

# 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



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# PYTHON 3 - IF, ELSE, ELIF

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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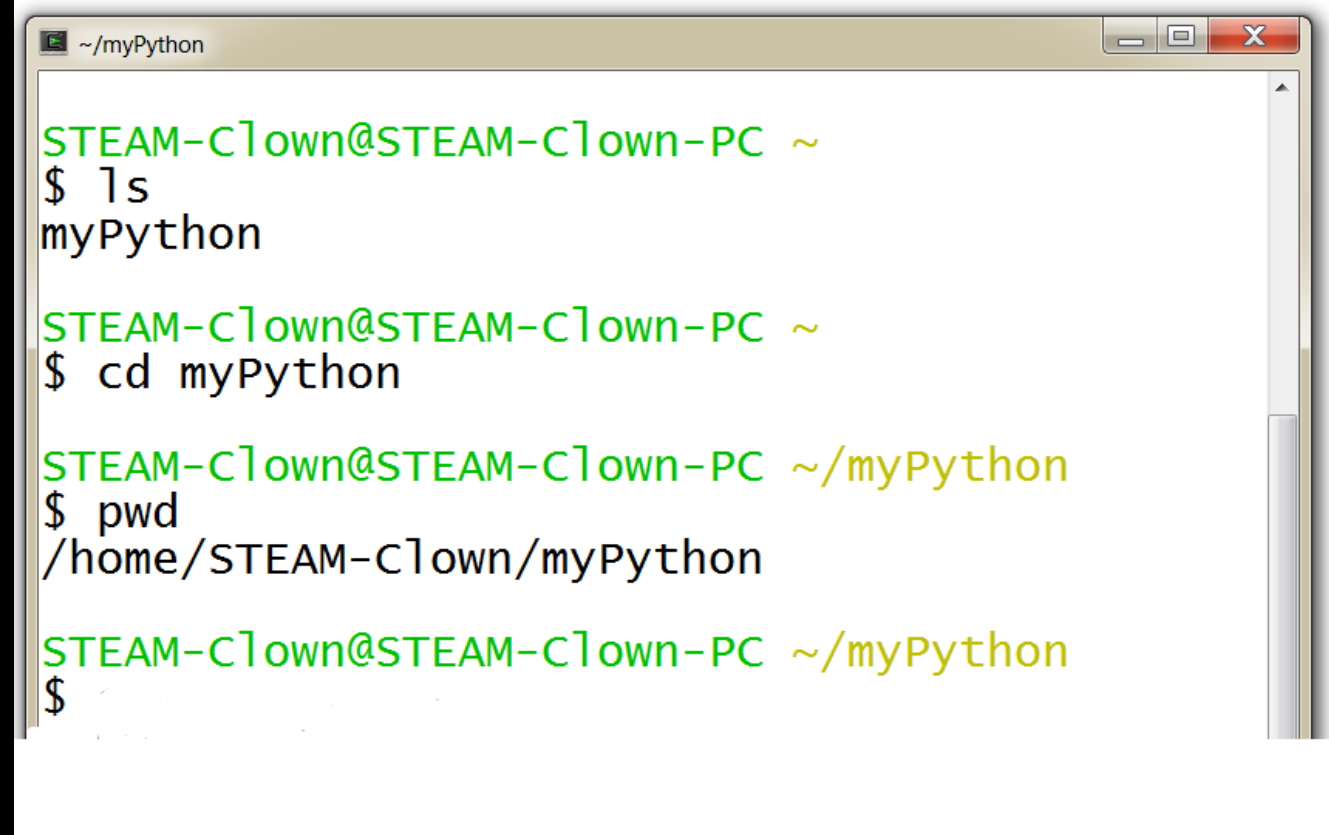
# OPEN A TERMINAL

