

WHAT TO ADD NEXT TIME YOU ARE UPDATING THESE SLIDES

- Update slides to have more animation in the bullet lists
- Verify that each slide has stand alone speaker notes
- Update Summary
- Update Lesson Plan info



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PYTHON 3 - GETTING READY TO WRITE A PROGRAM

A Python class for my Mechatronics Engineering @ SVCTE. Last Updated for
2017 – 2018 school year





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These slides are an adaption, to better target my SVCTE High School Mechatronics Engineering class, primarily from Dr. Charles R. Severance's Python for Everybody class <https://www.py4e.com/> ... but from other sources as well. See Appendix A

SEE APPENDIX A, FOR LICENSING & ATTRIBUTION INFORMATION

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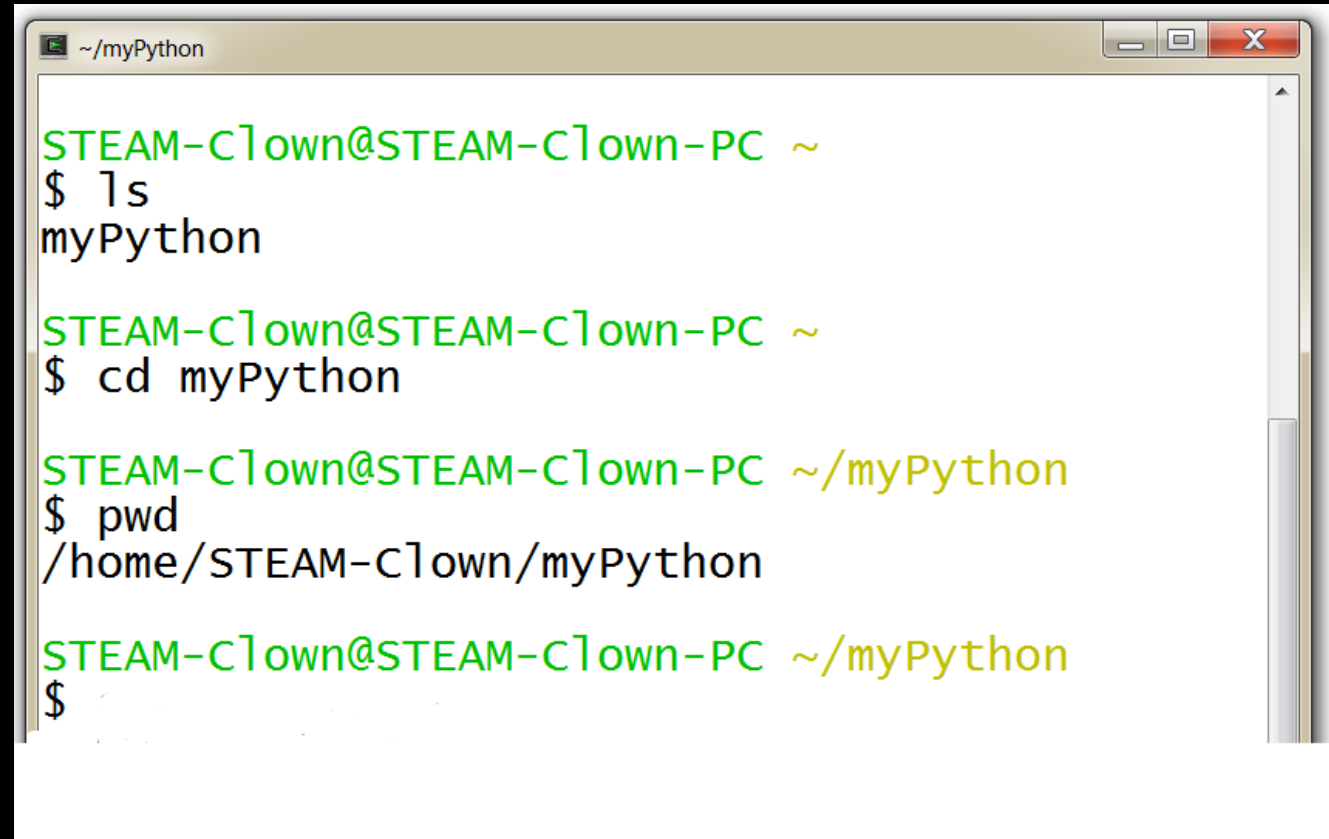


