MATH 365
MATLAB

1 Group work

You may work in groups to answer the following questions however, everyone must create their own scripts and print their own plots.

1. Create a script that loads the census data and creates arrays N_pop and N_years that contains only finite values of census data as described in the lab. In addition, in your script create arrays with only finite values of census data for the Hispanic population. Be prepared to discuss with the class how do you verified that you correctly created the arrays.

2. Plot the Hispanic population and Native American population with C_array as described in the lab with a legend, title and axis labels. Be prepared to discuss with the class the purpose of the shg command and how to change the size of the data points.

3. Plot the Hispanic, Native American and White populations in one plot, similar to what you plotted in 2. Then plot the Native American and White populations in separate plots. You can make two separate plots by using the commands

> figure(1); plot(C_array(:,1),C_array(:,6),'*','LineWidth',3)
> figure(2); plot(C_array(:,1),C_array(:,5),'*','LineWidth',3)

Include legends, title and axes label in each graph. Be prepared to discuss with the class challenges and benefits of plotting multiple graphs with one plot and with different plots.

4. Use the *axis* command to view each plot in 3. for the years 1960 to 2020. You can learn about the *axis* command by typing *help axis* at the MATLAB prompt. Print your graphs and draw a curve through the data points on each graph with a pen or pencil.

5. Extend your drawn in curves in 4. so that they start in 1960 and end in 2020.