

DS2000

1/27 - Fri ☺

Admin

- HW2 due 9pm
- HW3 out now

Agenda

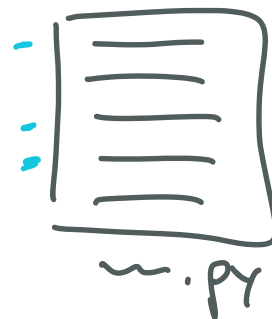
1. Loop Structure
2. while loop practice
3. Python

## 1. Loop Structure

Last time...

```
if condition:  
    # do a thing
```

Flow of Control



Today...

```
while condition:  
    # do a thing
```



write code once,  
execute many times

## Use of while loops #1

any code ← while condition :  
                    # do a thing

1. check condition
2. If True, do the thing.
3. If False, end the loop!

English: keep buying lottery tickets until  
                    I have \$1 million

Python: while I don't have \$1 million,  
                    buy a lottery ticket

## Use of loops #2: Read from a file

- useful where we don't need to remember every data point at the same time
- Run forever
- read from file using readline
- Are we at the end of the file?  
If so, end the loop with break

## Python we need

- while
- break
- →

x = 5

x = x + 1

x += 1

↖ same thing!

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