- Open a bash terminal on your Raspberry Pi or Cygwin terminal on a PC

```
$ ls
myPython

$ 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

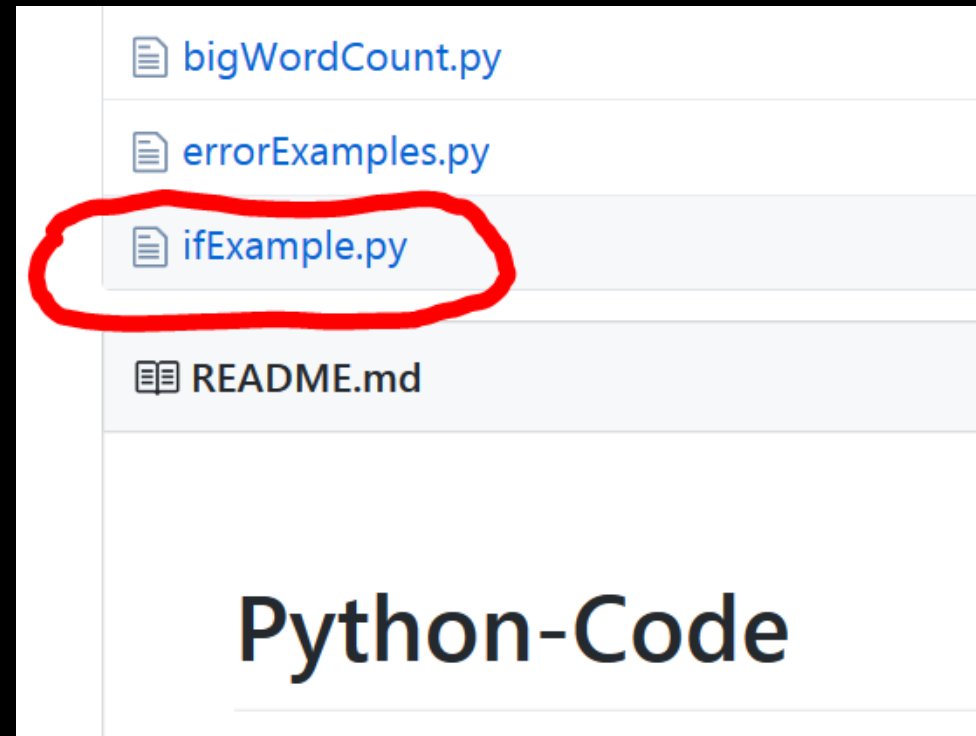
STEAM-Clown@STEAM-Clown-PC ~/myPython
$ pwd
/home/STEAM-Clown/myPython

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

# OPEN A FILE IN IDLE OR NOTEPAD++

- Copy the `ifExample.py` from my [github site](#)
- Save it, edit it, run it

```
$ python3 ifExample.py
```



# IF EXAMPLE - WHAT DOES IT DO?

# This is the main function. all your main code goes here.

```
def main():
```

```
    print ('This program illustrates an if function')
```

```
    numberFromKeyboard = int(input("Enter a number between 0 and 9: "))
```

```
    if numberFromKeyboard == 5:
```

```
        print('your number is 5')
```

```
    print('All Done')
```

```
    # All done
```

# This is the call to the Function main(). You should always

# have a main() and def main(): as part of all your programs

```
main()
```



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# LAB TIME - NOW MAKE SOME EDITS

The program only checks if the input is 5

```
if numberFromKeyboard == 5:
```

- Add more If statements to check for all the numbers

Hint: you are adding 9 more if statements

Was that easy?

- Update to add 1 to the variable `numberFromKeyboard` when ever it is a 0 or subtract 1 when it is 7
- Change the input from a keyboard input to a random number

Hint: You will need to include the random library and call the `random()` function



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# IF / ELSE

# This is the main function. all your main code goes here.

```
def main():
```

```
    print ('This program illustrates a if / else function')
```

```
    numberFromKeyboard = int(input("Enter a number between 0 and 9: "))
```

```
    if numberFromKeyboard == 5:
```

```
        print('your number is 5')
```

```
    else:
```

```
        print('your number is not 5, but rather, it is',numberFromKeyboard)
```

```
    print('All Done') # All done
```

# This is the call to the Function main(). You should always

# have a main() and def main(): as part of all your programs

```
main()
```



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# IF / ELIF / ELSE

```
if numberFromKeyboard == '0':  
    print ('this is the character 0')  
elif numberFromKeyboard == '7':  
    print ('this is the character ', numberFromKeyboard)  
else:  
    print ('this is not 0 or 7, it is', numberFromKeyboard)
```

# LAB TIME - NOW MAKE SOME EDITS

- Update to
  - add 1 to the variable `numberFromKeyboard` when ever it is a 0
  - subtract 1 when it is 7

Hint: are you working with a str or int?

## Was that easy?

- Change the input from a keyboard input to a random number

Hint: You will need to include the random library and call the `random()` function



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# APPENDIX



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- My best attempt to properly attribute, or reference any other sources or work I have used are listed in Appendix B



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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](http://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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# REFERENCE SLIDES



