

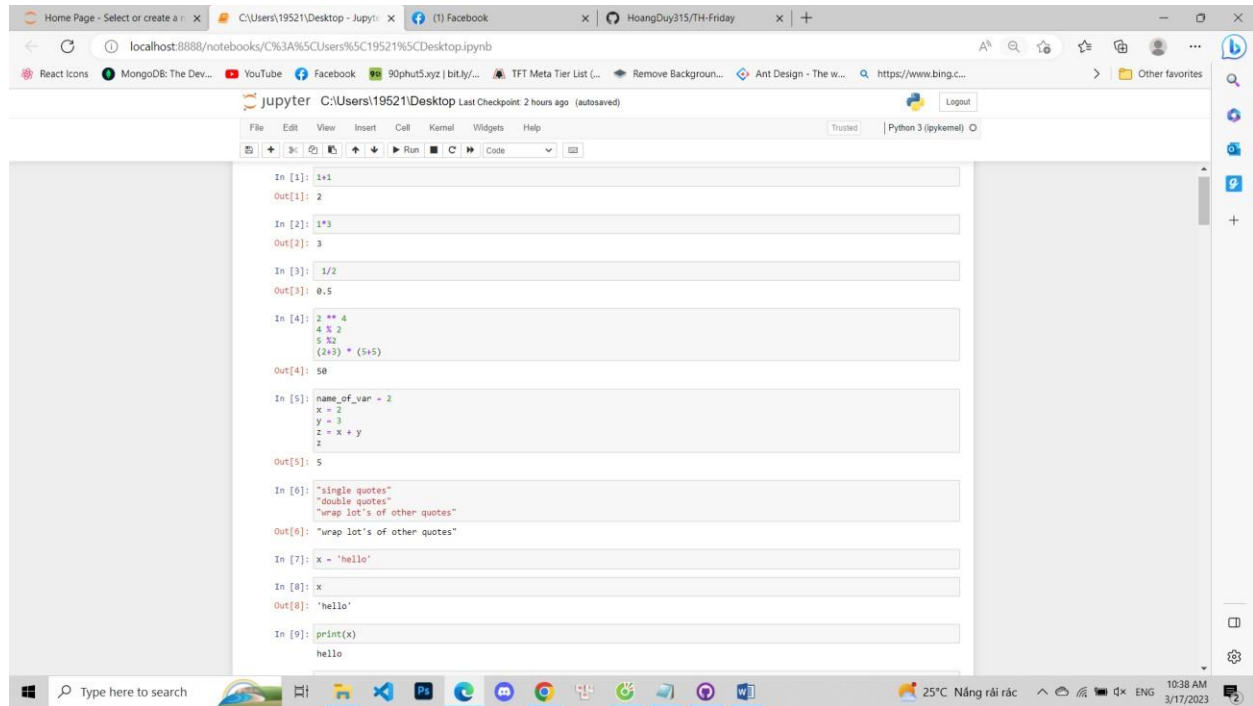
Lab1

NguyenHoangDuy

19521425

Link github: [HoangDuy315/TH_FRIDAY \(github.com\)](https://github.com/HoangDuy315/TH_FRIDAY)

Exercise 3:



The screenshot shows a Jupyter Notebook running in a web browser. The browser's address bar indicates the local host path: `localhost:8888/notebooks/C:/Users/19521/Desktop/19521%SCDesktop.ipynb`. The notebook interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with icons for file operations, running cells, and code execution. The notebook contains ten input-output pairs:

- `In [1]: 1+1`
`Out[1]: 2`
- `In [2]: 1*3`
`Out[2]: 3`
- `In [3]: 1/2`
`Out[3]: 0.5`
- `In [4]: 2**4`
`Out[4]: 16`
- `In [5]: name_of_var = 2`
`Out[5]: 5`
- `In [6]: "single quotes"`
`Out[6]: "single quotes"`
- `In [7]: x = "hello"`
`Out[7]: x`
- `In [8]: print(x)`
`Out[8]: hello`

The bottom of the image shows the Windows taskbar with the search bar, taskbar icons, and system tray information: 25°C, Nắng rải rác, 10:38 AM, 3/17/2023.

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Out[9]: 'hello'

```
In [9]: print(x)
hello

In [42]: num = 12
name = 'sam'
print('My number is: (one), and my name is: (two)'.format(one=num, two=name))
My number is: 12, and my name is: sam

In [11]: print('My number is: {}, and my name is: {}'.format(num,name))
My number is: 12, and my name is: sam

In [13]: [1,2,3]
Out[13]: [1, 2, 3]

In [14]: ['hi', 1, [1,2]]
Out[14]: ['hi', 1, [1, 2]]

In [15]: my_list = ['a','b','c']
In [16]: my_list.append('d')
In [17]: my_list
Out[17]: ['a', 'b', 'c', 'd']
In [18]: my_list[0]
Out[18]: 'a'
In [19]: my_list[1]
Out[19]: 'b'
In [20]: my_list[1:]
Out[20]: ['b', 'c', 'd']
```

