

Last login: Thu Apr 30 13:33:41 on ttys001

→ ~ cd PycharmProjects/python-girlscript-eop2/day-4

→ day-4 git:(master) ✕ ipython

Python 3.8.2 (default, Mar 11 2020, 00:29:50)

Type 'copyright', 'credits' or 'license' for more information

IPython 7.13.0 -- An enhanced Interactive Python. Type '?' for help.

In [1]: *"""Functions"""*

Out[1]: 'Functions'

In [2]: a = "string"

In [3]: a

Out[3]: 'string'

In [4]: a[0]

Out[4]: 's'

In [5]: len(a)

Out[5]: 6

In [6]: a[6]

IndexError Traceback (most recent call last)
st)
<ipython-input-6-84c1e027215d> in <module>
----> 1 a[6]

IndexError: string index out of range

In [7]: b = [10,20,30,40]

In [8]: b[3]

Out[8]: 40

In [9]: a

Out[9]: 'string'

```
In [10]: a[0:3]
```

```
Out[10]: 'str'
```

```
In [11]: a[:3]
```

```
Out[11]: 'str'
```

```
In [12]: a[:]
```

```
Out[12]: 'string'
```

```
In [13]: a[2:5]
```

```
Out[13]: 'rin'
```

```
In [14]: a
```

```
Out[14]: 'string'
```

```
In [15]: a[-3]
```

```
Out[15]: 'i'
```

```
In [16]: a[-2:-4]
```

```
Out[16]: ''
```

```
In [17]: a[-4:-2]
```

```
Out[17]: 'ri'
```

```
In [18]: a[::-1]
```

```
Out[18]: 'gnirts'
```

```
In [19]: s
```

```
-----  
---  
NameError                                Traceback (most recent call la  
st)  
<ipython-input-19-ded5ba42480f> in <module>  
----> 1 s
```

```
NameError: name 's' is not defined
```

```
In [20]: a
```

```
Out[20]: 'string'
```

```
In [21]: a[::-1]
```

```
Out[21]: 'gnirts'
```

```
In [22]: a[::2]
```

```
Out[22]: 'srn'
```

```
In [23]: 1
```

```
Out[23]: 1
```

```
In [24]: 1 2
```

```
File "<ipython-input-24-32d3c3db7c81>", line 1
```

```
1 2  
  ^
```

```
SyntaxError: invalid syntax
```

```
In [25]: """
```

```
...: 1  
...: 1 2  
...: 1 2 3  
...: 1 2 3 4  
...: """
```

```
Out[25]: '\n1\n1 2\n1 2 3\n1 2 3 4\n'
```

```
In [26]: for i in range(0,4):
```

```
...:     for j in range(0,i+1):  
...:         print(j)  
...:
```

```
0
```

```
0
```

```
1
```

```
0
```

```
1
```

```
2
```

```
0
```

```
1
```

```
2
```

3

```
In [27]: for i in range(0,4):
...:     for j in range(0,i+1):
...:         print(j,end=" ")
...:     print()
...:
...:
```

```
0
0 1
0 1 2
0 1 2 3
```

```
In [28]: for i in range(1,4):
...:     for j in range(1,i+1):
...:         print(j,end=" ")
...:     print()
...:
...:
```

```
1
1 2
1 2 3
```

```
In [29]: for i in range(1,5):
...:     for j in range(1,i+1):
...:         print(j,end=" ")
...:     print()
...:
```

```
1
1 2
1 2 3
1 2 3 4
```

```
In [30]: def square(n):
...:     pass
...:
```

```
In [31]: square("hello")
```

```
In [32]: def square(n):
...:     square = n ** 2
...:     return square
```

```
....:
```

```
In [33]: square(4)
```

```
Out[33]: 16
```

```
In [34]: square(5)
```

```
Out[34]: 25
```

```
In [35]: if __name__ == "__main__":  
....:     print("Hey Welcome")  
....:
```

Hey Welcome

```
In [36]: if __name__ == "__main__":  
....:     n = int(input())  
....:     res = square(n)  
....:     print(res)  
....:  
....:
```

