Lab 1 (8.26.19) CS103 Fall 2019

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course CS103 Fall 2019

version Fall 2019

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materials

you already have, on Canvas

- canvas_primer_19fa103.pdf
- canopy_installation_primer.pdf
- thought_exercises_0.pdf

new materials, through 103 git repo (19fa103) and Canvas

- lab1_19fa103.pdf (this document)
- canopy_primer_part1_19fa103.pdf (using the Python interpreter)
- unix_primer_19fa103.pdf (building a file structure)
- 103_directory_structure.png (visualization of the 103 directory structure)

purpose

- learn to use the **Python interpreter** through Canopy
- learn some Unix/Windows to build a 103 **directory** hierarchy
- start **thinking** about computer science, and start a **glossary**

Exercises

in the following use your laptop if you have one, unless specified below;
if you do not have your laptop, always use the lab machine

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lab environment

- acquaint you with lab machines (how to **log on**)
  exercise: log on
- quick tour of **Canvas**
  exercise: download lab1 materials from Files/lab/lab1

Python interpreter

- TA-led walkthrough of Windows parts of canopy_primer_part1_19fa103.pdf and demo of Python interpreter in Canopy terminal **on Windows**
- same demo for Unix:
  TA-led walkthrough of Unix parts of canopy_primer_part1_19fa103.pdf and demo of Python interpreter in Canopy terminal **on Unix**
- *exercise on your lab machine*: use the Python interpreter on a Windows machine to calculate the number of seconds in a year
- *exercise on your Unix laptop (if you have one)*: use the Python interpreter to calculate the number of inches in a mile

directory structure

- TA-led walkthrough of unix_primer_19fa103.pdf and demo of building a 103 directory and subdirectories *on Unix*
- same demo for Windows
- *exercise*: build your own 103 directory structure on your laptop; or on your lab machine if you did not bring a laptop; mimic 103_directory_structure.png (or as much of it as you can build in 10 minutes)

thought exercises

- choose a partner and together discuss and solve the thought exercises in thought_exercises_0.pdf

glossary

later we will learn some Markdown, which is ideal for your glossary; in the meantime, use the following format in a plain text document:

```
term
: definition
```

- *exercise*: start a glossary in the file `glossary_19fa103.md`, seeded with definitions of the following terms:

1) function (mathematics),

2) operator precedence,

3) command line interface
   (develop your own best definition, then look them up, Wikipedia is often a good choice; lecture will soon be a good source)

miscellany

- *before next time*, find your partner for pair programming and sit with them (otherwise, you will be randomly assigned one, which is fine too)
- how to take a screenshot (generating a png)
  exercise: generate a screenshot and save to OneDrive (next step)
- how to **save materials on OneDrive** when you leave (if you did not bring your laptop)
  exercise: save a screenshot on OneDrive (same as previous exercise)
- troubleshoot any Canopy installation problems: at the end of lab (perhaps last 15 minutes)

Deliverables (on Canvas lecture page, under Lab1 assignment)

1. screenshot of directory structure (e.g., 19fa103/lab/lab1/glossary.md), to establish that you have constructed it on your machine
2. screenshot of installed Canopy
3. answers to 2 of the exercise 0 thought exercises
4. answers to all of the exercise 1 thought exercises
5. your glossary: a glossary with definitions of the 3 terms

due date: next Tuesday (to give late adders a chance); please finish early if you can; future labs will be due the day after lab