Programming Workshop: Linux and Python Review

Intermediate Workshop #2
19 September 2016

1

Outline

1. Linux Query
2. Using the Command Line
3. Python Interpreter and Quick Syntax Review
4. Sample Speed Exercises
5. Codecademy - A Review Tool
6. "Homework"

Linux Query

Who has working Linux?

Who has working Python?

Using the Command Line

- What is a command line?
  - "A command-line interface or command language interpreter (CLI) … is a means of interacting with a computer program where the user (or client) issues commands to the program in the form of successive lines of text (command lines)."

[Wikipedia, Command-line Interface, https://en.wikipedia.org/wiki/Command-line_interface]

Using the Command Line

In Linux, can use to:

- ○ Navigate directories
- ○ Manipulate files
- ○ Invoke programs
- ○ Give direct OS commands

Using the Command Line

Example commands:

Command	Pseudonym	Description
cd	Change directory	Move between directories
ls	List	List contents of directories
mkdir	Make directory	Create a directory
./[path]/[name]	Invoke program [name]	Execute binary called [name] located at [path]
vim	Invoke vim	Begin terminal-based text editor Vim
python3	Begin Python interpreter	Begin terminal-based, interactive Python instance

Quick Note on Text Editors

Who has used a terminal-based text editor?

Which one?

Python Interpreter and Quick Syntax Review

- Make a variable
- Use a statement
- Make a loop
- Collect input
- Make a function
- Make a class (?)

Sample Speed Exercises

1:

Make a function that counts to 15 and prints each odd number.

60 seconds

Sample Speed Exercises

2:

Import the math package and print a list of 10 randomly generated numbers between 0 and 1.

120 seconds

Sample Speed Exercises

3:

Make a class called coin. Give it a property "value" and a function called flip(). Have flip() return "Heads" 50% of the time and "Tails" 50% of the time.

(Hint: random numbers might help.)

360 seconds

Discussion: Good use of a class?

Codecademy - A Review Tool

1. Connect to the internet
2. Open www.codecademy.com
3. Make an account
4. Start the Python lesson

"Homework"

1. **Get Linux and Python running!**
2. Make a GitHub account
3. Go through the Codecademy Python lesson

```
if user.get_experience() == "beginner":
    time_to_complete = 4
elif user.get_experience() == "experienced":
    time_to_complete = 1.5
```

Contact Details Reminder

Melanie Cornelius

mdooley1@hawk.iit.edu
melanie.e.cornelius@gmail.com
636.627.6230