Computer Lab 7 – Week 8

Part 1

Create a magic square of size 20x20 and using the **xlswrite** function, export the data from the matrix to an excel spreadsheet (.XLSX). Also use the **csvwrite** function to export to a Comma Separated Variable file (.CSV) and the **dlmwrite** function to export to a text file (.TXT) using the "pipe" delimiter **|** (vertical bar), instead of a comma.

Open both the .XLSX and .CSV files in Excel to ensure that they were created successfully. Also open the .CSV and .TXT files in a simple editor (such as Notepad or Wordpad) so you can see the structure of the text files. Now, read only the .CSV file back into a different matrix variable in MATLAB using **csvread**.

Part 2

What happens when you try to use the dlmwrite function with a delimiter that is more than just one character? For example, say we require that the file must have three plus-signs (+++) between each value?

For this part, you will need to output the same 20x20 matrix to a text file, but you will need to use low-level File I/O functions so that you can incorporate three plus-signs between each value.

You may want to read through the help file "Export to Text Data Files with Low-Level I/O" at: http://au.mathworks.com/help/matlab/import_export/writing-to-text-data-files-with-low-level-io.html.

You may also want to read through the low-level File I/O documentation for functions such as **fopen, fclose** and **fprintf**.