

CompSci 101

Introduction to Computer Science



Sept 29, 2016

Prof. Rodger

“All your troubles are due to those ‘ifs’,”
declared the Wizard. If you were not a
Flutterbudget you wouldn’t worry.”
- The Emerald City of Oz by Frank Baum

CompSci 101 Fall 2016

1

Announcements

- Test 1 is Tuesday!
 - You must take the exam in your lecture section
 - Accommodations for test 1? Must fill out form on website
- See Regrades form on website
- See all new Forms on website – main page
- No labs next week
- No consulting hours Tues-Thurs night
- Exam 1 Review session – LSRC B101
 - Sunday, 4:30-6pm

CompSci 101 Fall 2016

2

Exam logistics

- Exam is in the regular classroom
- Only need a pen or pencil
- No scratch paper
- Will give you a reference sheet of Python information with the test (see resources page)
- Closed book, closed notes, closed neighbor
- Covers lecture, lab and assigned reading, assgnmts, apts
- Have put old quizzes back up as quiz review
 - This is NOT for a grade, for studying only

CompSci 101 Fall 2016

3

The best way to study

- Write code on paper!
- Resources page has old tests and solutions
 - Try writing code, then look at solutions
- Rewrite an APT
- Rewrite code we did in lecture
- Rewrite code we did in lab

CompSci 101 Fall 2016

4

What we have not done

- Test 1 from Fall 2014 on we have covered everything.
 - If looking at old exams, note we **have not done** the following:
 - List comprehensions
 - Code in square brackets such as
 `y = [w for w in alist]`
- There may be other things.... If it looks strange, it might be we haven't done it....

Understand

- What is the difference between:
 - `[]` and `()`
 - `w =` and `w +=`
 - print value and assigning value to a variable
 - print and return
 - When do you print? When do you return?
 - Does a function print or return?
- if, for, range, strings, lists
 - Understand format and how they work
- Parameters vs arguments

Writing functions with formulae

bit.ly/101f16-0929-1

Writing functions with formulae

- Using extra variables: can be really smart
 - Helps in making each line simple
 - Easy to correct if you've made a mistake
- See `triangleArea`, what about other math symbols and formula?
- What do `+`, `-`, `*`, `/`, `%` do?
- What about `math.sqrt` or `5**0.5` or `math.sin ...`

Accumulating in a loop

- If you are going to return a string
 - Initialization, return value, how to "build it"
- If you are going to return an int (counter)
 - Initialization, return value, how to "build it"
- If you are going to return a list
 - Initialization, return value, how to "build it"

CompSci 101 Fall 2016

9

Counting 'a's in a string, 'fox' in a list?

- What Python functions/methods help
 - If you forget, how can you recreate yourself?
 - See exam Python reference sheet

CompSci 101 Fall 2016

10

Basic List/file Processing

bit.ly/101f16-0929-3

CompSci 101 Fall 2016

11

Review Old Exam Questions

CompSci 101 Fall 2016

12