CS4234 Homework #8

Write a sparse matrix transpose function. Suppose that a sparse matrix has been stored as an array of rows. Each row is represented by a struct consisting of three members: the number of nonzero entries in the row, the entries in the row, and the column numbers of the entries in the row. Write a function that identifies entries in a column of the matrix. Also write a function that uses MPI_Pack to store the entries in a user-defined buffer, and a function that uses MPI_Unpack to extract the entries from the buffer and store them in the same fashion as a row.

Send each column of A to process 1, but have process 1 receive each column into a row. When the function returns, A should be stored on process 0 and the transpose on process 1.