For this project, I simply chose to go with the default option on page 2 of the final project instructions. My main goal when designing this GUI was to make is simplistic and easy to use. The edit boxes were in their individual areas with labels and a button to push to enter them. The uibuttongroup looks clean and display their respective properties right next to them. The title of the plot fits nicely at the top of the graph. Everything just kind of lines up and has around the same proportions. I also added error messages so that if something was entered wrong, it was easy to know what went wrong.

The coding process for this project was at times really confusing and at others, really irritating. There was simply a lot of learning about various functions that needed to be done. Callbacks, edit boxes, and dealing with the strings from the edit boxes were all new to me and not from lab 10. If there was one thing that I really got stuck on though, it had to be the uibuttongroup. Apart from the format of the coding of uibuttongroups, I had a really hard time implementing some of the ideas I wanted to do with them. One of things at the top of my list for the uibuttongroups was a pushbutton that closed them, but I just couldn’t find a way to implement them. A couple things I tried to do was make the group invisible, and just adding a huge text box over them, but it didn’t really work out with the reset button and just clicking randomly on the figure.

On the other hand with the coding process, one of the things I kind of just didn’t like about it was copy and pasting various lines from the top of the function to update them in a line below. I think that my code just looks really cluttered, and it makes the small if/else statements look weird. I found condensing my code in general to be really tough as if there was a line of code I thought I could do better on or wasn’t needed, when I replaced it, my new code just wouldn’t work like I intended. I think that condensing my code would have really helped out with making the program run faster and making the code look better. Another thing I really struggled with were logical puzzles that trying to get the error messages to work caused me. Having to make them work in a way that would allow the user less trouble was really irritating. With the limit boxes for instance, I made it so that you could do only the x limit and leave the y limit blank, but it caused a bunch of headaches. I still don’t know how to detect if the input had a letter in it versus just having nothing, as the str2num treated letters as blanks.

Other than just simplifying and condensing the code, I wish that I could have added more functionality to the GUI. I know there isn’t too much one can do with a graph and inputting data, but perhaps adding a menu with way more options, or adding a way to plot the graph in 3d would have made it better. As far as using GUI’s in the future, I think they can be used in a lot of useful ways like programming calculators or maybe playing turn-based games like Pokémon or chess. It makes visualizing and just adding data a whole lot easier than declaring a variable in the command window and running the program and such. It just takes a ton of work to create GUI’s, even with the small stuff like the positions of every single box and retrieving the information that was entered into them. Maybe I could get really fast at creating these things, but it takes so much effort event for a GUI like plotting data that I couldn’t see myself creating these things for many purposes. Unless I’d have a specific purpose that creating a GUI would make so much easier, it’s a hard no from me.