

OPERATORS IN PYTHON

(2022BIT018)

arithmetic

```
anushka-patil@anushka-patil-1-0:~$ python3
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>> a=2
>>> b=2.1
>>> add=a+b
>>> add
4.1
>>> sub=a-b
>>> sub
-0.10000000000000009
>>> mul=a*b
>>> mul
4.2
>>> mod=a%b
>>> mod
2.0
>>> p=a**b
>>> p
4.2878938501451725
>>> div=a/b
>>> div
0.9523809523809523
>>> div=b/a
>>> div
1.05
>>> div_f=b//a
>>> div_f
1.0
>>> quit()
anushka-patil@anushka-patil-1-0:~$ 000
```

comparision

```
anushka-patil@anushka-patil-1-0:~$ python3
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>> x=2
>>> y=4
>>> x>y
False
>>> x<y
True
>>> x==y
False
>>> x!=y
True
>>> x>=y
False
>>> x<=y
True
>>> quit()
anushka-patil@anushka-patil-1-0:~$ 0
```

logical

```
anushka-patil@anushka-patil-1-0:~$ python3
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>> x=true
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'true' is not defined. Did you mean: 'True'?
>>> y=false
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'false' is not defined. Did you mean: 'False'?
>>> x=True
>>> y=False
>>> x and y
False
>>> x or y
True
>>> not x
False
>>> quit()
anushka-patil@anushka-patil-1-0:~$ 0
```

bitwise

```
anushka-patil@anushka-patil-1-0:~$ python3
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>> x=10
>>> y=4
>>> x&y
0
>>> x|y
14
>>> ~x
-11
>>> x^y
14
>>> x>>y
0
>>> x<<y
160
>>> x>>2
2
>>> x<<y
160
>>> x<<2
40
>>> quit()
anushka-patil@anushka-patil-1-0:~$ 0
```

assignment

```
anushka-patil@anushka-patil-1-0:~$ python3
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> a=10
>>> b=a
>>> b
10
>>> a+=b
>>> a
20
>>> b-=a
>>> b
-10
>>> b*=a
>>> b
-200
>>> b<=a
>>> b
-209715200
>>> a**=b
>>> a
0.0
>>> b^=a
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: unsupported operand type(s) for ^=: 'int' and 'float'
>>> b=b^a
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: unsupported operand type(s) for ^=: 'int' and 'float'
>>> b|=a
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: unsupported operand type(s) for |=: 'int' and 'float'
>>> a=2
>>> b=4
>>> a=a^b
>>> a
6
>>> b^=a
>>> b
2
>>> b|=a
>>> b
6
>>> quit()
anushka-patil@anushka-patil-1-0:~$
```

identity

```
anushka-patil@anushka-patil-1-0:~$ python3
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> a=10
>>> b=20
>>> a is not b
True
>>> c=a
>>> a is c
True
>>> a is b
False
>>> quit()
anushka-patil@anushka-patil-1-0:~$
```

membership

```
anushka-patil@anushka-patil-1-0: ~  
anushka-patil@anushka-patil-1-0:~$ python3  
Python 3.11.6 (main, Apr 10 2024, 17:26:07) [GCC 13.2.0] on linux  
Type "help", "copyright", "credits" or "license" for more information.  
>>> x=24  
>>> y=20  
>>> list=[10,20,30,40,50]  
>>> x not in list  
True  
>>> y in list  
True  
>>> y not in list  
False  
>>> quit()  
anushka-patil@anushka-patil-1-0:~$
```