In [1]:
```
l5=['joe',35,[67,89],[120,37]]
l5
```

Out[1]:
```
['joe', 35, [67, 89], [120, 37]]
```

In [3]:
```
print(len(l5))
```

```
4
```

In [5]:
```
l5.index(35)
```

Out[5]:
```
1
```

In [7]:
```
l5.index([67,89])
```

Out[7]:
```
2
```

In [9]:
```
l6=[90,87,{'hi','bye'},{'hello','welcome'}]
l6
```

Out[9]:
```
[90, 87, {'bye', 'hi'}, {'hello', 'welcome'}]
```

In [11]:
```
l6.index('hello')
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
Cell In[11], line 1
----> 1 l6.index('hello')

ValueError: 'hello' is not in list
```

In [13]:
```
l6.index({'hello','welcome'})
```

Out[13]:
```
3
```

In [15]:
```
print(len(l6))
```

```
4
```

LIST SLICING

In [18]:
```
my_list=['ten',12,'six',24]
my_list
```

Out[18]:
```
['ten', 12, 'six', 24]
```

In [20]:
```
my_list[:]
```

Out[20]:
```
['ten', 12, 'six', 24]
```

In [22]:
```
my_list[1:5]
```

Out[22]: [12, 'six', 24]

In [24]:
```
my_list[:-4]
```

Out[24]: []

In [26]:
```
my_list[:-3]
```

Out[26]: ['ten']

In [28]:
```
my_list[-4:-1]
```

Out[28]: ['ten', 12, 'six']

In [30]:
```
x=18
y=23
print(x)
```

```
18
```

In [32]:
```
x=9
y=4
x//y
```

Out[32]: 2

In [34]:
```
a='hello'
a[1:4]
```

Out[34]: 'ell'

In [36]:
```
x=[19,34,56,87]
max(x)
```

Out[36]: 87

In [38]:
```
x.index(34)
```

Out[38]: 1

In [40]:
```
l5
```

Out[40]: ['joe', 35, [67, 89], [120, 37]]

In [42]:
```
l5.len(l5)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[42], line 1
----> 1 l5.len(l5)

AttributeError: 'list' object has no attribute 'len'
```

In [44]:
```
len(l5)
```

Out[44]: 4

In [46]:
```
x=35.5
int(x)
```

Out[46]: 35

In [48]:
```
x
```

Out[48]: 35.5

In [50]:
```
isinstance(x,int)
```

Out[50]: False

In [52]:
```
type(x)
```

Out[52]: float

In [54]:
```
v='24'
v
```

Out[54]: '24'

In [56]:
```
int(30.8)
```

Out[56]: 30

In [58]:
```
python
copy code
print(type({}))
```

```
  Cell In[58], line 2
    copy code
         ^
SyntaxError: invalid syntax
```

In [60]:
```
l3=['m','n','s',3,7]
print(l3.pop())
```

```
7
```

In [62]:
```
l3
```

Out[62]: ['m', 'n', 's', 3]

In [64]:
```
var=9
print(9==9.0)
```

```
True
```

In [66]:
```
num=9+0j
print(type(num))
```

```
<class 'complex'>
```

In [68]:
```
num1=8.9
print(int(8.9))
```

```
8
```

In [70]:
```
a='python'+".py"
a
```

Out[70]:
```
'python.py'
```

In [72]:
```
print(str(True),end='')
int('8.9')
```

```
True
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
Cell In[72], line 2
      1 print(str(True),end='')
----> 2 int('8.9')

ValueError: invalid literal for int() with base 10: '8.9'
```

In [74]:
```
x=50
def fun1():
    x=25
    print(x)
fun1()
print(x)
```

```
25
50
```

In [80]:
```
x=76
def myfunc():
 x=x+1
 print(x)
myfunc()
print(x)
```

```
---------------------------------------------------------------------------
UnboundLocalError                         Traceback (most recent call last)
Cell In[80], line 5
      3   x=x+1
      4   print(x)
----> 5 myfunc()
      6 print(x)

Cell In[80], line 3, in myfunc()
      2 def myfunc():
----> 3   x=x+1
      4   print(x)

UnboundLocalError: cannot access local variable 'x' where it is not associated with
a value
```

In [86]:
```
print(type(0xFF))
```

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

In [92]:
```
str1='Ault\\'kelly'
str1
```

```
  Cell In[92], line 1
    str1='Ault\\'kelly'
                      ^
SyntaxError: unterminated string literal (detected at line 1)
```

In [94]:
```
str1="""Ault'kelly"""
str1
```

Out[94]:
```
"Ault'kelly"
```

In [96]:
```
str1='Ault\'kelly'
str1
```

Out[96]:
```
"Ault'kelly"
```

In [ ]:
```

```