CS21: INTRODUCTION TO COMPUTER SCIENCE

Prof. Mathieson
Fall 2018
Swarthmore College
Outline Sept 28:

- 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
```python
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

```python
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

```python
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