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```
In [18]: my_list[0]
Out[18]: 'a'

In [19]: my_list[1]
Out[19]: 'b'

In [20]: my_list[1:]
Out[20]: ['b', 'c', 'd']

In [21]: my_list[1:]
Out[21]: ['a']

In [22]: my_list[0] = 'NEW'
In [24]: my_list
Out[24]: ['NEW', 'b', 'c', 'd']

In [26]: nest = [1,2,3,[4,5,{'target':}]]
In [27]: nest[3]
Out[27]: [4, 5, {'target':}]

In [28]: nest[3][0]
Out[28]: {'target':}

In [35]: nest[3][2]
Out[35]: {'target':}

In [36]: d = {'key1':'item1','key2':'item2'}
In [37]: d
Out[37]: {'key1': 'item1', 'key2': 'item2'}
```

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```
In [37]: d
Out[37]: {'key1': 'item1', 'key2': 'item2'}

In [38]: d['key1']
Out[38]: 'item1'

In [40]: True
Out[40]: True

In [41]: False
Out[41]: False

In [43]: t = (1,2,3)
Out[43]: (1, 2, 3)

In [44]: t[0]
Out[44]: 1

In [45]: t[0] = 'NEW'
-----
TypeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_13356\2140988817.py in <module>
----> 1 t[0] = 'NEW'

TypeError: 'tuple' object does not support item assignment

In [46]: {1,2,3}
Out[46]: {1, 2, 3}

In [47]: {1,2,3,1,2,1,2,3,3,3,3,2,2,2,1,1,2}
Out[47]: {1, 2, 3}

In [48]: 1 > 2
Out[48]: False
```

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```
Out[49]: True

In [50]: 1 <= 1
Out[50]: True

In [51]: 1 <= 4
Out[51]: True

In [52]: 1 == 1
Out[52]: True

In [53]: 'hi' == 'bye'
Out[53]: False

In [54]: (1 > 2) and (2 < 3)
Out[54]: False

In [55]: (1 > 2) or (2 < 3)
Out[55]: True

In [57]: (1 == 2) or (2 == 3) or (4 == 4)
Out[57]: True

In [61]: if (4 < 2):
    print('yep!')
yep!

In [62]: if (4 < 2):
    print('yep!')
yep!

In [64]: if 1 < 2:
    print('first')
else:
    print('second')
```

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```
In [65]: if 1 > 2:
        print('first')
        else:
        print('last')

last

In [66]: if 1 == 2:
        print('first')
        elif 3==3:
        print('middle')
        else:
        print('last')

middle

In [67]: seq = [1,2,3,4,5]

In [68]: seq
Out[68]: [1, 2, 3, 4, 5]

In [69]: for item in seq:
        print(item)

1
2
3
4
5

In [70]: for item in seq:
        print('yep!')

yep!
yep!
yep!
yep!
yep!

In [71]: for jelly in seq:
        print(jelly + 'jelly')
```

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```
8
10

In [73]: 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
i is: 5

In [74]: range(5)
Out[74]: range(0, 5)

In [75]: for i in range(5):
        print(i)

0
1
2
3
4

In [76]: list(range(5))
Out[76]: [0, 1, 2, 3, 4]

In [77]: x = [1,2,3,4]

In [78]: out = []
        for item in x:
            out.append(item**2)
            print(out)

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

In [79]: [item**2 for item in x]
```

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```
In [81]: my_func
Out[81]: <function __main__.my_func(param='default')>

In [82]: my_func()
default

In [83]: my_func('new param')
new param

In [84]: my_func(param = 'new param')
new param

In [85]: def square(x):
        return x**2

In [86]: out = square(2)

In [87]: print(out)
4

In [88]: def time2(var):
        return var*2

In [89]: print(time2)
<function time2 at 0x0000029AC8247940>

In [90]: time2(2)
Out[90]: 4

In [91]: lambda var: var*2
Out[91]: <function __main__.lambda(var)>

In [92]: seq = [1,2,3,4,5]
```

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```
In [94]: list(map(time2,seq))
Out[94]: [2, 4, 6, 8, 10]

In [95]: list(map(lambda var: var*2,seq))
Out[95]: [2, 4, 6, 8, 10]

In [96]: filter(lambda item: item%2 == 0,seq)
Out[96]: <filter at 0x20ac13f3d0>

In [97]: list(filter(lambda item: item%2 == 0,seq))
Out[97]: [2, 4]

In [98]: st = 'hello my name is Sam'

In [99]: st = 'hello my name is Sam'
Out[99]: 'hello my name is sam'

In [100]: st.upper()
Out[100]: 'HELLO MY NAME IS SAM'

In [101]: st.split()
Out[101]: ['hello', 'my', 'name', 'is', 'Sam']

In [102]: tweet = 'Go Sports: #Sports'

In [103]: tweet.split('#')
Out[103]: ['Go Sports: ', 'Sports']

In [104]: tweet.split(':')[1]
Out[104]: 'Sports'

