Nhấp đúp (hoặc nhấn Enter) để chỉnh sửa

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WEEK 1 - LAB01

```
1+1
```

```
2
```

Nhấp đúp (hoặc nhấn Enter) để chỉnh sửa

```
1*3
```

```
3
```

```
1/2
```

```
0.5
```

```
2**4
```

```
16
```

```
4 % 2
```

```
0
```

```
5 % 2
```

```
1
```

```
(2 +3) * (5 + 5)
```

```
50
```

```
name_of_var = 2
x = 2
y = 3
z = x + y
z
```

```
5
```

```
'single quotes'
```

```
'single quotes'
```

```
"double quotes"
```

```
'double quotes'
```

```
"wrap lot's of other quotes"
```

```
'wrap lot's of other quotes'
```

```
x = 'hello'
x
```

```
'hello'
```

```
print(x)
```

```
hello
```

```
num = 12
name = 'Sam'
print('My name is: {one}, and my name is: {two}'.format(one = num, two = name))
```

```
My name is: 12, and my name is: Sam
```

```
print('My name is: {}, and my name is: {}'.format(num,name))
```

```
My name is: 12, and my name is: Sam
```

```
[1, 2, 3]
```

```
[1, 2, 3]
```

```
['hi', 1, [1, 2]]
```

```
['hi', 1, [1, 2]]
```

```
my_list = ['a', 'b', 'c']
my_list.append('d')
my_list
```

```
['a', 'b', 'c', 'd']
```

```
my_list[0]
```

```
'a'
```

```
my_list[1]
```

```
'b'
```

```
my_list[1:]
```

```
['b', 'c', 'd']
```

```
my_list[:1]
```

```
['a']
```

```
my_list[0] = 'NEW'
my_list
```

```
['NEW', 'b', 'c', 'd']
```

```
nest = [1,2,3,[4,5,['target']]]
nest[3]
```

```
[4, 5, ['target']]
```

```
nest[3][2]
```

```
['target']
```

```
nest[3][2][0]
```

```
'target'
```

```
d = {'key1' : 'item1', 'key2' : 'item2'}
d
```

```
{'key1': 'item1', 'key2': 'item2'}
```

```
d['key1']
```

```
'item1'
```

```
True
```

```
True
```

```
False
```

```
False
```

Nhấp đúp (hoặc nhấn Enter) để chỉnh sửa

```
t = (1, 2, 3)
t[0]
```

```
1
```

```
t1=list(t)
t1[0]="NEW"
t=list(t1)
```

```
t
```

```
['NEW', 2, 3]
```

```
{1, 2, 3}
```

```
{1, 2, 3}
```

```
{1, 2, 3, 1, 2, 1, 2, 3, 3, 3, 3, 2, 2, 2, 1, 1, 2}
```

```
{1, 2, 3}
```

```
1 > 2
```

```
False
```

```
1 < 2
```

```
True
```

```
1 >= 1
```

```
True
```

```
1 <= 4
```

```
True
```

```
1 == 1
```

```
True
```

```
'hi' == 'bye'
```

```
False
```

```
(1 > 2) and (2 < 3)
```

```
False
```

```
(1 > 2) or (2 < 3)
```

```
True
```

```
(1 == 2) or (2 == 3) or (4 == 4)
```

```
True
```

```
if 1 < 2:
  print('Yep!')
```

```
Yep!
```

```
if 1 < 2:
  print('yep!')
```

```
yep!
```

```
if 1 < 2:
  print('first')
```

```
else:
    print('last')
```

```
if 1 > 2:
  print('first')
else:
    print('last')
```

```
    last
```

```
if 1 == 2:
  print('first')
elif 3 ==3:
  print('middle')
else:
    print('last')
```

```
    middle
```

```
seq = [1, 2, 3, 4, 5]
for item in seq:
  print(item)
```

```
    1
    2
    3
    4
    5
```

```
for item in seq:
  print('Yep')
```

```
    Yep
    Yep
    Yep
    Yep
    Yep
```

```
for jelly in seq:
  print(jelly + jelly)
```

```
    2
    4
    6
    8
    10
```

```
i = 1
while i < 5:
  print('i is: {}'.format(i))
  i = i+1
```

```
    i is: 1
    i is: 2
    i is: 3
    i is: 4
```

```
range(5)
```

```
    range(0, 5)
```

```
for i in range(5):
  print(i)
```

```
    0
    1
    2
    3
    4
```

```
list(range(5))
```

```
    [0, 1, 2, 3, 4]
```

```
x = [1, 2, 3, 4]
out = []
for item in x:
```

```
  out.append(item**2)
  print(out)
```

```
[1]
[1, 4]
[1, 4, 9]
[1, 4, 9, 16]
```

```
[item**2 for  item  in x]
```

```
[1, 4, 9, 16]
```

```
def my_func(param1='default'):
  """
  Docstring goes here.
  """
  print(param1)
my_func
```

```
<function __main__.my_func(param1='default')>
```

```
my_func()
```

```
default
```

```
my_func('new param')
```

```
new param
```

```
my_func(param1 = 'new param')
```

```
new param
```

```
def square(x):
  return x**2
out = square(2)
print(out)
```

```
4
```

```
def times2(var):
  return var*2
times2(2)
```

```
4
```

```
lambda var : var*2
```

```
<function __main__.<lambda>(var)>
```

```
seq = [1, 2, 3, 4, 5]
map(times2, seq)
```

```
<map at 0x7f2bf61c70d0>
```

```
list(map(times2, seq))
```

```
[2, 4, 6, 8, 10]
```

```
list(map(lambda var : var*2, seq))
```

```
[2, 4, 6, 8, 10]
```

```
filter(lambda item : item%2 == 0, seq)
```

```
<filter at 0x7f2bf6097f10>
```

```
list(filter(lambda item : item%2 == 0, seq))
```

```
[2, 4]
```

```
st = 'hello my name is Sam'
st.lower()
```

```
'hello my name is sam'
```

```
st.upper()
```

```
'HELLO MY NAME IS SAM'
```

```
st.split()
```

```
['hello', 'my', 'name', 'is', 'Sam']
```

```
tweet = 'Go Sports! #Sports'
tweet.split('#')
```

```
['Go Sports! ', 'Sports']
```

```
tweet.split('#')[1]
```

```
'Sports'
```

```
d
```

```
{'key1': 'item1', 'key2': 'item2'}
```

```
d.keys()
```

```
dict_keys(['key1', 'key2'])
```

```
d.items()
```

```
dict_items([('key1', 'item1'), ('key2', 'item2')])
```

```
lst = [1, 2, 3]
lst.pop()
```

```
3
```

```
lst
```

```
[1, 2]
```

```
'x' in [1, 2, 3]
```

```
False
```

