BIOE 198-sp19 Lab2 report guidance:

Part 1: Answer the following in-lab worksheet questions:

Q 1: What inputs should we use to generate $g[n-2]$?

Q 2: What is $f[0]$?

Q 3: Why did we do (N-1) points of zero padding?

Q 4: Why don't we use f(n-N+1:n) as equation $f_a[n] = \frac{1}{N} \sum_{m=n-N+1}^{n} f[m]g[m-n+N]$ shows?

Q 5: Use the defined function `'MovAvg'` to calculate the moving average of ECG data with different window size. Compare the the plots and describe the difference.

Q 6: Generally describe the difference between a Matlab script and a Matlab function.

a. What are the input and output of the function?
b. When the function is being used(called) in a script, do input and output variable names have to be consistent with the function input/output names?
c. Does the order of the function inputs matter? (You may use the function 'Myminus' as an example)

Q 7: Generally describe the 'cell' data type, provide at least two advantages of using cell other than a regular matrix.

Part 2: Stock problem

1. Describe how many columns of data and how many rows of header the csv files contains. Briefly describe how the stock data is imported into MATLAB.
2. Describe how you find the index of the starting date and ending date
3. What're the inputs/outputs for function 'CalculateStockProfit'?
4. Determine the best choice of short term/ long term window sizes.
   a. Justify your answer by using table/chart to describe the profit/loss with different window sizes.
   b. In report, do NOT provide the plot of your best choice alone, briefly describe:
      i. do you make purchase on the first day, why?
      ii. how many golden crosses and dead crosses are there?
      iii. do you make profit on each pair of buying/selling procedure?