CP.2.2.1.b2c, Sauer3

Use code fragments for Gaussian elimination in the previous section to write a python script to take a matrix A as input and output L and U. No row exchanges are allowed—the program should be designed to shut down if it encounters a zero pivot. Check your program by factoring the matrices in EX.2.2.2.b2c.

(b) $\begin{pmatrix} 4 & 2 & 0 \\ 4 & 4 & 2 \\ 2 & 2 & 3 \end{pmatrix}$ (c) $\begin{pmatrix} 1 & -1 & 1 & 2 \\ 0 & 2 & 1 & 0 \\ 1 & 3 & 4 & 4 \\ 0 & 2 & 1 & -1 \end{pmatrix}$