Homework Assignment 5 Due on Friday 11/8

Programming Problems:

1. Modify your GE code to get a code that gives the LU decomposition of A by Gaussian elimination with scaled partial pivoting. You code should take A as input and give L, U, r as outputs. Please verify $L^*U = A(r,:)$ in Matlab by yourself.

2. Modify your code in 1 to be able to compute the determinate of a matrix A.

3. Write a code to perform Crout depromposition.

Writing Problems:

Do the following exercise problems in the text book by Bradie, Sec 3.5: 1^* , 2, 3, 7^* , 9^* , 10, 12^* Sec 3.6: 3^* , 8^* , 11^* Sec 3.7: 1, 2, 4, 5^* , $6(b)^*$, 7, 8, 9, $10(a)^*$, 11^* Just turn in the problems with *.

Bonus Problems: Sec 3.7: 19.