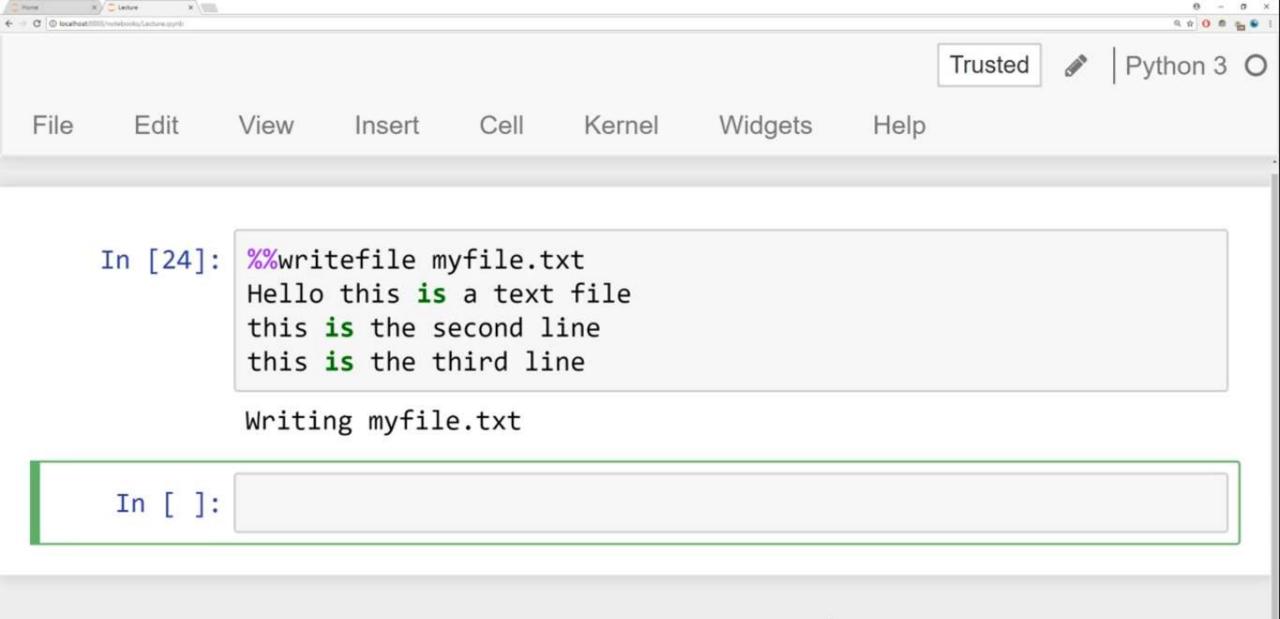# Files

# Complete Python 3 Bootcamp

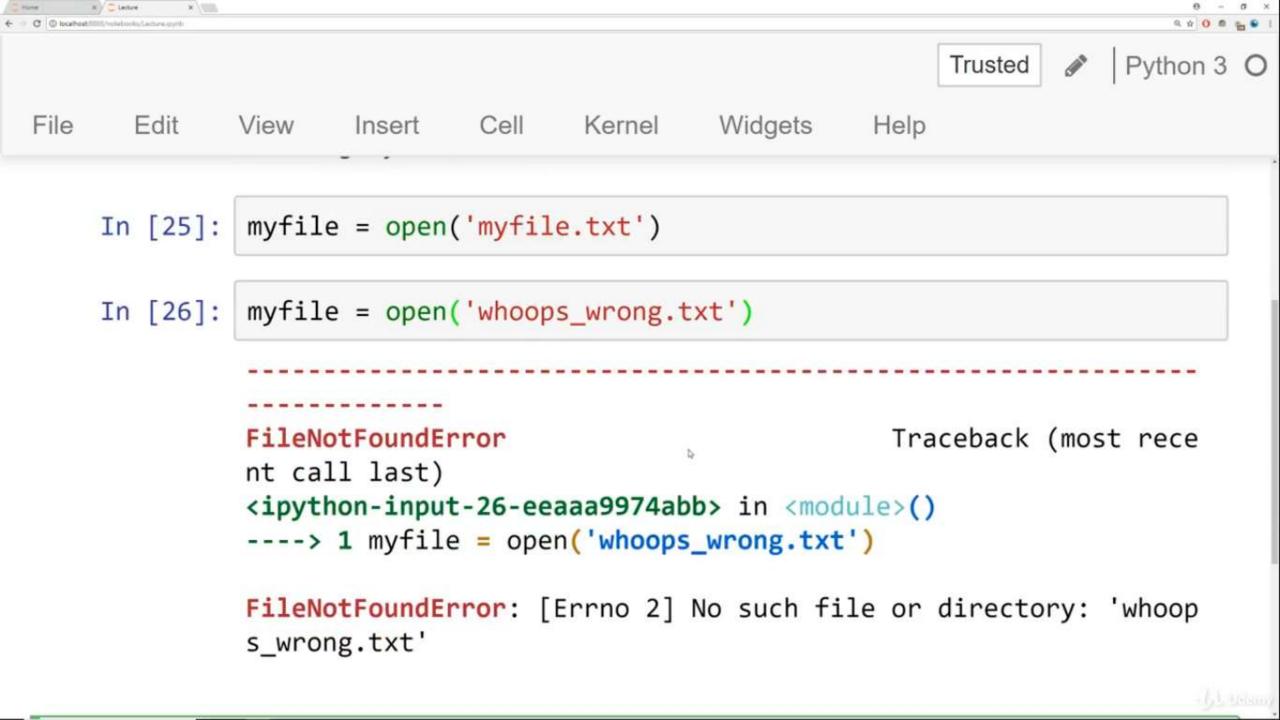Before we finish this section, let's quickly go over how to perform simple I/O with basic .txt files.

