

CSCI 224 - Discrete Structures II - Fall 2007
George Washington University

Final Project 25%

due 20 December 2007, by 6 pm on Blackboard.

Policy on collaboration: You may NOT discuss this among yourselves. However, this HW, like others, is open book, so you may refer to your notes or other material. However, you may not use any code not written by you, unless it is part of a standard library.

Any violations will be treated as violations of the Code of Academic Integrity.

Read Algorithms one and two in the paper:

Richard Gordon and Gabor T. Herman. Reconstruction of pictures from their projections. Communications of the ACM, Volume 14, Issue 12 (December 1971) Pages: 759 - 768

Provide

1. A typewritten report that describes, *in your own words*:
 - (a) The problem being solved in the paper
 - (b) Algorithms 1 and 2 in enough detail to implement the algorithm without referring to the paper
 - (c) Provide some mathematical analysis of the algorithms. Do you expect them to work well for all types of the problem? Are there certain ones for which they are particularly good or bad. Is one algorithm better than the other? How efficient are the algorithms? Is one more efficient than the other?
 - (d) The relationship between the problem and problems studied in 224. (Which problem studied in 224 is similar to the one described in the paper? Are the solution methods proposed similar? How do they differ? What is good and bad about the methods studied in 224 and Algorithms 1 and 2)?
2. Code in C or Java to use algorithm one and two to solve the problem. Provide a README file that describes how your code can be used to solve either problem. as always, no credit if your code does not run on hobbes.