In [1]:
```
1+1
```

Out[1]: 2

In [2]:
```
2-1
```

Out[2]: 1

In [3]:
```
3*4
```

Out[3]: 12

In [5]:
```
8/4
```

Out[5]: 2.0

In [6]:
```
8//4
```

Out[6]: 2

In [7]:
```
8/5
```

Out[7]: 1.6

In [8]:
```
8//5
```

Out[8]: 1

In [9]:
```
8+9-7
```

Out[9]: 10

In [10]:
```
8+8-
```

```
  Cell In[10], line 1
    8+8-
        ^
SyntaxError: invalid syntax
```

In [34]:
```
5+5*5
```

Out[34]: 30

In [36]:
```
(5+5)*5
```

Out[36]: 50

In [38]:
```
2*2*2*2*2
```

Out[38]: 32

In [40]:
```
2**5
```

Out[40]: 32

In [42]:
```
2*5
```

Out[42]: 10

In [44]:
```
15/3
```

Out[44]: 5.0

In [46]:
```
15//3
```

Out[46]: 5

In [48]:
```
15%2
```

Out[48]: 1

In [50]:
```
10%2
```

Out[50]: 0

In [52]:
```
15%%2
```

```
  Cell In[52], line 1
    15%%2
       ^
SyntaxError: invalid syntax
```

In [54]:
```
3+'nit'
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[54], line 1
----> 1 3+'nit'

TypeError: unsupported operand type(s) for +: 'int' and 'str'
```

In [ ]:
```
a,b,c,d,e=15,7.8,'nit',8+9j,True
```

In [ ]:
```
print(a,b,c,d,e)
print(b)
print(c)
print(d)
print(e)
```

In [ ]:
```
print(type(a))
print(type(b))
print(type(c))
print(type(d))
```

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

In [ ]:
```
type(c)
```

In [ ]:
```
'naresh it'
```

In [58]:
```
print("max it")
```

```
max it
```

In [63]:
```
"max it technologies"
```

Out[63]:
```
'max it technologies'
```

In [65]:
```
s1="max it technologies"
s1
```

Out[65]:
```
'max it technologies'
```

In [67]:
```
a=3
b='hi'
type(b)
```

Out[67]:
```
str
```

In [69]:
```
print('max it's"technology")
```

```
  Cell In[69], line 1
    print('max it's"technology")
          ^
SyntaxError: invalid syntax. Perhaps you forgot a comma?
```

In [71]:
```
print('max it\'s"technology"')#\ has some special meaning to ignore the error
```

```
max it's"technology"
```

In [73]:
```
print('max it',"technology")
```

```
max it technology
```

In [75]:
```
print('max it","technology')
```

```
max it","technology
```

In [77]:
```
'nit ' + ' nit'
```

Out[77]:
```
'nit  nit'
```

In [79]:
```
'nit'  'nit'
```

Out[79]:
```
'nitnit'
```

In [81]:
```
5*'  nit  '
```

Out[81]: ' nit   nit   nit   nit   nit '

In [83]:
```
print('c:\nit')
```

```
c:
it
```

In [85]:
```
#raw string we have r
print(r"c:\nit:")
```

```
c:\nit:
```

In [87]:
```
2
```

Out[87]: 2

In [8]:
```
x=2
x
```

Out[8]: 2

In [10]:
```
x+3
```

Out[10]: 5

In [12]:
```
y=3
y
```

Out[12]: 3

In [14]:
```
x+y
```

Out[14]: 5

In [16]:
```
x=9
x
```

Out[16]: 9

In [18]:
```
x+y
```

Out[18]: 12

In [20]:
```
x+10
```

Out[20]: 19

In [24]:
```
name='mit'
```

In [27]:
```
name
```

Out[27]: 'mit'

In [31]:
```
name+ ' technology'
```

Out[31]:
```
'mit technology'
```

In [33]:
```
len(name)
```

Out[33]:
```
3
```

In [37]:
```
name[5]
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
Cell In[37], line 1
----> 1 name[5]

IndexError: string index out of range
```

In [39]:
```
name[1]
```

Out[39]:
```
'i'
```

In [41]:
```
name[3]
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
Cell In[41], line 1
----> 1 name[3]

IndexError: string index out of range
```

