Project 3 Reflection

For my final project, I took four homework assignments from this past year from chapters 11-14 to show my progression in Multivariable over this past semester. First, I started with a simple 3-d shape that I was able to graph using mesh grid. This tool was very helpful as it allowed me to create this surface with the given x and y coordinates. Second, involving parametric equations, I was able to plot the surface with respect to x, y, and z. Then, I was able to determine the area under the curve by taking the integral of the given function. Third, I mapped the function of the ocean floor that was given to me and used the surf function to graph it. Then, I was able to find the gradient with respect with respect to x and y. The gradient takes the rate of change of the given vector. For my last project, I was able to take the function and easily solve the double integral after I found the x and y coordinates. Over the course of this semester, I learned more about Matlab because I had never used this form of coding before. I enjoyed how I was able to solve these problems more efficiently compared to solving them by hand. Matlab contains many functions that can simply input the answer within a click of a button. I was able to learn many new functions that can be helpful in the future as I continue to dive deeper into calculus and explore new problems.