

CSCI 127: Joy and Beauty of Data

Lecture 10: Files

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Snowmester 2020

<https://reese.github.io/classes/127/main.html>

Announcements

Lab 5 due **tomorrow** (Tuesday 11:59 PM)

- After today, you will be able to finish it
- Very similar to an example we will do later today
- There is an overview video posted

Announcements

Program 2 due Wednesday @ 11:59 PM

- Should have everything you need to complete it
- I'll likely make Wednesday's lecture shorter to give you more time to work on it

Announcements

Lab 6 due Thursday @ 11:59 PM

You have two options:

1. Come to a live virtual review session Thursday @ 11:00 AM in my Webex room
 - If you show up, you will receive a 100% for Lab 6
2. Answer any two example test questions and submit your python solution to D2L
 - This will largely be effort based... if you attempted them you will receive 100% for Lab 6

I'm hoping this will be an **easy, non-stressful** 100% for everyone.....

Announcements

Midterm Exam on Friday

Will be posted at 6 AM on Friday. Due at 11:59 PM on Friday

I'm hoping that it shouldn't take more than 2 hours to complete

100 Points

10 multiple choice Qs **(20 pts)**



Two of these will be pulled from the practice exam

3 short programming problems **(60 pts)**

1. Basic Python Calculation (20 pts)
2. Selection (30 pts)
3. Nested List (30 pts)



One of these questions will be directly pulled from the example test questions



I'm still trying to figure out how I want it to be submitted (.py file, written down and scanned, etc)

Announcements

Midterm Exam on Friday

Content covered on midterm

Data Types/Variables

Operators (+, -, *, %, ...)

User input

.format

Functions

Selection

Iteration (for loops/while loops)

Lists

Strings

Modules

Files

Good ways to study:

- Review Labs/Programs
- Review in class examples
- Do example test questions
- Read through textbook

Announcements

Extra Credit Opportunity

If you fill out a short, anonymous mid-semester survey (coming soon), I will add 2% to your midterm grade.

Submit a screenshot that you completed the survey to D2L

** If you get 100% on the midterm, the 2% may or may not be added

More formal announcement and instructions coming very soon

Announcements

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Announcements

You can now sign up for a 1 on 1 meeting time w/ Reese

Remember that **5%** of your final grade comes from meeting with me once during the semester

https://doodle.com/poll/civq435b9vgiy62w?utm_source=poll&utm_medium=link

- **EVERYONE** must sign up for a time via doodle. If none of the available times work, email me
- First come, first serve
- Please only sign up for 1 time slot. If you need more than 15 minutes, then feel free to book two consecutive time slots (times are in Mountain/Denver)

Announcements

What you can expect from me

- I will have all labs/programs graded by the midterm exam (maybe not Program 2...)
- I will have solution videos for all assignments so far by the midterm
- I will post all example test questions tonight/tomorrow
- I will post practice exams tomorrow/Wednesday morning

- I will post lab 6, lab 7 and program 3 tomorrow



Today:








Reading from Files, Recursion (maybe?)



Reading from files

Steps for reading a file

STEP 0: Make sure your .py file and file you are reading from are in the same folder/directory !!

 book_file	12/14/2020 9:57 AM	Python File
 calculate_football_wins	12/10/2020 6:27 AM	Python File
 calculate_mode	12/9/2020 5:51 AM	Python File
 celsius	12/1/2020 5:31 AM	Python File
 change	12/3/2020 6:07 AM	Python File
 change_updated	12/3/2020 7:26 AM	Python File
 classics	12/14/2020 8:28 AM	Microsoft Excel C...

Reading from files

Steps for reading a file

Name of file. Could be
a .txt, .in, etc

"r" means you reading
from the file

```
file = open("my_file.csv", "r")
```

1. Open the file

```
file.readline()
```

2. Discard the column headers (if necessary)

```
for each_line in file:
```

3. Do a for loop through each line in the file

```
    row = each_line.split(",")
```

4. Convert each line of the file (string)
to a list using **.split()**. If you reading
from a .csv file, you will always split on
a comma (","), otherwise you will need
to figure out what to split on.

```
    ## do stuff here with row
```

Announcements (Tuesday):

Lab 5 due **tonight** @ 11:59 PM

Program 2 due **tomorrow** @ 11:59 PM

Lab 6 due **Thursday** @ 11:59 PM**

Midterm Exam on Friday

Extra Credit Opportunity Available

You can now schedule your one on one meeting w/ Reese (5% of your grade)

Today: More on reading from files, writing to files

	Arrays start at 0	
	Arrays start at 1	
	Arrays can start wherever <code>~_(\ツ)_/-</code>	
	Arrays start at 4, stop at 6, restart at 1, stop again at 3, restart at 7 then continue on	