We'll also discuss file paths on your computer.

Let's get started!

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File    Edit    View    Insert    Cell    Kernel    Widgets    Help

In [24]:
```
%%writefile myfile.txt
Hello this is a text file
this is the second line
this is the third line
```

Writing myfile.txt

In [ ]:

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File      Edit      View      Insert      Cell      Kernel      Widgets      Help

In [25]:  `myfile = open('myfile.txt')`

In [26]:  `myfile = open('whoops_wrong.txt')`

```
-----------------------------------------------------------------------------
-------------
FileNotFoundError                          Traceback (most rece
nt call last)
<ipython-input-26-eeaaa9974abb> in <module>()
----> 1 myfile = open('whoops_wrong.txt')

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

Python 3 ○

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**FileNotFoundError**: [Errno 2] No such file or directory: 'whoop
s_wrong.txt'

In [27]: pwd

Out[27]: 'C:\\Users\\Marcial\\Pierian-Data-Courses'

In [ ]:

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Out[27]:   'C:\\Users\\Marcial\\Pierian-Data-Courses'

In [28]:   myfile = open('myfile.txt')

In [29]:   myfile.read()

Out[29]:   'Hello this is a text file\nthis is the second line\nthis is t
he third line'

In [ ]:

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In [29]: `myfile.read()`

Out[29]: `'Hello this is a text file\nthis is the second line\nthis is t`
`he third line'`

In [30]: `myfile.read()`

Out[30]: `''`

In [ ]: |

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```python
In [31]: myfile.seek(0)
```

```
Out[31]: 0
```

```python
In [32]: myfile.read()
```

```
Out[32]: 'Hello this is a text file\nthis is the second line\nthis is t
         he third line'
```

```python
In [ ]: m
```

File     Edit     View     Insert     Cell     Kernel     Widgets     Help

In [34]:  `myfile.seek(0)`

Out[34]:  0

In [35]:  `contents = myfile.read()`

In [36]:  `contents`

Out[36]:  `'Hello this is a text file\nthis is the second line\nthis is t`
`he third line'`

In [ ]:

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In [37]: `myfile.seek(0)`

Out[37]: 0

In [38]: `myfile.readlines()`

Out[38]: ['Hello this is a text file\n',
 'this is the second line\n',
 'this is the third line']
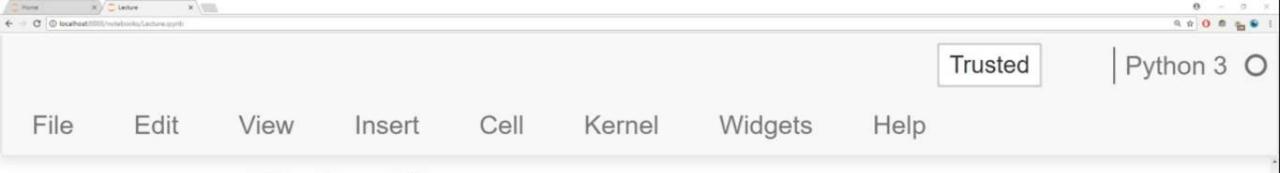
In [ ]:

