**Lessons Learned**

While working on assignment 3 it was difficult to think about the pattern to use for encryption and decryption. I felt that the PowerPoint provided to use that explained the Bellaso cipher encryption was the most helpful when working on the code. I often wrote things down and wrote it backwards to make sure I was not missing any steps. The warp around concept was a bit difficult to grasp initially. In the explanation it only gave an example for if a character was larger than the upper bound which in that case was 95. After multiple attempts I was able to figure out that the character also had to be evaluated to see if it tests for less than lower bound. After being able to work that out I was able to successfully encrypt the plain text.

I thought about multiple ways to compare the characters in a string using a for loop and I decided on declaring an array of character type and converting the string to character array and initializing it to that character array. I think it could have been an added step that was unnecessary but it felt that it was my best option. At the end of the methods I was able to initialize that array to a string variable that was able to return.

The most complicated part for me was when I was writing the code for Bellasco decryption. It was easy to work forwards but when I started to work backwards I was a bit confused. I decided that I would create my own table like the EXAMPLE given and then I was able to trace the error. In my case it was that my bounds weren’t being tested and once I added them I had no problem. Since transitioning to simply online it feels a bit harder to attend study sessions with LA. I felt it was easier to meet in person. Overall I was happy I was able to accomplish the objective of the assignment.