In [43]:
```
name[0]
```

Out[43]:
```
'm'
```

In [49]:
```
name[1:4]
```

Out[49]:
```
'it'
```

In [51]:
```
name[:4]
```

Out[51]:
```
'mit'
```

In [53]:
```
name[:]
```

Out[53]:
```
'mit'
```

In [55]:
```
name[-1:4]
```

Out[55]:
```
't'
```

In [63]:
```
name[-4:6]
```

Out[63]:
```
'mit'
```

In [65]:
```
num=5
```

In [67]:
```
id(num)
```

Out[67]: 140703380154936

In [69]:
```
age=5
id(age)
```

Out[69]: 140703380154936

In [75]:
```
n=7
a=-(n)
```

In [78]:
```
a
```

Out[78]: -7

In [80]:
```
a=5
b=4
a and b
```

Out[80]: 4

In [82]:
```
a or b
```

Out[82]: 5

In [94]:
```
5+3
```

Out[94]: 8

In [ ]:
```
#introduction to id
```

In [103…
```
num=5
```

In [105…
```
id(num)
```

Out[105… 140703380154936

In [107…
```
id(5)
```

Out[107… 140703380154936

In [109…
```
#constants
```

In [111…
```
PI=3.14
```

In [113…
```
PI=3.15
```

In [115…
```
type(PI)
```

Out[115… float

In [117…
```
# operators
```

In [120…
```
#aritnhmatic operators(+,-,/,%,*,//)
```

In [122…
```
a=5
b=10
a+b
```

Out[122… 15

In [124…
```
a^b
```

Out[124… 15

In [126…
```
x1,x2=10,5
```

In [128…
```
x1^x2
```

Out[128… 15

In [130…
```
x1+x2
```

Out[130… 15

In [132…
```
x1-x2
```

Out[132… 5

In [134…
```
x1*x2
```

Out[134… 50

In [136…
```
x1/x2
```

Out[136… 2.0

In [138…
```
x1//x2
```

Out[138… 2

In [140…
```
x1%x2
```

Out[140… 0

In [142…
```
x1**x2
```

Out[142… 100000

In [182…
```
x2=3
y2=2
x2**y2
```

Out[182… 9

assignment operator#

In [185…
```
x=2
x=x+2
```

In [187…
```
x
```

Out[187… 4

In [189…
```
x+=2
```

In [191…
```
x
```

Out[191… 6

In [193…
```
x*=2
```

In [195…
```
x
```
Out[195… 12

In [197…
```
x-=2
```
In [199…
```
x
```
Out[199… 10

In [201…
```
x/=2
```
In [203…
```
x
```
Out[203… 5.0

In [205…
```
x//=2
```
In [207…
```
x
```
Out[207… 2.0

In [209…
```
a,b=5,6#unary operator
```
In [211…
```
a
```
Out[211… 5

In [213…
```
b
```
Out[213… 6

In [217…
```
a=-(5)
```
In [220…
```
a
```
Out[220… -5

In [222…
```
n=7
n
```
Out[222… 7

m=-(n)

In [227…
```
m=-(n)
```
m

In [230…
```
m
```

Out[230… -7

In [234…
```
-n
```

Out[234… -7

RELATIONAL OPERATOR(==,<,>,<=,>=,!=)

