Final Project:

I used the general topic for this project stated in the directions, I did not work with a partner and did not talk to a TA.

One of the many problems that students face going through different levels of education in math and science is having to use different graphing programs. For example, google sheets, a program that is supposed to be easy to use, well when there is an update every year or so for that program, their can be many different issues with this program and finding options you are looking for. So, if someone wanted to make a scatter plot from data for a science project, they needed to scroll through multiple different settings just to make the graph. The idea of this project for me was to make a graph that took in x and y variables that allowed the user to make a graph.

Starting out with this project I wanted to allow the user to change 4 different items: their data being the first, I wanted the user to be able to enter as many data points that they can possibly enter thus this program can use as many data points as possible that the user wants. Second, I want the user to be able to enter x and y axis titles as well as a graph title, this is important because when making a graph axis titles are extremely important. Third, I want the user to be able to change the shape of the graph. Fourth the ability to change the color of all the points on the graph.

Some of the issues I had while creating this program happened when I could not figure out how to make text boxes, after reading through the lecture slides, Zybooks, and going through the entirety of MATLAB’s website (joking not actually serious about the entirety of their website) I found an answer. The first version of this code did not allow the user to enter information into text boxes and basically was just using a excel file and 2 inputs on the function to make a graph., along with buttons to change the color. After looking back at the code and how I had written it I decided that it was a good idea to change it for the better. Thankfully through trial and error I was able to make the code what it is now.

GUI’s are a great part of MATLAB that in my future I could use for many things. To start off, we can do homework assignments and experiments with these to find /create models. When it comes to the workplace, I think that MATLAB would be a great too to compare data from different spreadsheets or even different programs. For example, if I wanted to compare the results of two cars performance by testing their 0-60 mph. I could set up a GUI that compares the two different cars times and from there make a better version of the car by analyzing the data that was entered into MATLAB.

If I had more time, I would have made another function in this code that allowed the user to see other items from the graph like mean, median, mode, range, slope value. All of which could be useful when looking at a graph. I would set this up by taking the Y values and inserting that into the MATLAB written functions for all the above listed.