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

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Pronoun</th>
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</thead>
<tbody>
<tr>
<td>Artemis Metaxa-Kakavouli</td>
<td><a href="mailto:ametaxakakavouli@smith.edu">ametaxakakavouli@smith.edu</a></td>
<td>she/her</td>
</tr>
<tr>
<td>Eleanor Ewing</td>
<td><a href="mailto:eewing@smith.edu">eewing@smith.edu</a></td>
<td>she/her</td>
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<tr>
<td>Farida Sabry</td>
<td><a href="mailto:fsabry@smith.edu">fsabry@smith.edu</a></td>
<td>she/her</td>
</tr>
<tr>
<td>Logan Swanson</td>
<td><a href="mailto:lswanson@smith.edu">lswanson@smith.edu</a></td>
<td>he/him</td>
</tr>
<tr>
<td>Prayasha Chaudhary</td>
<td><a href="mailto:pchaudhary@smith.edu">pchaudhary@smith.edu</a></td>
<td>she/her</td>
</tr>
<tr>
<td>Riley Mancuso</td>
<td><a href="mailto:emancuso@smith.edu">emancuso@smith.edu</a></td>
<td>they/them</td>
</tr>
<tr>
<td>Val McCulloch</td>
<td><a href="mailto:vmcculloch@smith.edu">vmcculloch@smith.edu</a></td>
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<tr>
<td>Zoe Kendall</td>
<td><a href="mailto:zkendall@smith.edu">zkendall@smith.edu</a></td>
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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

```python
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
Quiz: Discuss with a partner
Match input to output

Input:

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word1 = "hot"
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print(word1, word2)
len(word1)
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input("Enter your name: ")
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Output:

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Enter your name: Sara
'Sara'
6
3
5 coffees
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Software development workflow
Software development workflow

Analyze the problem: without jumping into the code (concrete: work out ideas using pencil and paper, or background research)
Software development workflow

**Analyze the problem**: without jumping into the code (concrete: work out ideas using pencil and paper, or background research)

**Determine specifications**: think about the solution / end goal (concrete: determine the inputs and outputs)
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Implement the design: coding!

Test/debug the program: i.e. Run module and try different inputs, fix bugs in the program as they arise

Maintain the program: over time, user’s needs will change
Naming Conventions
Naming variables and functions

SpamAndEggs
Spam_And_Eggs
Spam_and_eggs
spamAndEggs
spamAndEggs
spam_and_eggs
Naming variables and functions

- SpamAndEggs
- Spam_And_Eggs
- Spam_and_eggs
- spamAndEggs
- spamAndEggs

For us, only the last one!

- Underscores to separate words
- All lowercase
Swap Function
Swap: switch the values of two variables

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

>>> x = y
>>> y = x

I'm done!
```
Swap: switch the values of two variables

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

<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
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<tr>
<td>7</td>
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>>> x = 7
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Wait....
Swap: switch the values of two variables

```python
>>> x = 7
>>> y = 10
>>> x = y
>>> y = x
>>> temp = x
```

Wait....

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### Code

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>>> y = 10
>>> x = y
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>>> temp = x
>>> x = y
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### Explanation
- **LHS**: variable that is being changed
- **RHS**: use the value of the expression

Wait....

Yay!
More For Loop Examples