

Homework Submission Guidelines

Please save your assignment and its associated files in a folder called 'hw#_LASTNAME' (e.g. hw1_DUONG). Upload this folder to your respective Google Drive folder. Your assignments will be graded by us and returned to you in this folder. **Be sure the uploaded folder contains your scripts and .html files** (details below).

Matlab

Please save each question as its own .m file and name it Q#.m where # is the question number (e.g. Q1.m, Q2.m, etc.) In each .m file, use double percentage signs %% followed by a space to separate sections within your code.

Step 1:

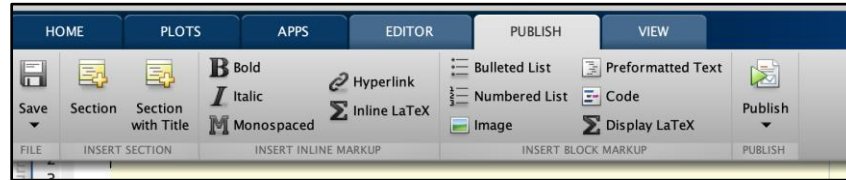
Format each question in its own script as shown below. If there are no clear partitions to an assignment question (e.g. 1a, 1b, 1c), feel free to use sections anyway to break up the script a bit and make it easier for us to read. Please try typing out an example .m file for yourself like this screenshot:

```

Editor - /Users/lyndonduong/Documents/hw1_DUONG/Q1.m
Q1.m x +
1  %% Assignment 1 - Question 1 -- Lyndon Duong
2
3
4  %% 1a)
5  % Not all questions require code. This is my wordy answer to question 1a. I
6  % am writing my answer in the form of a comment beneath the section start.
7  % These comments automatically wrap onto the next line as I am typing them.
8
9  %% 1b)
10 % Code by itself can be confusing. That's why for this question part, I am
11 % also writing a (brief) description of my code here to demonstrate that I
12 % understand the underlying concepts. I am storing my favourite numbers
13 % into a vector named my_fav_numbers.
14
15 my_fav_numbers = [1,2,3,5,8,13,21]; % in-line code comments can also be helpful
16
17 disp('My fav numbers are:')
18 disp(my_fav_numbers)
19
20 %% 1c)
21 % I will now plot my_fav_numbers. For questions involving plots, be sure to
22 % provide your interpretation of the plot and what we can learn from it. Be
23 % sure to label your axes!
24
25 close all
26 figure
27 plot(my_fav_numbers, '.')
28 xlabel('My top 8 fav numbers')
29 ylabel('Number')
  
```

Step 2:

Go to the 'Publish tab' and hit the **Publish** button toward the right side of the panel. Be sure every section runs before you hit this button.



This will create an .html file in a subfolder that is nicely formatted according to your sections and comments in your .m file. It will have plots and Command Window outputs displayed in-line. The output .html file should look like this:

Assignment 1 - Question 1 – Lyndon Duong

Contents

- 1a)
- 1b)
- 1c)

1a)

Not all questions require code. This is my wordy answer to question 1a. I am writing my answer in the form of a comment beneath the section start. These comments automatically wrap onto the next line as I am typing them.

1b)

Code by itself can be confusing. That's why for this question part, I am also writing a (brief) description of my code here to demonstrate that I understand the underlying concepts. I am storing my favourite numbers into a vector named my_fav_numbers.

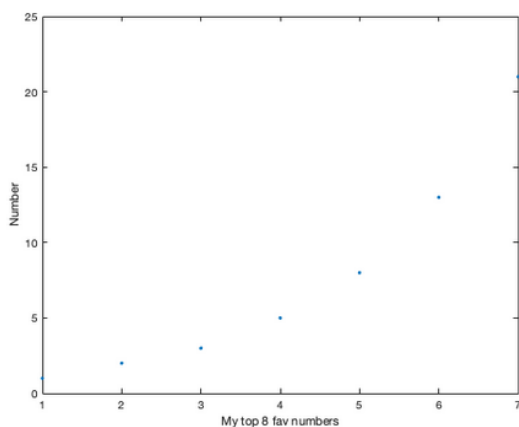
```
my_fav_numbers = [1,2,3,5,8,13,21]; % in-line code comments can also be helpful
disp('My fav numbers are:')
disp(my_fav_numbers)
```

```
My fav numbers are:
    1     2     3     5     8    13    21
```

1c)

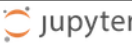
I will now plot my_fav_numbers. For questions involving plots, be sure to provide your interpretation of the plot and what we can learn from it. Be sure to label your axes!

```
close all
figure
plot(my_fav_numbers, '.')
xlabel('My top 8 fav numbers')
ylabel('Number')
```




Python:

If you are submitting in Python, please submit each question individually in the form of a Python 3.x Jupyter notebook (.ipynb). Please plot all figs in-line. Along with the .ipynb file, be sure to also save an HTML file for each question. You can do this by: **File** → **Download As** → **HTML**. An example is shown below. Please ensure your hw#_LASTNAME folder contains your .ipynb files and .html files (html files can be put in a subfolder together).


Q1 Last Checkpoint: 22 minutes ago (autosaved)
Logout

File Edit View Insert Cell Kernel Widgets Help
Notebook saved Trusted PyCharm (end-to-end)



Assignment 1 - Question 1 - Lyndon Duong

In [1]:

```
# your import statements may differ
from scipy.io import loadmat # this will be useful for loading .mat files we provide
import numpy as np
import matplotlib.pyplot as plt
import seaborn
```

1a)

Not all questions require code. This is my wordy answer to question 1a. I am writing my answer in its own cell using markdown.

1b)

Code by itself can be confusing. That's why for this question part, I am also writing a (brief) description of my code here to demonstrate that I understand the underlying concepts. I am storing my top 8 favourite numbers into a vector named my_fav_numbers.

In [2]:

```
my_fav_numbers = np.array([1,2,3,5,8,13,21]) #in-line comments can also be helpful
print('My fav numbers are:')
print(my_fav_numbers)
```

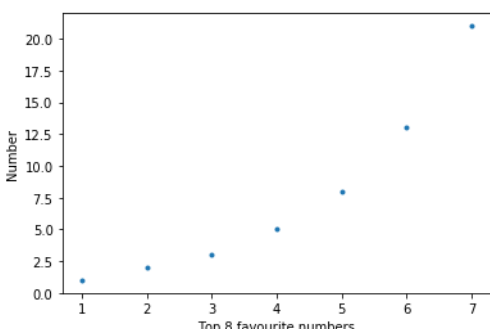
My fav numbers are:
[1 2 3 5 8 13 21]

1c)

I will now plot my_fav_numbers. For questions involving plots, be sure to provide your interpretation of the plot and what we can learn from it. Remember to label your axes!

In [3]:

```
plt.plot(np.arange(1,8),my_fav_numbers,'.')
plt.ylabel('Number')
plt.xlabel('Top 8 favourite numbers');
```



Top 8 favourite numbers	Number
1	1
2	2
3	3
4	5
5	8
6	13
7	21