Do your work in Jupyter Python and screenshot your code with answers and paste the codes/answers below each question in this word document.

Submit both the word document and Python file. Include your name towards the end of this file name. For example: ADVDM L1&2 In-Class\_Exercise\_Neba\_Nfonsang

**Section 1**

1. Suppose that we want to use the data from Quarter 1 and Quarter 2 in the notes, but we want the data to be inside of our Python file rather that separate .xlsx files when we share our script code. Copy the data from Excel and paste it into your script file. The files are:

ADVDML1Qtr1.xlsx and ADVDML1Qtr2.xlsx

Store these 2 datasets into their own DataFrames. Note the data will come in with tabs but you can use the \s+ space separator to read in the data. View the first 5 rows of data of each DataFrame.

**Insert the screenshots of your codes and outputs here.**

1. Read in the ADVDML1TwoSheets.xlsx file based on the following conditions. View the data for each condition:
2. Read in all the columns of the First Sheet, wrongly assume the first row is the header, and name the columns: Person, Quantity, Label, Data

**Insert a screenshot of your code and output.**

1. Read in the Columns A, B and C of the First sheet, assume there is no header, and name the columns: ID, Quantity, Total

**Insert a screenshot of your code and output.**

1. Read in all the Columns of the Second sheet, assume the first row is the header. After reading in the data, add a column Total which is Price \* Data. The Price for Chocolate is $2.00 and the price for Vanilla is $1.50. (Hint: you may use Boolean selection in your code).

**Insert a screenshot of your code and output here.**

1. a) Create a folder on your desktop called “CurrentData”. Write a code that changes your current working directory to “CurrentData”. Write another code that prints your current working directory. Put the ADVDML1TestCurrentPath.tsv file into this CurrentData folder.

**Insert a screenshot of your codes and outputs here.**

b) write a code that lists the files in your working directory.

**Insert a screenshot of your code and output here.**

c) Write a code that uploads the ADVDML1TestCurrentPath.tsv file into your Pyhon environment. DO NOT USE THE FULL PATH.

**Insert a screenshot of your code and output here.**

1. Create a subdirectory called “SubData”. one level below your current working directory. Put the ADVDML1TestDataPath.tsv file in this subdirectory.
2. View the files in this subdirectory.

**Insert a screenshot of your code and output here.**

1. Use a relative path to import the ADVDML1TestDataPath.tsv into Python.

**Insert a screenshot of your code and output here.**

1. Create a parent directory called “ParentData” which is one level above your current working directory. Put the ADVDML1TestParentPath.tsv file in this parent directory.
2. View the files in this parent directory.

**Insert a screenshot of your code and output here.**

1. **Use a relative path to import the** ADVDML1TestParentPath.tsv file into Python.

**Section 2**

1. There are 2 csv files on the web on Github for you to load into Python. Look at them here: <https://github.com/kkParker/ClassData/tree/master/Python>
2. Read the two files from the web and store them in a DataFrame **dfSue** and **dfMike.**

View each DataFrame and print the first five rows

**Insert your output and codes here**

1. For each of the DataFrame, recode the Flavor variable so that 1= “Chocolate”, 2= ”Vanilla”, and 3 = “Mixed”. (hint. You may use a imple code such as df.Flavor[df.Flavor==1]="Chocolate"). View the first five rows of your DataFrames

**Insert your output and codes here**

1. Create a barplot of the Flavor counts for Sue using matplotblib features

**Insert your code and bar chart output here**

1. a) Create a barplot of the Flavor counts for Mike using matplotblib features.

**Insert your code and bar chart here**

b) By modifying the code you used in question “8a”, create a function that plots the same bar chart of Flavor counts for Mike. The function should accepts parameters such as x, y, title, ylabel, and xticknames. Call the function with the parameters to show the barplot

**Insert your code and bar chart here**

1. Use BeautifulSoup to extract all the hyperlinks from a website of your choice

**Insert your output and code here**