

Link to the repository:

<https://github.com/Scoop-A-Doop/cs2300-coursework>

Pseudocode:

Notes: Requirements are 3 separate programs, so there will be 3 different classes per part.

Part 1:

- Main: Establish all 2D arrays (matrices), all Files and call all needed methods
- PopulateMatrix: This method will take in what value you want the 2D array (matrix) to start at, and how much you want each value to increment by. With these given values, fill the 2D array matrix.
- WriteFile: This method will take in a 2D array matrix and the file you want the 2D array matrix to be written to. The method will go through the entire array (matrix) and write each number followed by a space into the given file.

Part 2:

- Main: Establish all 2D arrays (matrices), all Files and call all needed methods
- ReadFile: This method will take in a file and a 2D array matrix you want to fill. It will read through each individual number one at a time and place that number in the 2D array
- AddMatrix: This method will take in 2 2D array matrices and first check to see if you can add the two together by seeing if they have the same dimensions. If they cannot be added, print an error message to their file, otherwise add the corresponding element between the two arrays and then write it to the given file.

Part 3 (the exact same as Part 2, but instead of adding, you multiply):

- Main: Establish all 2D arrays (matrices), all Files and call all needed methods
- ReadFile: This method will take in a file and a 2D array matrix you want to fill. It will read through each individual number one at a time and place that number in the 2D array
- MultiplyMatrix: This method will take in 2 2D array matrices and first check to see if you can multiply the two together by seeing if they have the same dimensions. If they cannot be multiplied, print an error message to their file, otherwise multiply the corresponding element between the two arrays and then write it to the given file.