

CS21: INTRODUCTION TO COMPUTER SCIENCE

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Fall 2017

Swarthmore College

Outline Sept 27:

Right now: try to finish
`min_max_range.py`

- Hand back Lab 2
- Go over: `min_max_range.py`
- While loops
- Indexing practice
- Next week: graphics

Notes

- **Lab 3** due **Saturday** night
- **No office hours today**
- **Ninja session 7-9pm tonight**

While loops

Format for a while loop

while loop:

combine loop with conditional.

Valid = False

while not valid:

```
input(...)
```

```
# initialize (flip = "T")
```

```
while <condition>:
```

```
# body  
# update → flip = ...
```

```
next  
code
```

```
# initialize variable(s)
```

```
while <condition>:
```

```
# body
```

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/week04/while_random.py](#)
- [cs21/week04/guess_number.py](#)
- [cs21/practice/while_challenge.py](#)
- [cs21/practice/student_computer.py](#) (indexing)