DS2000
2/10 - Fri :)

Admin
- HW4 out now, due 2/17 @ 9pm
- mini viz due 3/3 @ 9pm (no late subs)

Agenda
1. Algorithmic thinking (min/max)
2. File structure --> lists
3. Python

1. Algorithmic Thinking

- Algorithm: steps to solve a problem
- Python has built-in algorithms
  - we want to know how they work
  - may not be perfect for what we want to do
- ex: max of some values

```
cards = [4, 11, 5, 9]
highest = max(cards)      # 11
```

How Python's max works>

- Look at every card, one at a time
- If highest so far, then save it

limitations>

- In case of a tie, keeps first one
- only tracks one thing

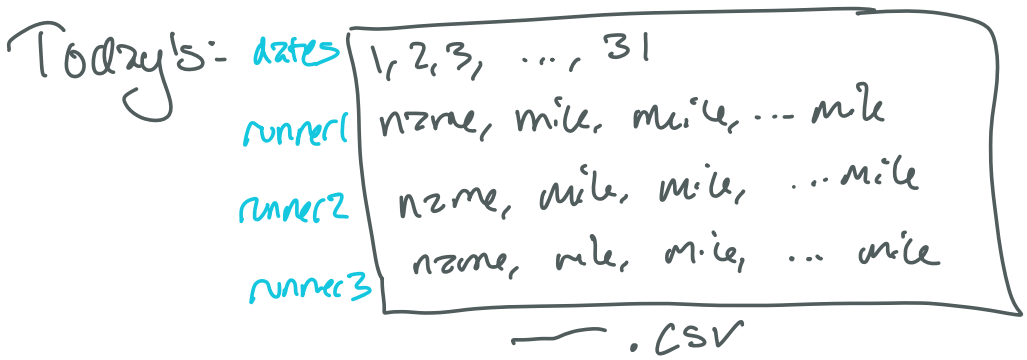
our version: highest value, 2nd color

- start: highest = 0
  color = ""
- look at every card one at a time
- If value >= highest
  - update highest value
  - update color

2. File structure

CSV File: comma separated values
like an excel file

Today's:



1. Treat header differently

infile.readline() before the loop

2. Iterate over the file with a for loop

```
for line in infile:
```

↳ string

3. Turn string into a list of strings

```
lst = line.split(",")
```