8

64

```
In [37]: def square(n):  
....:     square = n ** 2  
....:     return square  
....: if __name__ == "__main__":  
....:     n = int(input())  
....:     res = square(n)  
....:     print(res)  
....:
```

9

81

```
In [38]: a = [10,20,30,40]
```

```
In [39]: def double(a):  
....:     for i in a:  
....:         i = 2*i  
....:     return a  
....:
```

```
In [40]: double(a)
```

```
Out[40]: [10, 20, 30, 40]
```

```
In [41]: def double(a):
...:     for i in range(len(a)):
...:         a[i] = 2*a[i]
...:     return a
...:
```

```
In [42]: double(a)
```

```
Out[42]: [20, 40, 60, 80]
```

```
In [43]: def double(a):
...:     for i in range(len(a)):
...:         a[i] = 2*a[i]
...:     return
...:
...:
```

```
In [44]: double(a)
```

```
In [45]: def greet(s):
...:     print("Good Morning "+s)
...:
```

```
In [46]: greet("aditya")
```

Good Morning aditya

```
In [47]: a = 6
```

```
In [48]: a = lambda a:a = a*2
```

```
File "<ipython-input-48-0e7d027faf80>", line 1
```

```
  a = lambda a:a = a*2
    ^
```

```
SyntaxError: cannot assign to lambda
```

```
In [49]: a = lambda a:a*2
```

```
In [50]: a
```

```
Out[50]: <function __main__.<lambda>(a)>
```

```
In [51]: a(5)
```

```
Out[51]: 10
```

```
In [52]: b = lambda b:b ** 2
```

```
In [53]: b(4)
```

```
Out[53]: 16
```

```
In [54]: b(10)
```

```
Out[54]: 100
```

```
In [55]: add_three = lambda a, b, c:a+b+c
```

```
In [56]: add_three(10,20,30)
```

```
Out[56]: 60
```

```
In [57]: def add_two(a,b):  
...:     return a+b  
...:
```

```
In [58]: ret = add_two(3,4)
```

```
In [59]: ret
```

```
Out[59]: 7
```

```
In [60]: pwd
```

```
Out[60]: '/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4  
,
```

```
In [61]: ls
```

```
README.md
```

```
In [62]: f = open("mentors.txt")
```

```
-----  
---  
FileNotFoundError                                Traceback (most recent call la  
st)  
<ipython-input-62-03a451810e55> in <module>  
----> 1 f = open("mentors.txt")
```

```
FileNotFoundError: [Errno 2] No such file or directory: 'mentors.txt'
```

```
In [63]: f = open("mentors.txt", "x")
```

```
In [64]: f.close()
```

```
In [65]: f = open("mentors.txt", "x")
```

```
-----  
---  
FileExistsError                                Traceback (most recent call la  
st)  
<ipython-input-65-04193a40e976> in <module>  
----> 1 f = open("mentors.txt", "x")
```

```
FileExistsError: [Errno 17] File exists: 'mentors.txt'
```

```
In [66]: f = open("mentors.txt", "w")
```

```
In [67]: f.write("Aditya Raman")
```

```
Out[67]: 12
```

```
In [68]: f.close()
```

```
In [69]: f = open("mentors.txt")
```

```
In [70]: f.read()
```



```
Out[70]: 'Aditya Raman'
```

```
In [71]: f.close()
```

```
In [72]: f = open("mentors.txt", "r")
```

```
In [73]: f.read()
```

```
Out[73]: 'Aditya Raman'
```

```
In [74]: f.close()
```

```
In [75]: f = open("mentors.txt", "rt")
```

```
In [76]: f.read()
```

```
Out[76]: 'Aditya Raman'
```

```
In [77]: f.close()
```

```
In [78]: f = open("mentors.txt", "rb")
```

```
In [79]: f.read()
```

```
Out[79]: b'Aditya Raman'
```

```
In [80]: f.close()
```

```
In [81]: f = open("mentors.txt", "a")
```

```
In [82]: f.write("Raman")
```

```
Out[82]: 5
```

```
In [83]: f.close()
```

```
In [84]: f = open("mentors.txt")
```

```
In [85]: f.read()
```

```
Out[85]: 'Aditya RamanRaman'
```

```
In [86]: f.close()
```

```
In [87]: f = open("mentors.txt", "a")
```

```
In [88]: f.write("\nAditya")
```

```
Out[88]: 7
```

```
In [89]: f.close()
```

```
In [90]: f = open("mentors.txt")
```

```
In [91]: f.read()
```

```
Out[91]: 'Aditya RamanRaman\nAditya'
```

```
In [92]: f.close()
```

```
In [93]: f = open("mentors.txt", "w")
```

```
In [94]: f.write("Good Morning")
```

```
Out[94]: 12
```

```
In [95]: f.close()
```

```
In [96]: f = open("mentors.txt", "r")
```

```
In [97]: f.read()
```

```
Out[97]: 'Good Morning'
```

```
In [98]: ls
```

