COMP 5812M: Foundations of Modeling & Rendering 2018-2019

Induction Week Lab - C / C++

1. This is an exercise in file I/O and pointer handling. You will be provided with a 57MB data file. It consists of 6000 rows, 4800 columns of short (16 bit) integers. Unfortunately, it is in big-endian format, where Intel machines are in little-endian format. Moreover, the value -9999 is a sentinel value, which should be replaced by the value 0.

You should read in the data to memory, then print it out correctly in ASCII format, WITHOUT ever using array notation []

A quick and dirty test of whether you are reading it correctly is to print out a space for every value of 0, and a full stop . for every other value, with a carriage return at the end of each row. If you use a VERY small font size, you can get a very high-level overview of the data. If you did it correctly, it will be obvious.

2. Write a small matrix arithmetic library using C/C++ overloaded operators. Use it to check your work on the previous assignment.