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CS 3010  
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Project 1: Report

Please view my code at: <https://colab.research.google.com/drive/1De4PQM87UJqf8soEP8hAUsP6OkLOhwjQ>

Task 1:

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My code has an input with A matrix as a (n x n) nonsingular matrix, and b, as a (n x 1) vector. The output is the solution to Ax = b. k represents the current pivot row, because GE traverses the matrix in the upper right triangle, we also use k for indicating the k-diagonal column index

Once in the for loop, I choose the largest pivot element below (and including) k. I swap rows and equate the solution in the column.

To solve Q13a, I call the specific functions:

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Description automatically generated

Here are my outputs:

A close up of text on a black background

Description automatically generated

To solve Q13c, I call the specific functions:

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Description automatically generated

Here are my outputs:

A close up of a keyboard

Description automatically generated

A close up of a logo

Description automatically generated

Task 2:

This is my code to find specific iterative methods:

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Description automatically generated

To solve Q1b, this is my main method code:

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Description automatically generated

This is the output:

A close up of text on a black background

Description automatically generated

A screenshot of text

Description automatically generated

A close up of text on a black background

Description automatically generated

To solve Q2, this is my main method code:

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This is the output:

A screenshot of text

Description automatically generated

A close up of text on a white background

Description automatically generated

A close up of text on a black background

Description automatically generated