In [3]:
```
import sys
sys.version
```

Out[3]:
```
'3.12.7 | packaged by Anaconda, Inc. | (main, Oct  4 2024, 13:17:27) [MSC v.192
9 64 bit (AMD64)]'
```

In [4]:
```
x = 3
x
#id(x)
```

Out[4]:
```
3
```

In [5]:
```
x = 4
x
```

Out[5]:
```
4
```

In [6]:
```
x, y = 3
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[6], line 1
----> 1 x, y = 3

TypeError: cannot unpack non-iterable int object
```

In [7]:
```
type(x)
```

Out[7]:
```
int
```

In [8]:
```
x1 = 4
x1
type(x1)
```

Out[8]:
```
int
```

In [9]:
```
x,x1
```

Out[9]:
```
(4, 4)
```

In [10]:
```
y = 3
id(y)
```

Out[10]:
```
140729998453240
```

In [11]:
```
x1 = 4
id(x1)
```

Out[11]:
```
140729998453272
```

In [12]:
```
y = False
type(y)
```

Out[12]:
```
bool
```

In [13]:
```
a@ = 6
a@
```

```
  Cell In[13], line 1
    a@ = 6
       ^
SyntaxError: invalid syntax
```

In [14]:
```
6 = b
```

```
  Cell In[14], line 1
    6 = b
    ^
SyntaxError: cannot assign to literal here. Maybe you meant '==' instead of '='?
```

In [15]:
```
r = range(5)
r
```

Out[15]:
```
range(0, 5)
```

In [16]:
```
r1 = range(10)
r1
```

Out[16]:
```
range(0, 10)
```

In [26]:
```
print(r1)
print(list(range(0,10)))
```

```
range(0, 10)
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

In [22]:
```
list(range(5,20))
```

Out[22]:
```
[5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19]
```

In [27]:
```
list(range(10,100,5))
```

Out[27]:
```
[10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95]
```

In [28]:
```
list(range(10,100,10))
```

Out[28]:
```
[10, 20, 30, 40, 50, 60, 70, 80, 90]
```

In [29]:
```
list(range(5,20,5,2))
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[29], line 1
----> 1 list(range(5,20,5,2))

TypeError: range expected at most 3 arguments, got 4
```

In [30]:
```
r = range(10)
r
```

Out[30]:
```
range(0, 10)
```

In [31]:
```
list(r)
```

Out[31]: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

In [32]:
```
for i in r:
    print('yes')
    print(i)
```

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

In [33]:
```
range(10.0, 11.5)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[33], line 1
----> 1 range(10.0, 11.5)

TypeError: 'float' object cannot be interpreted as an integer
```

In [34]:
```
w1 = range(10,20)
w1
```

Out[34]: range(10, 20)

In [35]:
```
for i in w1:
    print(i)
```

```
10
11
12
13
14
15
16
17
18
19
```

In [36]:
```
r[4]
```

Out[36]: 4

In [37]:
```
w1[3]
```

Out[37]: 13

In [38]:
```
w1[6]
```

Out[38]: 16

In [40]:
```
w1[0:5]
```

Out[40]: range(10, 15)

In [41]:
```
range(50)
```

Out[41]: range(0, 50)

In [42]:
```
range(10,50) # 5 state from 10 to 50 print the output with 5 steps
```

Out[42]: range(10, 50)

In [43]:
```
range(10,50,5)
```

Out[43]: range(10, 50, 5)

In [44]:
```
range(10,50,5,6)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[44], line 1
----> 1 range(10,50,5,6)

TypeError: range expected at most 3 arguments, got 4
```

In [45]:
```
range(10,100,10.56)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[45], line 1
----> 1 range(10,100,10.56)

TypeError: 'float' object cannot be interpreted as an integer
```

In [47]:
```
for i in range(0,10):
    print(i)
```

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

In [48]:
```
for i in range(10):
    print(i)
```

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

In [49]:
```
for i in range(10,20):
    print(i)
```

```
10
11
12
13
14
15
16
17
18
19
```

In [50]:
```
for i in range(10,100,10):  # start, end , stpe
    print(i)
```

```
10
20
30
40
50
60
70
80
90
```

In [ ]:

In [ ]: