Lesson 1: Your First Program

Using the Terminal/Command Prompt

Before we get to programming in Python, let's learn some important commands that will help us move around and use the terminal/command prompt.

You can use the ***mkdir*** command to create a new **directory**. A **directory** is essentially a folder containing files and other directories.

```
pschwendy@Peters-MacBook-Pro % mkdir aamoc
pschwendy@Peters-MacBook-Pro %
```

You can use the ***cd*** command to move to a different directory.

```
pschwendy@Peters-MacBook-Pro % cd aamoc
pschwendy@Peters-MacBook-Pro aamoc %
```

1. As you can see in the snippet above, the current directory will appear after the user and machine name

Use ***cd ..*** to move to the outer directory

```
pschwendy@Peters-MacBook-Pro aamoc % cd ..
pschwendy@Peters-MacBook-Pro %
```

Finally, use ***ls*** (or ***dir*** if you use Windows) to list a directory's contents

```
pschwendy@Peters-MacBook-Pro ~ % cd Desktop
pschwendy@Peters-MacBook-Pro Desktop % ls
2021-12-08.jpg
AAMOC CS
Cisco AnyConnect Secure Mobility Client.app
PO-Pixel-Art
Peter's Stuff
th.png
```

Hello World

The basis of any program is in input and output. To start, let's write a simple script, helloworld.py to print the words, "Hello World!" to the command line.

```
print("Hello World!")
```

1. The **print()** function prints out text to the command line
2. Quotes ("" or '') signify text, referred to as a **String**

With python, running programs is easy. Simply use the python3 command with the program file as an argument.

```
pschwendy@Peters-MacBook-Pro Lesson 1 % python3 helloworld.py
Hello World!
pschwendy@Peters-MacBook-Pro Lesson 1 %
```

Summary

1. Use ***mkdir***, ***cd***, ***cd ..***, and ***ls*** to navigate the terminal
    a. Use ***dir*** instead of ls on Windows machines
2. The **print()** function prints out text to the command line
3. Text inside quotes ("" or '') is referred to as a **String**
4. Python programs can be run by calling python with the program's file as an argument
    a. Ex: `python3 helloworld.py`