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```
'x' in ['x', 'y', 'z']
```

```
True
```

IV. Python basics – Exercises

```
7 ** 4
```

```
2401
```

```
st = 'Hi there Sam!'
st.split()
my_list = st.split()
my_list[2] = 'dad!'
my_list
```

```
['Hi', 'there', 'dad!']
```

```
planet = "Earth"
diameter = 12742
print('The diameter of {one} is {two} kilometers.'.format(one = planet, two = diameter))
```

```
The diameter of Earth is 12742 kilometers.
```

```
lst = [1, 2, [3, 4], [5, [100, 200, ['hello']], 23, 11], 1, 7]
lst[3][1][2][0]
```

```
'hello'
```

```
d = {'k1': [1, 2, 3, {'tricky': ['oh', 'man', 'inception', {'target': [1, 2, 3, 'hello']}]}]}
```

```
[1,
 2,
 3,
 {'tricky': ['oh', 'man', 'inception', {'target': [1, 2, 3, 'hello']}]}]
```

```
d['k1'][3]['tricky'][3]['target'][3]
```

```
'hello'
```

```
def domainGet(email):
  return email.split('@')[-1]
domainGet('user@domain.com')
```

```
'domain.com'
```

```
def findDog(st):
  return 'dog' in st.lower().split()
findDog('Is there a dog here?')
```

```
True
```

```
def countDog(st):
  count = 0
  for word in st.lower().split():
    if word == 'dog':
      count += 1
  return count
```

```
countDog('This dog runs faster than the other dog dude!')
```

```
2
```

```
seq = ['soup', 'dog','salad','cat','great']

list(filter(lambda word: word[0] == 's', seq))
```

```
['soup', 'salad']
```

FINAL Problem

```
def caught_speeding(speed, is_birthday):
  if is_birthday:
    speeding = speed - 5
  else:
    speeding = speed

  if speeding > 80:
    return 'Big Ticket'
  elif speeding > 60:
    return 'Small Ticket'
  else:
    return 'No Ticket'

caught_speeding(81,True)
```

```
'No Ticket'
```

```
caught_speeding(40,0)
```

```
'No Ticket'
```

```
caught_speeding(81,False)
```

```
'Big Ticket'
```

Các sản phẩm có tính phí của Colab — Huỷ hợp đồng tại đây

✓ 0 giây hoàn thành lúc 10:21