In [105]: d
```

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```
In [106]: d.keys()
Out[106]: dict_keys(['key1', 'key2'])

In [107]: d.items()
Out[107]: dict_items([('key1', 'item1'), ('key2', 'item2')])

In [108]: lst = [1,2,3]
In [109]: lst.pop()
Out[109]: 3

In [110]: lst
Out[110]: [1, 2]

In [111]: 'x' in [1,2,3]
Out[111]: False

In [112]: 'x' in ['x','y','z']
Out[112]: True

In [113]: #boi4
In [114]: 7 ** 4
Out[114]: 2401

In [115]: s = 'Hi there Sam!'
In [116]: s.split()
Out[116]: ['Hi', 'there', 'Sam!']

In [ ]:
```

Exercise 4:

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Not Trusted Python 3 (pykernel)

```
In [112]: 'x' in ['x','y','z']
Out[112]: True

In [113]: #boi4
In [114]: 7 ** 4
Out[114]: 2401

In [115]: s = 'Hi there Sam!'
In [116]: s.split()
Out[116]: ['Hi', 'there', 'Sam!']

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

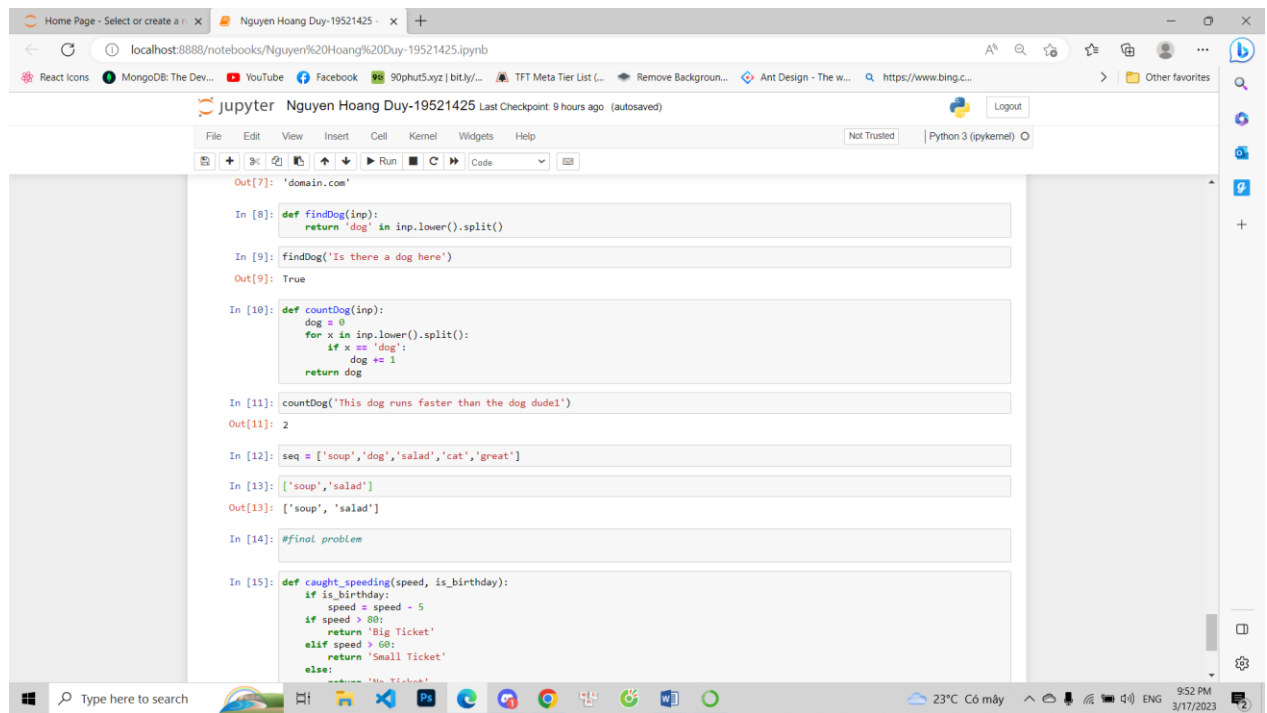
In [3]: d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]]]}
In [4]: d['k1'][3][{'tricky'}[3][{'target'}[3]]
Out[4]: 'hello'

In [6]: def domainGet(inp):
        return inp.split('@')[1]

In [7]: domainGet('user@domain.com')
Out[7]: 'domain.com'

In [8]: def findDog(inp):
```

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Final problem

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Run | Code

```
In [12]: seq = ['soup','dog','salad','cat','great']

In [13]: ['soup','salad']
Out[13]: ['soup', 'salad']

In [14]: #final problem

In [15]: def caught_speeding(speed, is_birthday):
    if is_birthday:
        speed = speed - 5
    if speed > 80:
        return 'Big Ticket'
    elif speed > 60:
        return 'Small Ticket'
    else:
        return 'No Ticket'

In [16]: caught_speeding(81,True)
Out[16]: 'Small Ticket'

In [17]: caught_speeding(81,False)
Out[17]: 'Big Ticket'

In [ ]:
```

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