File    Edit    View    Insert    Cell    Kernel    Widgets    Help

# File Locations

If want to open files at another location on your computer, simply pass in the entire file path.
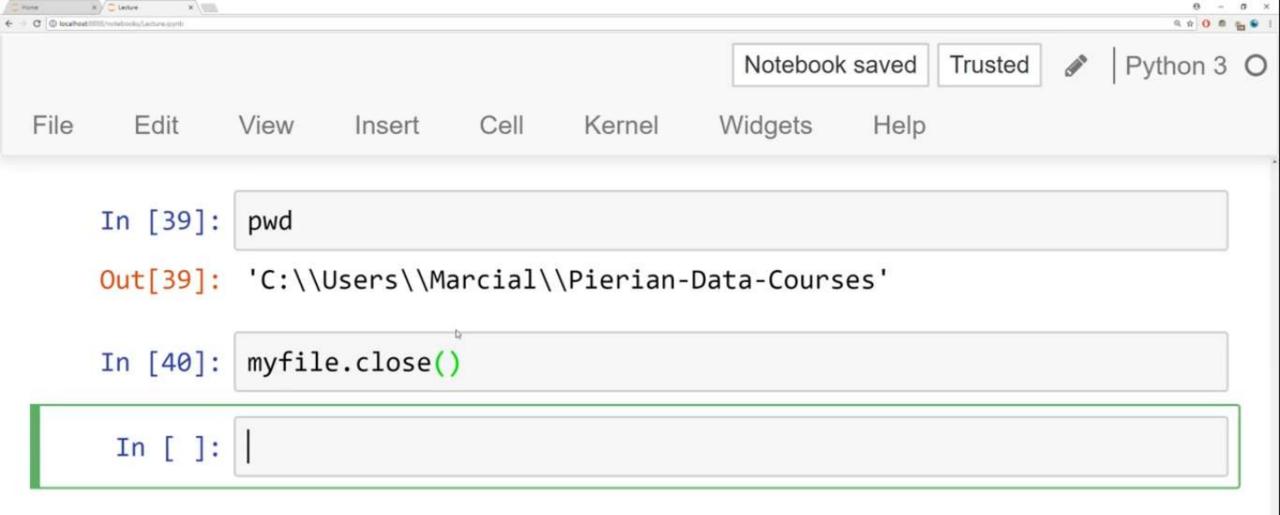
For Windows you need to use double \ so python doesn't treat the second \ as an escape character, a file path is in the form:

```
myfile = open("C:\\Users\\UserName\\Folder\\test.txt")
```

For MacOS and Linux you use slashes in the opposite direction:

```
myfile = open("/Users/YouUserName/Folder/myfile.txt")
```

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```
In [39]: pwd
```

```
Out[39]: 'C:\\Users\\Marcial\\Pierian-Data-Courses'
```

```
In [40]: myfile.close()
```

```
In [ ]:
```

```
Out[39]:   C:\\Users\\Marcial\\Pierian-Data-Courses
```

```
In [40]: myfile.close()
```

```
In [41]: with open('myfile.txt') as my_new_file:
             contents = my_new_file.read()
```

```
In [ ]:
```

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File    Edit    View    Insert    Cell    Kernel    Widgets    Help

he third line

In [45]:
```python
with open('myfile.txt',mode='r') as myfile:
    contents = myfile.read()
```

In [46]:
```python
contents
```

Out[46]: 'Hello this is a text file\nthis is the second line\nthis is t
he third line'

In [ ]:

File    Edit    View    Insert    Cell    Kernel    Widgets    Help

# Reading, Writing, Appending Modes

- **mode='r'** is read only
- **mode='w'** is write only (will overwrite files or create new!)
- **mode='a'** is append only (will add on to files)
- **mode='r+'** is reading and writing
- **mode= 'w+'** is writing and reading (Overwrites existing files or creates a new file!)

```
In [52]:  %%writefile my_new_file.txt
          ONE ON FIRST
          TWO ON SECOND
          THREE ON THIRD
```

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TWO ON SECOND
THREE ON THIRD

Overwriting my_new_file.txt

```python
In [57]: with open('my_new_file.txt',mode='r') as f:
             print(f.read())
```

ONE ON FIRST
TWO ON SECOND
THREE ON THIRD

```python
In [ ]:
```

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Overwriting my_new_file.txt

```
In [57]: with open('my_new_file.txt',mode='r') as f:
             print(f.read())
```

ONE ON FIRST
TWO ON SECOND
THREE ON THIRD

```
In [58]: with open('my_new_file.txt',mode='a') as f:
             f.write('FOUR ON FOURTH')
```

```
In [ ]:
```

```
print(f.read())
```

```
ONE ON FIRST
TWO ON SECOND
THREE ON THIRD
```

In [64]:
```
with open('my_new_file.txt',mode='a') as f:
    f.write('\nFOUR ON FOURTH')
```

In [65]:
```
with open('my_new_file.txt',mode='r') as f:
    print(f.read())
```

```
ONE ON FIRST
TWO ON SECOND
THREE ON THIRD
FOUR ON FOURTH
```

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File    Edit    View    Insert    Cell    Kernel    Widgets    Help

```
TWO ON SECOND
THREE ON THIRD
FOUR ON FOURTH
```

In [66]:
```python
with open('dhfjdkshfjdks.txt',mode='w') as f:
    f.write('I CREATED THIS FILE!')
```

In [67]:
```python
with open('dhfjdkshfjdks.txt',mode='r') as f:
    print(f.read())
```

```
I CREATED THIS FILE!
```

In [ ]: |