README.md mentors.txt

In [99]: ls

README.md mentors.txt

In [100]: f.read()

Out[100]: ''

In [101]: f.close()

In [102]: f = open("mentors.txt", "r")

In [103]: f.read()

Out[103]: 'Aditya Raman\nAditya\nRaman\nHello World\nHello\nWhat are you doing'

In [104]: f.close()

In [105]: f = open("mentors.txt", "r")

In [106]: f.readline()

Out[106]: 'Aditya Raman\n'

In [107]: f.readline()

Out[107]: 'Aditya\n'

In [108]: f.readline()

Out[108]: 'Raman\n'

In [109]: f.readline()

Out[109]: 'Hello World\n'

In [110]: f.close()

```
In [111]: f = open("mentors.txt", "r")
```

```
In [112]: for line in f:
...:     print(line)
...:
```

Aditya Raman

Aditya

Raman

Hello World

Hello

What are you doing

```
In [113]: f.close()
```

```
In [114]: f = open("mentors_bin.txt", "wb")
```

```
In [115]: f.write("0101101010")
```

```
-----
---
TypeError                                Traceback (most recent call last)
<ipython-input-115-c8f5361e7b82> in <module>
----> 1 f.write("0101101010")
```

TypeError: a bytes-like object is required, not 'str'

```
In [116]: f.write(0101101010)
```

```
File "<ipython-input-116-7c757aa1244d>", line 1
    f.write(0101101010)
            ^
```

SyntaxError: leading zeros in decimal integer literals are not permitted; use an 0o prefix for octal integers

```
In [117]: f.write(101101010)
```

```
-----  
---  
TypeError                                Traceback (most recent call la  
st)  
<ipython-input-117-4201e9234540> in <module>  
----> 1 f.write(101101010)
```

TypeError: a bytes-like object is required, not 'int'

```
In [118]: f.write(bin(10))
```

```
-----  
---  
TypeError                                Traceback (most recent call la  
st)  
<ipython-input-118-f71b15015a38> in <module>  
----> 1 f.write(bin(10))
```

TypeError: a bytes-like object is required, not 'str'

```
In [119]: f.close()
```

```
In [120]: ls
```

```
README.md      mentors.txt      mentors_bin.txt
```

```
In [121]: import os
```

```
In [122]: os.remove("mentors_bin.txt")
```

```
In [123]: ls
```

```
README.md      mentors.txt
```

```
In [124]: os.remove("mentors_bin.txt")
```

```
-----  
---  
FileNotFoundError                        Traceback (most recent call la  
st)  
<ipython-input-124-0bc96d8302e5> in <module>  
----> 1 os.remove("mentors_bin.txt")
```

FileNotFoundError: [Errno 2] No such file or directory: 'mentors_bin

.txt'

```
In [125]: if os.path.exists("mentors_bin.txt"):
...:     os.remove("mentors_bin.txt")
...: else:
...:     print("File doesn't exist")
...:
```

File doesn't exist

```
In [126]: if os.path.exists("mentors.txt"):
...:     os.remove("mentors.txt")
...: else:
...:     print("File doesn't exist")
...:
```

```
In [127]: ls
```

README.md

```
In [128]: print(os.path)
```

<module 'posixpath' from '/usr/local/Cellar/python@3.8/3.8.2/Frameworks/Python.framework/Versions/3.8/lib/python3.8/posixpath.py'>

```
In [129]: os.mkdir("new")
```

```
In [130]: ls
```

README.md new/

```
In [131]: cd new//
```

/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4/new

```
In [132]: ls
```

```
In [133]: f = open("new", "w")
```

```
In [134]: f.close()
```

```
In [135]: ls
```

new

```
In [136]: cd ../
```

/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4

```
In [137]: ls
```

README.md new/

```
In [138]: os.remove("new/new")
```

```
In [139]: ls
```

README.md new/

```
In [140]: cd nw
```

[Errno 2] No such file or directory: 'nw'
/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4

```
In [141]: cd new
```

/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4/new

```
In [142]: ls
```

```
In [143]: ls
```

```
In [144]: pwd
```

```
Out[144]: '/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4/new'
```

```
In [145]: cd ../
```

/Users/aditya/PycharmProjects/python-girlscript-eop2/day-4

```
In [146]: ls
```

README.md new/

```
In [147]: import pandas
```

```
-----  
---  
ModuleNotFoundError                                Traceback (most recent call la  
st)  
<ipython-input-147-38d4b0363d82> in <module>  
----> 1 import pandas
```

ModuleNotFoundError: No module named 'pandas'

In [148]: import os

In [149]: import numpy

In [150]: l

```
-----  
---  
NameError                                Traceback (most recent call la  
st)  
<ipython-input-150-cde25b5e10ad> in <module>  
----> 1 l
```

NameError: name 'l' is not defined

In [151]: ls

README.md get.py new/

In [152]: less get.py

In [153]: import get

In [154]: print_("aditya")

```
-----  
---  
NameError                                Traceback (most recent call la  
st)  
<ipython-input-154-3f7fc600e2e6> in <module>  
----> 1 print_("aditya")
```

NameError: name 'print_' is not defined


```
In [155]: get.print_("aditya")
```

```
Hello : aditya
```

```
In [156]: ls
```

```
README.md      __pycache__/  get.py         new/
```

```
In [157]: f = open("get.py","r")
```

```
In [158]: f.readline()
```

```
Out[158]: 'def print_(s):\n'
```

```
In [159]: print(f.readline())
```

```
print("Hello : "+s)
```

```
In [160]: print(f.read())
```

```
return
```

```
In [161]: f.close()
```

```
In [162]: f = open("get.py","r")
```

```
In [163]: print(f.read())
```

```
def print_(s):  
    print("Hello : "+s)  
    return
```

```
In [164]: 6 & 1
```

```
Out[164]: 0
```

```
In [165]: 7 & 1
```

```
Out[165]: 1
```

```
In [166]: a = list(map(int, input().split()))
1 2 3 4 5 6
```

```
In [167]: a
Out[167]: [1, 2, 3, 4, 5, 6]
```

```
In [168]: a = list(map(str, input().split()))
1 2 3 4 5
```

```
In [169]: a
Out[169]: ['1', '2', '3', '4', '5']
```

```
In [170]: a = 7
```

```
In [171]: a >> 2
Out[171]: 1
```

```
In [172]: a
Out[172]: 7
```

```
In [173]: a & 1
Out[173]: 1
```

```
In [174]: a = 8
```

```
In [175]: a & 1
Out[175]: 0
```

```
In [176]: a = [1, 2, 1, 2, 4]
```

```
In [177]: xor = a[0]
```

```
In [178]: for i in range(1, len(a)):
...:     xor = xor ^ a[i]
...:
```

```
In [179]: xor
Out[179]: 4
```

```
In [180]: a = "  string  "
```

```
In [181]: a.strip()
Out[181]: 'string'
```

```
In [182]: a
Out[182]: '  string  '
```

```
In [183]: a.rstrip()
```

```
Out[183]: '  string'
```

```
In [184]: a.lstrip()
```

```
Out[184]: 'string  '
```

```
In [185]: help(str)
```

```
In [186]: dir(str)
```

```
Out[186]:
```

```
['__add__',  
'__class__',  
'__contains__',  
'__delattr__',  
'__dir__',  
'__doc__',  
'__eq__',  
'__format__',  
'__ge__',  
'__getattr__',  
'__getitem__',  
'__getnewargs__',  
'__gt__',  
'__hash__',  
'__init__',  
'__init_subclass__',  
'__iter__',  
'__le__',  
'__len__',  
'__lt__',  
'__mod__',  
'__mul__',  
'__ne__',  
'__new__',  
'__reduce__',  
'__reduce_ex__',  
'__repr__',  
'__rmod__',  
'__rmul__',  
'__setattr__',  
'__sizeof__',  
'__str__',  
'__subclasshook__',  
'capitalize',  
'casefold',  
'center',
```

```
'count',
'encode',
'endswith',
'expandtabs',
'find',
'format',
'format_map',
'index',
'isalnum',
'isalpha',
'isascii',
'isdecimal',
'isdigit',
'isidentifier',
'islower',
'isnumeric',
'isprintable',
'isspace',
'istitle',
'isupper',
'join',
'ljust',
'lower',
'lstrip',
'maketrans',
'partition',
'replace',
'rfind',
'rindex',
'rjust',
'partition',
'rsplit',
'rstrip',
'split',
'splitlines',
'startswith',
'strip',
'swapcase',
'title',
'translate',
'upper',
'zfill']
```

```
In [187]: def f():
...:     """
...:     this function is a
...:     fiundcmenck
```

```

    ....:         kbsdkcndwq
    ....:         """
    ....:         pass
File "<ipython-input-187-2a3dcdf6c65b>", line 7
pass
^

```

IndentationError: unexpected indent

```

In [188]: def f():
    ....:         """
    ....:         this function is a
    ....:         fiundcmenck
    ....:         kbsdkcndwq
    ....:         """
    ....:         pass
    ....:

```

In [189]: f()

In [190]: f.__doc__()

```

-----
TypeError                                Traceback (most recent call last)
<ipython-input-190-44659826199a> in <module>
----> 1 f.__doc__()

```

TypeError: 'str' object is not callable

In [191]: f().__doc__()

```

-----
TypeError                                Traceback (most recent call last)
<ipython-input-191-c38e9c5344e8> in <module>
----> 1 f().__doc__()

```

TypeError: 'NoneType' object is not callable

In [192]: f.__doc__

```

Out[192]: '\n    this function is a \n    fiundcmenck\n    kbsdkcnd
wq\n'

```

In [193]: print(d.__doc__)

```

-----
NameError                                Traceback (most recent call last)
<ipython-input-193-b7b33a7cbdd8> in <module>
----> 1 print(d.__doc__)

```

NameError: name 'd' is not defined

```
In [194]: print(f.__doc__)
```

```
this function is a  
fiundcmcnck  
kbsdkcndwq
```

```
In [195]: help(str)  
^[OB
```

```
In [196]: a = [1,1,2,2,3,3,4]
```

```
In [197]: b = 7
```

```
In [198]: b ^ 7
```

```
Out[198]: 0
```

```
In [199]: 0 ^ 7
```

```
Out[199]: 7
```

```
In [200]: 0 ^ 8
```

```
Out[200]: 8
```

```
In [201]: xor = a[0]
```

```
In [202]: xor
```

```
Out[202]: 1
```

```
In [203]: a
```

```
Out[203]: [1, 1, 2, 2, 3, 3, 4]
```

```
In [204]: for i in range(1,len(a)):
```

```
....:     xor = xor ^ a[i]
```

```
....:     print(xor, a[i])
```

```
....:
```

```
0 1
```

```
2 2
```

```
0 2
```

```
3 3
```

```
0 3
```

```
4 4
```

```
In [205]: xor
```

```
Out[205]: 4
```

```
In [206]: a = [1,3,2,5,3,2,1]
```

```
In [207]: for i in range(1, len(a)):
...:     xor = xor ^ a[i]
...:     print(xor, a[i])
...:
```

```
7 3
5 2
0 5
3 3
1 2
0 1
```

```
In [208]: xor
```

```
Out[208]: 0
```

```
In [209]: a
```

```
Out[209]: [1, 3, 2, 5, 3, 2, 1]
```

```
In [210]: xor = a[0]
```

```
In [211]: for i in range(1, len(a)):
...:     xor = xor ^ a[i]
...:     print(xor, a[i])
...:
```

```
2 3
0 2
5 5
6 3
4 2
5 1
```

```
In [212]: xor
```

```
Out[212]: 5
```

```
In [213]:
```