NEXT YEAR NEED TO DO THIS EARLIER ...

HOW TO RUN SECTIONS

2 Ways to define sections

1) Click  button in editor tab under the edit heading

2) Type %% at the beginning of each section of code

Now when you are debugging you can click the run section button  and it will only run your current section of code (will be highlighted in editor)

INPUT / OUTPUT

Lecture Date: 26 SEP 16

TAKEAWAY

We can use fprintf to save output to a file!

QUESTION: Ask students various questions about fprintf

↖ NOTE: use random_student

fprintf()

* Last class we started making interactive scripts
* Now lets make interactive programs that can save and open files

fprintf() can write output to a file!

→ data can be used in MATLAB or other applications

3 STEPS TO WRITING OUTPUT TO A FILE

a) Open a file using fopen()
b) Write output to the open file w/ fprintf()
c) Close the file w/ fclose()

(a) Notes

```
fid = fopen('file_name', 'permission')
```

fid ↗ file identifier
- scalar value assigned

'permission' ↑ permission code
- written as string
- Students should look up for HW

(b) Notes

ALMOST SAME AS WHAT WE LEARNED LAST CLASS FOF *fprintf()* !

(c) Notes

It is important to close the file using the *fclose()* command

LECTURE NOTES :

* As I am filling in the follow along script be sure to show them how MATLAB :
  - → is adding variables to the workspace
  - → is adding the new text files to the current working directory

* Show them the files

* Change Vmph vector and rerun the program
  - → show students how existing data was overwritten!
  - → change permission 'w' to 'a' and show what happens

save() and load()

Overview : save() command is used for saving the variables that are currently in the workspace. load() is for retrieving those variables

save('file_name')
- ↳ will save all workspace variables to file_name.mat created in current directory
- ↳ variable will maintain type, size, value
- ↳ can NOT be read by other applications

save('file_name', 'var1', 'var2')
- ↳ will save just 2 variables, var1 and var2

LECTURE NOTE:
- * For both save() and load() show them that you can also do in command window AS WELL as in a script file
- * You can add arguments to the save command to do different things

save('file_name', 'var1', 'var2', '-ascii')
(optional)

QUESTION : what is preserved/lost when saving variables in the ASCII format

A quick note on ASCII

ASCII - American Standard Code for Information Interchange

→ computers only understand #'s so how is it possible to save 'a'?

→ ASCII is a numerical code to represent non-numerical values

load ('file_name')

→ will load ALL variables stored in the file

load ('file_name', 'var1')

→ will only load specific var1 from file

* Then show how to use import wizard