ]:

```

```

In [ ]:

```
print(a*3) ##   pythonpythonpython
print(a.capitalize())  ## Python
print(a.count('y'))     ## 1
print(a.upper())        ## PYTHON
print(a.lower())       ##python
print(a.isupper())  ##   false
print(a.islower())  ##    true
print(a.isalnum())    ## true
print(a.isalpha())      ##  true
print(a.isnumeric())   ## false
a="python is an awesome programming language"
print(a.split())   ## ['python', 'is', 'an', 'awesome', 'programming', 'languag
e']   return a list.
print(a.split("a")) ## ['python is ', 'n ', 'wesome progr', 'mming l', 'ngu', 'g
e']
```

Data types conversion : -

int( ) convert data type in integer value.

float( ) convert data type in float value.

complex( ) convert data type in complex no.

str( ) convert data type in string.

list( ) convert data type in list.

In [ ]:

```
a = 23
```

In [ ]:

```
b = str(a)
```

In [ ]:

```
print(b , a  , type(b ) , type(a))
```

Take input from User

In [ ]:

```
a =  input("Enter the val ")
```

In [ ]:

```
print(type(a))
```

In [ ]:

```

```

program to Add to number from user

In [25]:

```
a  = int(input("Enter the first no "))
b = int(input("Enter the second  no "))
c = a + b
print("sum  of  " ,a , " and   " , b  , "  is  ", c)
```

```
sum  of   12  and   13   is   25
```

In [26]:

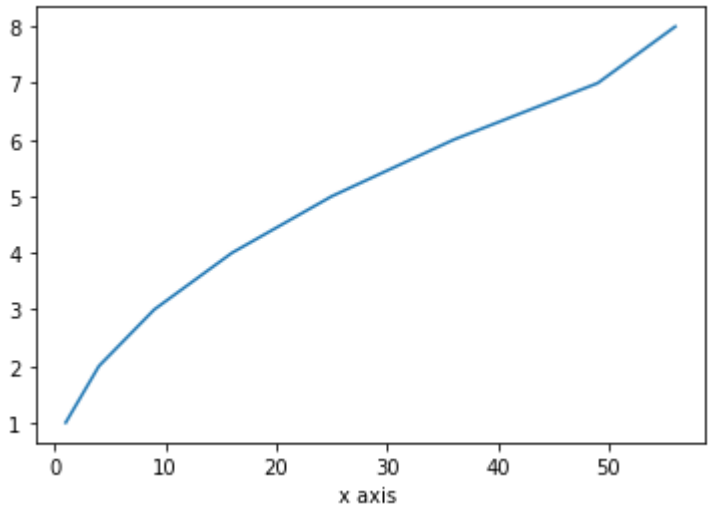
```

```

Out[26]:

```
'12 13'
```

In [4]:

```
import matplotlib.pyplot as plt
x = [1 , 2, 3 ,4 , 5 , 6 ,7 ,8 ]
y = [1 , 4 ,9,16 ,25 , 36 ,49 , 56 ]
plt.plot(y , x)
plt.xlabel("x axis ")
plt.show()
```



In [ ]:

In [ ]: