UW CSE 160 Section 1

January 5, 2017

Introductions

Does everyone have python installed and working?

Raise your hand if not, we'll help you get set up

During Section

- Create an empty text file and save everything about what you try and what you get.
- You can also include your name and your teammate's name in the file.
- Email this text file to TA after class if you still feel doubt about any part of the section.

Command Line Intro

- Command Prompt in Windows (cmd)
- Terminal in Mac/Linux

Objectives

- Navigate file system
- Run Python (interactive and programs)

Command Line Basics

• Show current directory/folder

Unix, linux, osx	Windows
pwd	echo %cd%

• List contents in the current directory/folder

Unix, linux, osx	Windows
ls	dir

• Directory separator

Unix, linux, osx	Windows
/	$\mathbf{\lambda}$

Basics continued

• Change directory

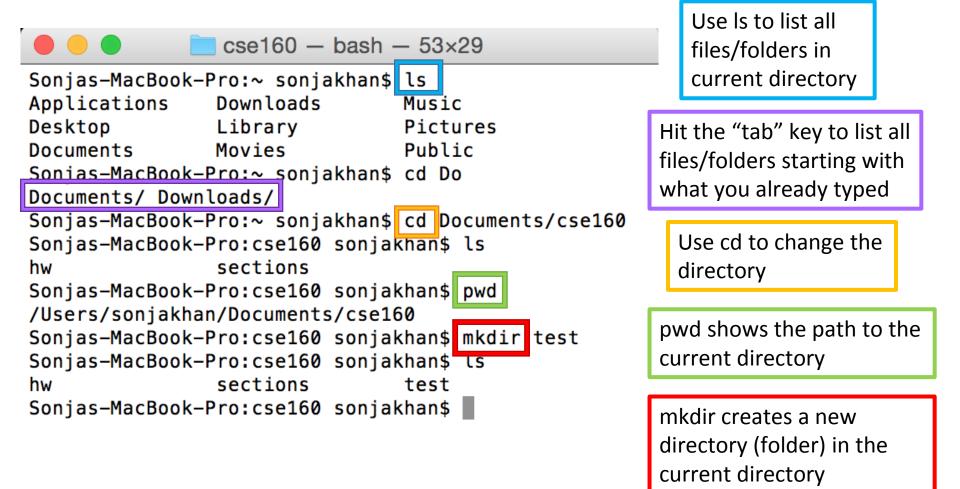
Unix, linux, osx	Windows
cd	cd

- Pro tip: Use "tab" key to loop through path!
- Make directory

Unix, linux, osx	Windows
mkdir	md

More info here: <u>http://courses.cs.washington.edu/courses/cse160/16wi/shell-usage.html</u>

Mac/Linux



Windows

Administrator: Command Prompt

C: dir Volume in drive C has no label. Volume Serial Number is A433-661C Directory of C:\		Use dir to list all files/folders in current directory
2015-03-20 06:28 PM 61 2013-09-17 03:25 PM <dir> 2012-09-19 05:28 PM 200 2013-01-25 01:41 PM 0 2014-01-10 03:51 PM 932 2009-07-13 08:20 PM <dir> 0 2012-09-18 02:13 PM <dir> 0 2014-09-17 04:29 PM <dir> 0 2015-03-07 03:48 PM <dir> 0 2013-05-02 10:43 AM <dir> 0 2013-05-27 10:48 PM <dir> 0 2013-05-27 10:48 PM <dir> 0 2012-09-24 01:21 AM S50 0 2012-07-02 03:24 PM <dir> 0 2012-07-02 03:24 PM <dir> 0 2015-03-23 10:21 AM <dir> 0 2015-03-09 04:58 PM <dir> 0 </dir></dir></dir></dir></dir></dir></dir></dir></dir></dir></dir></dir>	Android COLLECTOR.txt Cygwin dns.cmd end ndsvc.log PerfLogs Per164 Program Files Program Files (x86) Python27 Python33 Samsung Galaxy S3 ToolKit sophosrestore.cmd temp uptodate.cmd Users Windows bytes	Use cd to change the directory
C:\User:\terrier>dir Volume in drive C has no label. Volume Serial Number is A433-661C Directory of C:\Users\terrier		\ (backslash) separates directories
	9	

Python with command line

- Using the interpreter
 - python
 - How to exit: exit() ctr-D
- Using script
 - python myprogram.py
 - python myprogram.py *argument1 argument2*
- The operating system command shell/prompt is *not* the same as the Python interpreter

Careful!

- Don't forget the colon
- Indentation matters!

Range Basics

• The built-in range() function can be used to quickly create sequential lists.

range(start,stop[,step])

- range(10)
 - [0,1,2,3,4,5,6,7,8,9]
- range(0,10,2)
 - [0,2,4,6,8]
- range(10,0,-2)
 - [10,8,6,4,2]

Now it's time to team up!

- Find partners! Group can be 2-4 people.
- Try to share as much as possible about what you think with your teammates!

Exercise: Handout

Today's takeaway

- Installing and Using Python
- Command line environment
- Variables
- Print

GO TO OFFICE HOURS IF YOU NEED MORE HELP GETTING UP AND RUNNING OR WITH HW #1!

Extra Material

Preview: Loops

Loop Basics

- Use loops to reduce code repetition!
- For loop:

for iterating_var in sequence:
 statements(s)

• Example:

for x in [0,1,2,3,4,5,6,7,8,9]:
 print(x**2+x)

Exercise: Sum consecutive numbers

Format:

Requirements

Use a for loop, range, and only one print statement outside the loop

Hints:

- Careful about the conversion between number and string
- Use str(some number)

Solution

```
sum = 0
for i in range(1, 11):
    print i
    sum = sum + i
print "sum: " + str(sum)
```