In [238…
```
a,b=5,6
```

In [240…
```
a
```

Out[240… 5

In [242…
```
b
```

Out[242… 6

In [244…
```
a<b
```

Out[244… True

In [246…
```
b<a
```

Out[246… False

In [248…
```
b>a
```

Out[248… True

In [250…
```
b<=a
```

Out[250… False

In [252…
```
b>=a
```

Out[252… True

In [254…
```
a<=a
```

Out[254… True

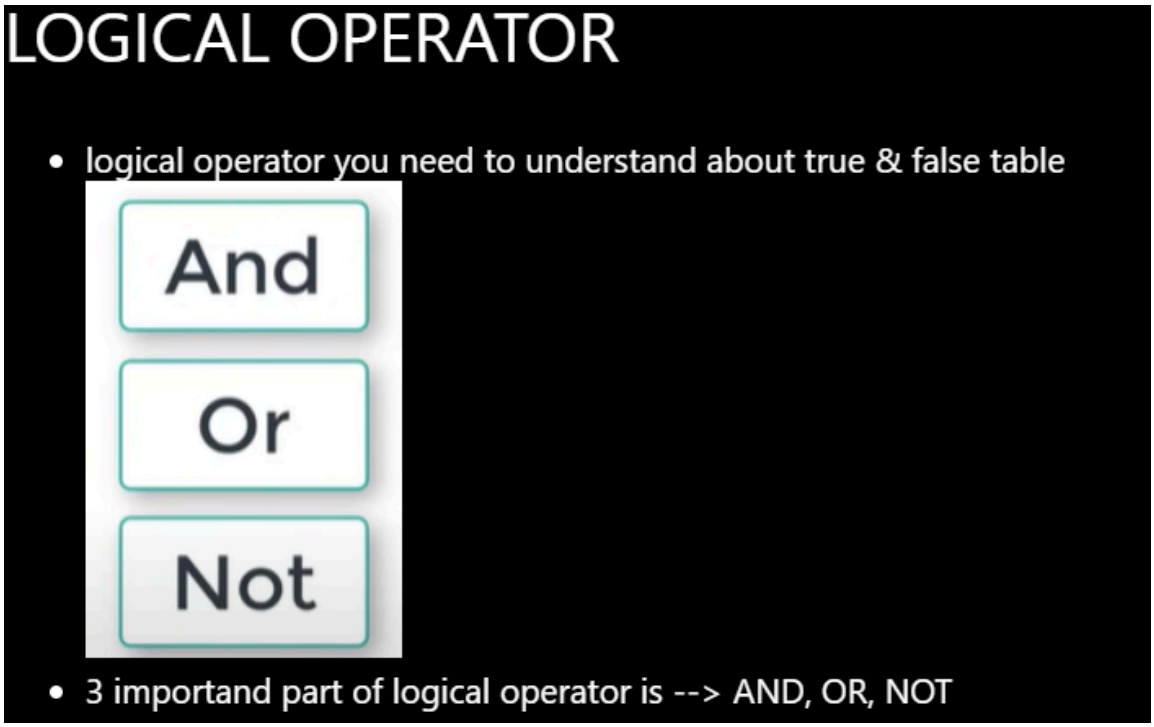
In [256…
```
a==b
```

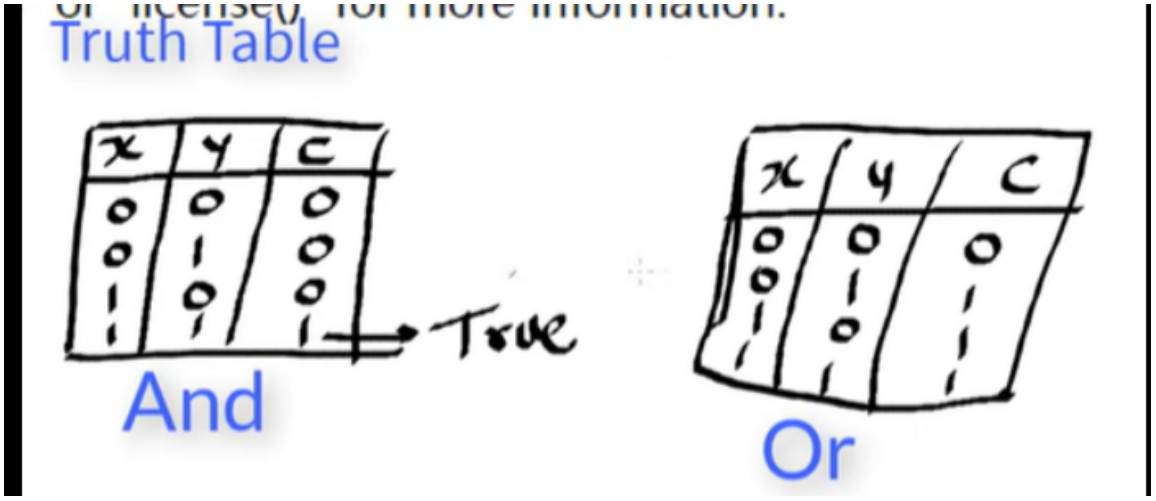
Out[256… False

In [259…
```
a!=b
```

Out[259… True

logial operator(and or not)





In [264…
```
a,b=5,4
```

In [266…
```
print(a,b)
```

```
5 4
```

In [270…
```
a<8 and b<5
```

Out[270… True

In [272…
```
x=False
x
```

Out[272… False

In [274…
```
not x
```

Out[274… True

In [276…
```
x=2
x
```

Out[276… 2

In [278…
```
y=5
y
```

Out[278… 5

In [280…
```
x+y
```

Out[280… 7

In [282…
```
_+y
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[282], line 1
----> 1 _+y

TypeError: can only concatenate str (not "int") to str
```

In [ ]: