**Name: Hasib Rostaiee**

**Class: CMSC203- 32715**

**Instructor: Farnaz Eivazi**

**Date: 05/10/2020**

**Assignment: #5 – Learning Experience:**

The assignment was helpful to work with arrays, especially two dimensions array which is widely used as tables. readFile and writeToFile methods were very challenging. For a long time, I wasn’t able to read data properly to a temp array, until I realized that I need to read each line into a row and then in a different array, get data of each row in to a two dimensions array of double.

All other methods extensively need to nested loops to go through arrays and get total, average, total of specific row, total of specific column , highest and lowest numbers and so on. Once worked in couple of them, the rest of them used similar pattern with little bit of modifications. It was good practice of working with arrays. Challenge was using temp variables in these methods and then switch it with the iteration of desired found value.

I added different tests for student test file, before adding test, I created a test table in Excel to simulate a ragged array (a table basically) and come up with total of each row and column and all totals and also the average, highest and lowest. I then added the test and used my expected value for the excel table to see if the test match. All tests passed successfully, I wasn’t able to read data back to compare it with the writing to file test, however I manually compare the generated file and the content matched with the array passed in the test.