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OPEN A CYGWIN TERMINAL

- Open a Cygwin terminal
 - \$ ls
 - \$ cd myPython
 - \$ pwd
- We are now in your python code directory



```
~/myPython
STEAM-Clown@STEAM-Clown-PC ~
$ ls
myPython

STEAM-Clown@STEAM-Clown-PC ~
$ cd myPython

STEAM-Clown@STEAM-Clown-PC ~/myPython
$ pwd
/home/STEAM-Clown/myPython

STEAM-Clown@STEAM-Clown-PC ~/myPython
$
```

CREATING A FILE WITH CAT

- The cat (short for “concatenate”) command
 - cat command allows us to create single or multiple files
 - View contents of a file
 - Concatenate files and redirect output in terminal or files
 - One of the most frequently used command in Linux/Unix

```
$ cat [OPTION] [FILE]
```

CREATE A FILE WITH CAT COMMAND

- Open a Cygwin command window
- At the command prompt \$ type, then Enter

```
$ cat > hello.py
```

```
|
```



Flashing pipe character

- Opens a text file and leaves it open and waiting for input
- The “cursor” is flashing, but not with the “\$” prompt
- The cat command is waiting for you to type something



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CREATE A FILE WITH CAT COMMAND

- Type some text like... # first file.. Hello World

Type the “#” because it will be saved as a python “comment”

```
$ cat > hello.py  
# first file.. Hello world  
print(“Hello world”)
```

- When you are done entering text, press CTRL+D (hold down Ctrl Key and type ‘d’) to exit.
- The text will be written in hello.py file



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SEE THAT THE FILE GOT WITTEN

- At the command prompt \$ type the following

\$ ls

- Lists the files in the current directory

```
~/myPython
STEAM-Clown@STEAM-Clown-PC ~
$ ls
myPython

STEAM-Clown@STEAM-Clown-PC ~
$ cd myPython

STEAM-Clown@STEAM-Clown-PC ~/myPython
$ pwd
/home/STEAM-Clown/myPython

STEAM-Clown@STEAM-Clown-PC ~/myPython
$ cat > hello.py
# my first program... Hello world
print("Hello world")

STEAM-Clown@STEAM-Clown-PC ~/myPython
$ ls
hello.py

STEAM-Clown@STEAM-Clown-PC ~/myPython
$ |
```



ECHO THE CONTENT OF A FILE

- Type the cat command with the file name (without the ">")

```
$ cat hello.py  
# first file... Hello world  
print("Hello world")
```

\$

```
STEAM-Clown@STEAM-Clown-PC ~/myPython  
$ pwd  
/home/STEAM-Clown/myPython
```

```
STEAM-Clown@STEAM-Clown-PC ~/myPython  
$ cat > hello.py  
# my first program... Hello world  
print("Hello world")
```

```
STEAM-Clown@STEAM-Clown-PC ~/myPython  
$ cat hello.py  
# my first program... Hello world  
print("Hello world")
```

```
STEAM-Clown@STEAM-Clown-PC ~/myPython  
$
```



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```
~/myPython
STEAM-C1own@STEAM-C1own-PC ~
$ ls
myPython

STEAM-C1own@STEAM-C1own-PC ~
$ cd myPython

STEAM-C1own@STEAM-C1own-PC ~/myPython
$ pwd
/home/STEAM-C1own/myPython

STEAM-C1own@STEAM-C1own-PC ~/myPython
$ cat > hello.py
# My First Python Program - Hello World

STEAM-C1own@STEAM-C1own-PC ~/myPython
$ ls
hello.py

STEAM-C1own@STEAM-C1own-PC ~/myPython
$ cat hello.py
# My First Python Program - Hello World

STEAM-C1own@STEAM-C1own-PC ~/myPython
$ |
```



LET'S REVIEW DR CHARLES R. SEVERANCE'S CHAPTER 2 SLIDES

- [Pythonlearn-02-Expressions.pdf](#)

PY4E - Introduction (Chapter...)

Variables, Expressions, and Statements
Chapter 2

Python for Everybody
www.py4e.com

UMSI

YouTube



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LAB - WRITE A PROGRAM THAT DOES MATH

Write a program to prompt the user for hours and rate per hour to compute gross pay.

```
Enter Hours: 35
```

```
Enter Rate: 2.75
```

```
Pay: 96.25
```



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SUMMARY



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APPENDIX



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 - Initial Development: Charles Severance, University of Michigan School of Information
 - Modifications and Adaptions by Jim Burnham, Top Clown @ www.steamclown.org
- Another great Python site is Barbara Saurette AKA [mechanicalgirl](#) and her [Github site](#)
- Additionally used some content from slide deck from Mr Ganesh Bhosale found <https://github.com/gdbhosale/python-rpi/blob/master/python1.pdf>





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