Introduction to Python: Day 1 - Syntax

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Course Outline

https://github.com/RydenButler/PythonCourse2019

Course Expectations

- Learn how to code
- Learn how to learn how to code
- Complete all labs and homework
- Do not plagiarize code!!!
- Work with faculty on a poster project
- Take your time

Why Python?

- Helpful for web scraping, APIs, text, apps
- Coding skills are transferable
- Sends a signal
- Python 2 or 3?
- Shell or IDE?

Homework

- 5 assignments
- Submit on GitHub, making meaningful commits
- Think together; write apart
- Direct all homework logistics questions to Patrick

Office Hours

- I'm not always in the office
- I can help any time during lab, and will stay longer as necessary
- Email is fine for clarifications, but coding help requires face time
- I will give extra help by arrangement, but am not responsible for last-minute help sessions

Schedule

- Take a quiz
- Make sure we're comfortable with GitHub
- Review syntax & do some exercises
- Lunch
- Lab

Quiz

https://www.onlineexambuilder.com/python2015/exam-33067

Lab Help: Number Bases

- We're accustomed to working in base 10

...	10^3	10^2	10^1	10^0	
...	(1000)	(100)	(10)	(1)	
0	0	0	0	2	2
0	0	0	1	5	15

- Let's try base 2

...	2^3	2^2	2^1	2^0	
...	(8)	(4)	(2)	(1)	
0	0	0	1	0	2
0	1	1	1	1	15

Lab Help: Converting Bases

- $50_{10} = ???_2$

Dividend	50/2	25/2	12/2	6/2	3/2	1/2
Quotient	25	12	6	3	1	0
Remainder	0	1	0	0	1	1

- Reverse the remainder and check our work

2^5 (32)	2^4 (16)	2^3 (8)	2^2 (4)	2^1 (2)	2^0 (1)
1	1	0	0	1	0

- $32 + 16 + 2 = 50 \implies 50_{10} = 110010_2$