3X3 matrix gaussian elimination algorithm

Objective:

Using the method of gaussian elimination simplify the line of numbers.

Complexity level:

* Difficult

Business Scenario:

* John Doe is a student in differential equations class.
* The student wants to be able to master gaussian elimination.

Problem statement

1. a) 2 6 8

    1 2 4

          0 0 1

b) 1 0 1 0 1

  2 6 4 8 1

  0 0 0 1 1

1. Write an algorithm that takes a 3x3 matrix and reduces each row to Row Echelon Form (this is very difficult- make sure you know the rules).

Expectation outcomes:

Practice thinking of relationships between the rows in matrices and practice gaussian elimination expressed through code.

Reference URL:

1. Atkinson, Kendall A. (1989), An Introduction to Numerical Analysis (2nd ed.), New York: [John Wiley & Sons](https://en.wikipedia.org/wiki/John_Wiley_%26_Sons), [ISBN](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [978-0-471-50023-0](https://en.wikipedia.org/wiki/Special:BookSources/978-0-471-50023-0) .
2. Bolch, Gunter; Greiner, Stefan; de Meer, Hermann; Trivedi, Kishor S. (2006), Queueing Networks and Markov Chains: Modeling and Performance Evaluation with Computer Science Applications (2nd ed.), [Wiley-Interscience](https://en.wikipedia.org/wiki/Wiley-Interscience), [ISBN](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [978-0-471-79156-0](https://en.wikipedia.org/wiki/Special:BookSources/978-0-471-79156-0) .
3. Calinger, Ronald (1999), A Contextual History of Mathematics, [Prentice Hall](https://en.wikipedia.org/wiki/Prentice_Hall), [ISBN](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [978-0-02-318285-3](https://en.wikipedia.org/wiki/Special:BookSources/978-0-02-318285-3) .
4. Farebrother, R.W. (1988), Linear Least Squares Computations, STATISTICS: Textbooks and Monographs, Marcel Dekker, [ISBN](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [978-0-8247-7661-9](https://en.wikipedia.org/wiki/Special:BookSources/978-0-8247-7661-9) .