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**Course: CS-610-22756**

**Project-2**

* Part 1: Use code “parallel/RankSortParallel.c” as example code to work out contents of textbook Appendix C to show that you know how to use the various performance debugging tools provided by the C\* environment. Submit screen captures organized into a Word file showing how you tried out the Appendix C performance debugging features on the sample code. This skill is valuable for your later projects.

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* Part 2: Exercise 2 on textbook page 91.  
  To improve the visual quality of an image represented as a two-dimensional array of pixel values, a smoothing algorithm is sometimes applied. A simple smoothing algorithm is to replace the value of each pixel by the average of its immediate neighbors. Each pixel has eight immediate neighbors, including the diagonal neighbors. This algorithm replaces the value at each pixel by the average of nine pixels, consisting of itself and the eight neighbors.

In this exercise, you are to write and run a parallel program to apply this smoothing algorithm to an image. To simplify the programming, do not modify the pixels along the four outer boundaries of the image array.

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