Python Learning Notes

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"Code is more often read than written."

— Guido van Rossum

"It doesn't matter how good your software is, because if the documentation is not good enough, people will not use it."

— Daniele Procida

"Code tells you how; Comments tell you why."

— Jeff Atwood (aka Coding Horror)

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Part I

Python Learning Notes

Chapter 1

Control Structures

1.1 Python's Switch/Case

There's no switch/case control structures in Python so to speak. But dictionaries can be used to fulfill that job as in the example below:

```python
def hangman_states(case):
    switcher = {
        1: hangman_state1,
        2: hangman_state2,
        3: hangman_state3,
        4: hangman_state4,
        5: hangman_state5,
        6: hangman_state6,
        7: hangman_state7,
        8: hangman_state8
    }

    return switcher.get(case, "State doesn't exist")()
```

Chapter 2

Data Types and Structures

2.1   Mutable/Not Mutable Data Types

1. list = mutable
2. tuple = not mutable
3. string = not mutable

2.2   Lists slices

This verbatim below comes from the moving to python wikipage [4]:

```
Python indexes and slices for a six-element list.

Indexes enumerate the elements, slices enumerate the spaces between the elements.

Index from rear:    -6  -5  -4  -3  -2  -1
Index from front:    0   1   2   3   4   5
                    +---+---+---+---+---+---+
                    | a | b | c | d | e | f |
                    +---+---+---+---+---+---+
Slice from front:   :   1   2   3   4   5   :
Slice from rear:    :  -5  -4  -3  -2  -1   :
```

```
a=[0,1,2,3,4,5]    a[1:]==[1,2,3,4,5]
len(a)==6          a[:5]==[0,1,2,3,4]
a[0]==0            a[:-2]==[0,1,2,3]
a[5]==5            a[1:2]==[1]
a[-1]==5           a[1:-1]==[1,2,3,4]
a[-2]==4

b=a[:]
b==[0,1,2,3,4,5] (shallow copy of a)
```

2.3   Global Variables

In order to use global variables do as indicated here:

1. Declare variable

2. In local scope, statement global <var>

3. Use variable...

Chapter 3

Conventions

3.1   Indentation

Indentation = holywar between tabs, four-spaces and weirdos. Not sure what I should use.

Bibliography

[1] Python Software Foundation. *Pep 8 - Style Guide for Python Code*. Accessed: 2020-04-23. 2020. URL: https://www.python.org/dev/peps/pep-0008/.

[2] Python Software Foundation. *Python Documentation Homepage*. Accessed: 2020-04-23. 2020. URL: https://www.python.org/doc/.

[3] Python Software Foundation. *The Python Standard Library*. Accessed: 2020-04-23. 2020. URL: https://docs.python.org/3/library/index.html.

[4] Python Wiki. *Moving to Python From Other Languages*. Accessed: 2020-04-23. 2020. URL: https://wiki.python.org/moin/MovingToPythonFromOtherLanguages.