

# CSC 111:

# Intro to Computer Science through Programming

Spring 2017  
Prof. Sara Mathieson



# TODO

- + Sit somewhere new! Sit by someone you haven't met yet
- + We'll use computers for an exercise towards the end of class
- + Make sure to turn in **Lab 1 on Moodle by tonight!**
  - + Don't worry if you don't have a complete transcript this week
  - + If you are not on Moodle yet, email me your work

# Admin

- + **I will be away on Monday (Feb 6).** There will be no class meeting, but I will upload a video lecture and there will be a **Moodle quiz.**
- + No office hours on Monday next week, but I will come to TA hours: **Tuesday 7:30-9:30pm**
- + Homework 1 due Tuesday Feb 7

# Updated 111 TAs

Name	Email	Pronoun
Artemis Metaxa-Kakavouli	ametaxakakavouli@smith.edu	she/her
Eleanor Ewing	eewing@smith.edu	she/her
Farida Sabry	fsabry@smith.edu	she/her
Logan Swanson	lswanson@smith.edu	he/him
Prayasha Chaudhary	pchaudhary@smith.edu	she/her
Riley Mancuso	emancuso@smith.edu	they/them
Val McCulloch	vmcculloch@smith.edu	they/them
Zoe Kendall	zkendall@smith.edu	she/her

# Outline: 2/3

- + Recap last time
- + Software development workflow
- + Naming conventions
- + Swap function
- + More for loop examples

Recap

# Quiz: Discuss with a partner

## Match input to output

### Input

```
word1 = "hot"  
word2 = "coffee"  
  
print(word1 + word2)  
  
print(word1, word2)  
  
len(word1)  
  
len(word2)  
  
print(5 + word2 + "s")  
  
input("Enter your name: ")  
eval(input("Enter your name: "))
```

### Output

hot coffee

hotcoffee

Enter your name: Sara  
'Sara'

6

3

5 coffees

Enter your name: Sara

Traceback (most recent call last):  
 File "<pyshell#21>", line 1, in <module>  
 eval(input("Enter your name: "))  
 File "<string>", line 1, in <module>  
NameError: name 'Sara' is not defined

None of the above

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# Naming Conventions

# Naming variables and functions

SpamAndEggs

Spam\_And\_Eggs

Spam\_and\_eggs

spamAndEggs

spam\_and\_eggs



# Naming variables and functions

~~SpamAndEggs~~

~~Spam\_And\_Eggs~~

~~Spam\_and\_eggs~~

~~spamAndEggs~~

spam\_and\_eggs

- Underscores to separate words
- All lowercase

For us, only the last one!

# Swap Function

# Swap: switch the values of two variables

```
>>> x = 7  
>>> y = 10  
>>>  
>>> x = y  
>>> y = x
```

I'm done!

# Swap: switch the values of two variables

Wait....

```
>>> x = 7
>>> y = 10
>>>
>>> x = y
>>> y = x
```



x	y
7	10

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>>> x = y
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```

x	y
7	10
10	10




# Swap: switch the values of two variables


Wait....

>>> <b>x</b> = 7		<b>x</b>	<b>y</b>
>>> <b>y</b> = 10	→	7	10
>>>			
>>> <b>x</b> = <b>y</b>	→	10	10
>>> <b>y</b> = <b>x</b>	→	10	10

# Swap: switch the values of two variables

Wait....

<code>&gt;&gt;&gt; x = 7</code>		<b>x</b>	<b>y</b>
<code>&gt;&gt;&gt; y = 10</code>		7	10
<code>&gt;&gt;&gt;</code>			
<code>&gt;&gt;&gt; x = y</code>		10	10
<code>&gt;&gt;&gt; y = x</code>		10	10

		<b>x</b>	<b>y</b>	<b>temp</b>
<code>&gt;&gt;&gt; temp = x</code>		7	10	

# Swap: switch the values of two variables

Wait....

>>> x = 7		x	y
>>> y = 10	→	7	10
>>>			
>>> x = y	→	10	10
>>> y = x	→	10	10

		x	y	temp
>>> temp = x	→	7	10	7



# Swap: switch the values of two variables

Wait....

>>> x = 7	x	y
>>> y = 10	7	10
>>>		
>>> x = y	10	10
>>> y = x	10	10

	x	y	temp
>>> temp = x	7	10	7
>>> x = y	10	10	7

# Swap: switch the values of two variables

Wait....

>>> x = 7	x	y
>>> y = 10	7	10
>>> x = y	10	10
>>> y = x	10	10

>>> temp = x	x	y	temp
>>> x = y	7	10	7
>>> y = temp	10	10	7
>>> y = temp	10	7	7

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Wait....

>>> x = 7	x	y
>>> y = 10	7	10
>>>		
>>> x = y	10	10
>>> y = x	10	10

>>> temp = x	x	y	temp
>>> x = y	7	10	7
>>> y = temp	10	10	7
	10	7	7

Yay!

LHS: variable that is being changed

RHS: use the value of the expression

# More For Loop Examples