**Name: Hasib Rostaiee**

**Class: CMSC203- 32715**

**Instructor: Farnaz Eivazi**

**Date: 03/12/2020**

**Assignment: #3 – Learning Experience:**

*This assignment was a good learning experience for me, working with string length and charAt() method was very helpful when using them in the loop. It was hard to start, but when came up with a example on paper, the logic become more clear and drawing some high level logic in the paper help me to complete methods.*

*Meanwhile, provided jUnit tests also worked as a debug tool, I kept running it when implementing method and when getting failure, looking for what could be wrong and finally came with solutions so eventually the tester was passing unit I completed all methods.*

*Combining for and while loops along with if statements inside methods were challenging at the beginning but once, the logic become clear, I was able to implement them and reuse few logics from one method into other with some modifications.*

*Finally, while running the GUI, I realized that the application is encrypting text even with invalid characters, although all jUnit test and CryptoManagerTest were passed successfully. I then realized that can use the validation method inside these methods to check if passed texts have invalid texts or not. I put a place holder results “The Text Contains Invalid Character” or “The key string contains invalid character”, for the results in the “Encrypted” field so we don’t get run-time errors on passing invalid texts.*