



CS 1112: Introduction To Programming

File Reading and Regular Expressions (RegEx) Combined!

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Friendly Reminders

- Your **safety** and **comfort** is important!
 - If you choose to wear a mask you are welcome to do so
 - *We will interpret wearing a mask as being considerate and caring of others in the classroom (not that you are sick), and realize that some may choose to mask to remain distanced*
- Remember to always be **kind, respectful, supportive, compassionate** and **mindful of others!** 😊
- Be an **active** participant in your learning!
You're welcome and **encouraged** to ask questions during class!
- If you feel **unwell**, or think you are, **please stay home**
 - *Contact us! We will work with you!*
 - Get some rest 😊
 - View the recorded lectures – *please allow 24-48 hours to post*



Announcements

- **Quiz 8** will be on **RegEx and File I/O** is due **by 11:00pm on Mon. 4/14**
 - *Last quiz!*
- **PA07** (on **RegEx**) is due **by 11:00pm on Wed. 4/16**
 - *Last programming assignment (PA)!*
- *Exam 2 is still being graded. We'll do our best to complete grading as soon as possible.*

Review of File Reading

(plus see **try-except** in action!)

```
def read_file(file_path):  
    try: # an exception could occur if opening a file that doesn't exist... place in "try" block  
        ➔ with open(file_path, 'r') as file:  
            content = file.read() # reads EVERYTHING at once!  
            print("File Contents:")  
            print(content)  
    except FileNotFoundError: # "catch" a FileNotFoundError exception  
        print(f"Error: File '{file_path}' not found.")
```

An exception could occur if we try to open a file that doesn't exist. So, place this code in the **"try"** block.

One way to **open a file for reading** is: `with open(file_path, 'r') as file`
Use `.read()` to read all the file contents

Combined Version is possible, too

- Instead of creating a file stream variable and calling a function in it directly, you can call `.read()` and so on directly after opening a file for reading. See examples below:

```
# Combined/compressed versions:
file_1 = open("data.txt", 'r').read()      # Read everything
file_2 = open("data.txt", "r").readlines() # Puts in a list
file_3 = open("data.txt", "r").readline()  # Just first line
```

```
File_1:
New text
hello

File_2:
['New text\n', 'hello\n']

File_3:
New text
```

PYTHON DEMONSTRATION

Let's jump on PyCharm!

`file_reading_RegEx.py`
`file_reading_RegEx2.py`

Activity for Today!

- In **pairs** or groups **up to three** work on the following activity.
- **file_reading_RegEx_ica.py**
- *Practicing file reading and regular expressions together*

Remember to **check-in** with a TA before leaving class today!

In-Class “lab” Activity!

Reminder: CS Laptop Loaner Program

- This course requires students to have a **laptop**
- I realize that not everybody might have one (nor necessarily need one for their desired major / path...)
- If you do not have a laptop for any reason... *not to worry!*
- The CS department's Systems staff has a notebook / laptop loaner program and will be able to loan you a notebook / laptop computer for the duration of the semester if you don't have one or if you cannot afford one.
 - Also available if your laptop is broken and under repair, we can arrange for you to receive a loaner laptop for a week or two until your own laptop is fixed

Interested? Link: https://www.cs.virginia.edu/wiki/doku.php?id=cs_laptop_loaner

I am happy to be your sponsor. Please let me know.