

Instructions: Create script files to obtain your answers and plots. All of the answers should be obtained using MATLAB.

To turn in:

- the script files of how you answered your questions and obtained your plots (emailed), named `hw9_1a.m`, `hw9_2.m`, etc.
- your answers to #1a, #2bc, #3a-e (on paper in class) with the coversheet stapled on top.

The m-files should be emailed with MATLAB HW9 as the subject line.

1. Import `Gradebook-Fake.xls` from the H drive. Each exam is out of 50 points.
 - (a) What are the means and medians of each exam?
 - (b) For each exam, use `histc` to count the grade distribution as PERCENTAGES, using the standard scale: < 60%: F, 60 – 69.9%: D, 70 – 79.9%: C, 80 – 89.9%: B, 90 + %: A. Using subplot, Create three pie charts for each exam, labeling each with the letter grade and with a legend and appropriate titles. Use your best judgment on how these should be displayed (horizontally, vertically, 2 in one row, 1 in the next, etc.) Make the F pieces “explode”.
2. Import `EugeneORMonthly.xls`, `BaltimoreMDMonthly.xls`, `DubuqueIAMonthly.xls`, and `SuvaFijiMonthly.xls`. (Data obtained from www.weather.com) Temperatures are in degrees Fahrenheit.
 - (a) Make a bar graph of the average precipitation (in inches) of Eugene and Baltimore on the same plot, with an appropriate legend. Label the axes appropriately.
 - (b) What months have the highest and lowest average precipitation for Eugene and Baltimore (and what are they)?
 - (c) Report the minimum record lows, and maximum record highs for Eugene, Baltimore and Dubuque.
 - (d) Plot the mean temperatures for Eugene, Baltimore, Dubuque and Fiji on the same plot. Plot them with different colors, markers at each point and solid lines connecting them. Label the axes appropriately and have an appropriate legend.
3. The maximum daily temperature (in °F) for New York City and Anchorage, Alaska during the month of January, 2001 are given in the file `TempData.xls` on the H drive (data from U.S. National Oceanic Atmospheric Administration).
 - (a) What is the average temperature for the month in each city?
 - (b) How many days was the temperature below the average in each city?
 - (c) How many days, and which dates in the month, was the temperature in Anchorage higher than the temperature in New York?
 - (d) How many days, and which dates in the month, was the temperature the same in both cities?
 - (e) How many days, and which dates in the month, was the temperature in both cities above freezing (above 32°F)?
 - (f) Note: the above answers should be obtained through commands saved in a script file. Now, demonstrate some of these answers (support your answers) by creating on the same graph scatter plots of the two cities’ temperatures, with the x -axis going from 1 to 31 with different markers and colors for each, and plots of horizontal lines at the average of the two cities, with those solid lines having matching colors. Also, a solid horizontal black line should be plotted for the freezing temperature. Create a legend for the plot.