CptS 111 – Fall 2024

Project Proposal
Due: Friday, 11.15.24, before 11:59 pm

Instructions

Fill out this form as completely as you can. It will be used by your TA to approve your project. They may ask you to revise it to ensure it meets all the requirements for the project or if they think your project is too ambitious.

1. Names of team members

   Blaise Polk
   Ryan Ludwig

2. Project title

   Linear Algebra Calculator

3. What project will do

   Perform automatic calculations on linear algebra problems

4. Project tasks; each task represents a single function (minimum of 6 functions plus `main()`)

   Adding rows into each other
   Scaling rows
   Switching rows
   Gaussian Elimination(augment=[[0],[0],[0]], rref or ef)
   Linear System Solving
   Transformations
   Adding matrices
   Scaling matrices
   Multiplying matrices
   Matrix inversion
   Determinant calculator
   Null space calculator
   Column space calculator
   Eigenvalue calculator
   Diagonalize
   Factorize
   potentially more if we decide…

5. Plan for testing your code (used closed-box texting and include edge cases if appropriate)

   Test each function as we write them against test cases we think up & solve ourselves
   We will make sure each function follows applicable theorems to Linear Algebra

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Save your Word document as a **pdf** file and submit it via Canvas before 11:59 pm, Friday, 11.15.24.