File Writing/Review

***please do the course evals

***here's the link to the review guide again https://cs1110.cs.virginia.edu/know.html

***the exams are there now at the bottom or

https://cs1110.cs.virginia.edu/files/CS111X-F16-Final.pdf

https://cs1110.cs.virginia.edu/files/CS111X-F16-Final-KEY.pdf

https://cs1110.cs.virginia.edu/files/CS111X-S16-Final-Coding.pdf

https://cs1110.cs.virginia.edu/files/CS111X-S16-Final-KEY.pdf

***questions won't be the same but format and difficulty will

Here's a hint for the exam: if you run out of space to write your solution, it may not be right

Covered last time: open, close, and write various ways

Review of that here: https://cs1110.cs.virginia.edu/files/002/write_ex1.py

***Brief advice: updating your software could mess up your game code, be careful

Two more functions to learn: **os.remove(filename)** and **os.rename(oldfilename, newfilename)**

My interjection: these are very useful for inventory.py, due Monday

os.remove deletes files just like dragging them to the trash, except that it is irreversible

similarly, **os.rename** will rename files, just like when we do it manually

So why would we not just do it manually?

Because these can be called within loops and functions

Exercise using all of our file writing concepts:

```
import os
# a library standing for 'operating system' that works with the user's internal
storage

# task: create a to-do list csv file
# date, time, task
# update a task if something comes up
# use os.path.exists, os.remove, and os.rename for the experience
# use a dictionary not a list since we have less practice with those

def create_file(filename, date, time, task):
    dict = {}
    if not os.path.exists(filename):
        # if it doesn't exist yet
        with open(filename, 'w') as f:
            print(date + ',' + time + ',' + task, file = f)
        # this format makes it a csv
    else:
        # if it already exists
        with open(filename, 'r') as x:
            for line in x:
```

```
                if len(line) > 0 and line != '\n':
                    pieces = line.strip().split(',')
                    dict[str(pieces[0]) + ',' + str(pieces[1])] = pieces[2]
        if dict != {}:
        # or if len(dict) > 0:
            with open('temp.csv', 'w') as newfile:
                for key in dict.keys():
                    if key == date + ',' + time:
                        # if it's the value we want to change
                        print(key + ',' + task, file = newfile)
                        # use the newly inputted task
                    else:
                        # if it's a different one, we still want it there but
unchanged
                        print(key + ',' + dict[key], file = newfile)
    os.remove(filename)
    os.rename('temp.csv', filename)

date = input('Enter date: ')
time = input('Enter time: ')
task = input('Enter task: ')
create_file('todo.csv', date, time, task)
```