

## Project2 – Programming in another language

**Due Thursday, 11/30.**

### **Specifications:**

1. This is an individual assignment. You will work on this assignment by yourself.
2. Please use any computer language (**but not Java, C, or C++, and it is recommended that you choose a language you know nothing about it yet.**) to create a program to do the following:
  - a. Open and read from the data file, "**COSC450\_P2\_Data.txt**", which contains some number of integer values (separated by white space character(s)) with the number of integers a multiple of 10. A sample "**COSC450\_P2\_Data.txt**" file will be given to you but your program should be able to process any "**COSC450\_P2\_Data.txt**" file with the above property.
  - b. After read in the data file your program will process the integer values into two matrixes (stored in two dimension arrays): the first one with the dimension **5 \* X** and the second one **X \* 5**, where **X** is some value determined by the number of integers in the input data file.
  - c. Output the above two matrixes into an output file, "**COSC450\_P2\_Output.txt**", created by your program.
  - d. Calculate a product matrix (a two-dimension array of **long integers**) based on the first matrix multiplies the second matrix;
  - e. Write the product matrix out to the same output file, "**COSC450\_P2\_Output.txt**", by appending it to the end;
  - f. **Bonus points for undergraduates (10 points) and required for graduates:** sort the product matrix and append it to the end of the above output file, "**COSC450\_P2\_Output.txt**". Your sorting **cannot** be done by copy the values out from the matrix into a single dimension array then put it back but **has to** be done on the matrix directly by manipulating the subscripts correctly.

### **Deliverables:**

1. Submit your source code file(s) to the Blackboard before the due time.
2. Screen shot and paste the output in a word document, and submit it on blackboard.

### **Grading:**

1. Total 100 points, excluding the 10 bonus points for undergraduates.