CS21: INTRODUCTION TO COMPUTER SCIENCE

Prof. Mathieson

Fall 2018

Swarthmore College

Outline Sept 28:

Sit at a new computer!

- Hand back Lab 2
- Go over: **first_last.py**
- While loops
- Indexing practice
- More functions & lists

Notes

- **Lab 3** due **Saturday** night
- **Office hours 3-5pm TODAY**
- **Ninja session 7-9pm TONIGHT**

You can attend any of our office hours!

- **Lauri Courtenay**: Mondays 2-3pm, Thursdays 11:30-12:30pm, room **257**

- **Sara Mathieson**: Fridays 3-5pm, room **249**

- **Aline Normoyle:** M 10:30am-11:30am, WF 10:30am - noon, F 1-2pm, room **252C**

- **Scout Sinclair**: Mondays 2-3:30pm, Thursdays 10:30-11:30am, room **262A**

first_last.py

```
def find_first(lst):
    """Compute and return the alphabetically first string in the list."""
    min_name = "z" # lowercase comes AFTER uppercase
    for i in range(len(lst)):
        name = lst[i]
        # will return True if name comes before min_name alphabetically
        if name < min_name:
            min_name = name
    return min_name
```

While loops

while loops: combine idea of loop with idea of condition.

```
flip = "T" # initialization
while <condition>:
    # body, update loop variable
    flip = random.choice(["H", "T"])
print("heads!")
```

must be True or False

boolean

```
flip == "T":
flip != "H":
```

Example of while vs. for loops for the same task

Implicitly assigning i = 0 initially

```
for i in range(len(lst)):
    print(lst[i])
```

In a while loop, we need to *explicitly* initialize the variable(s) we'll be using in the condition

```
i = 0
while i < len(lst):
    print(lst[i])
    i = i + 1
```

While loop practice problems

- cs21/w04/while_5.py
- cs21/w04/while_s.py
- cs21/w04/while_die.py
- cs21/practice/while_yn.py
- cs21/practice/while_coin.py