**MAT-248**

Applied Linear Algebra

Group Members :

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4. Malhar Patel - AU2140226

5. Krishna Patel - AU2140170

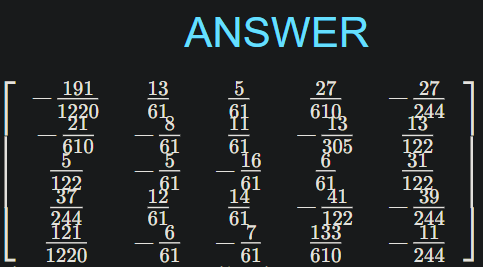
Group Number : 23

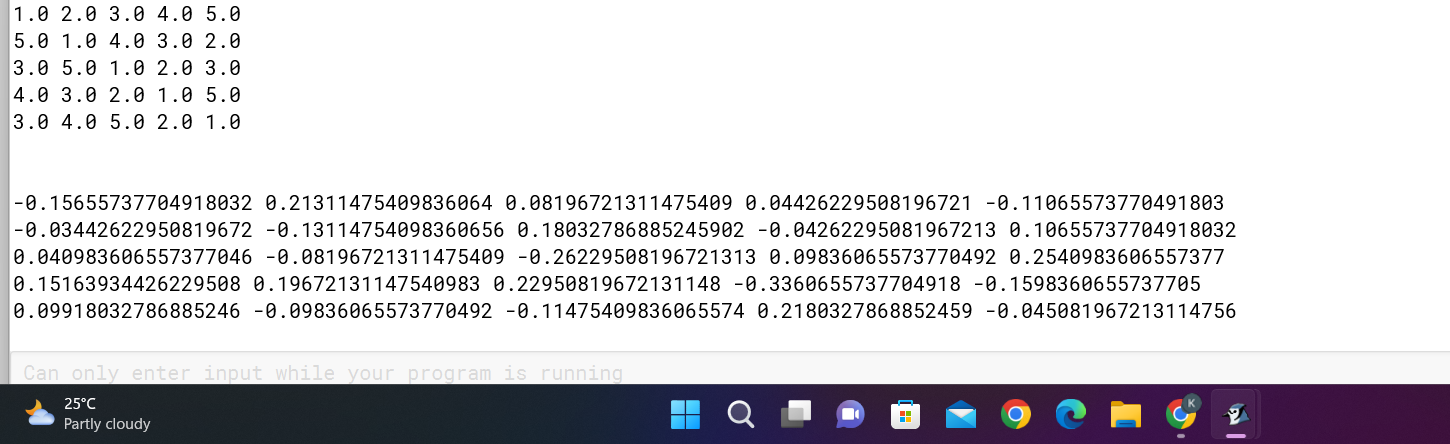
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A. Inverse of a Matrix:

Test Case Link :

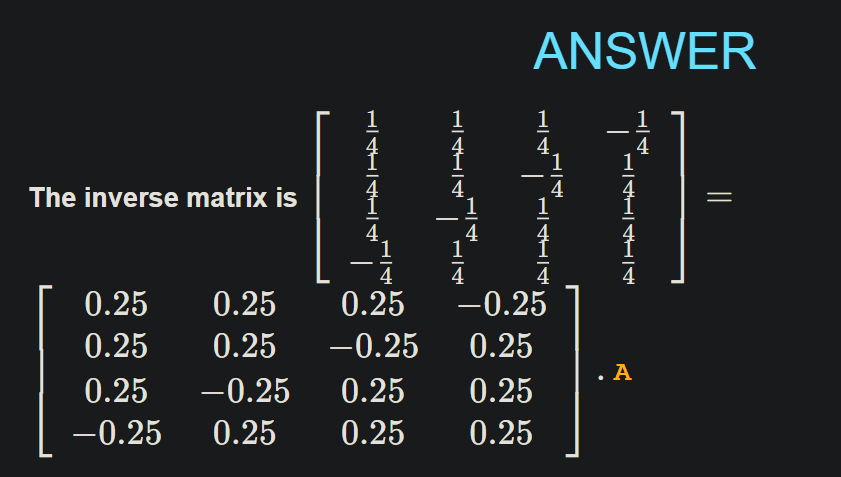
1) 5\*5

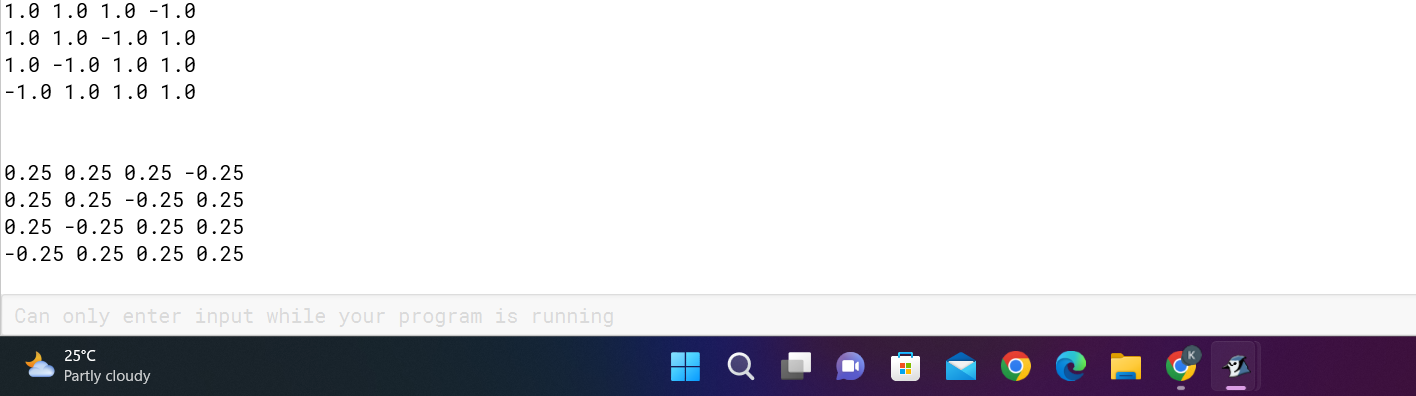




<https://www.emathhelp.net/calculators/linear-algebra/inverse-of-matrix-calculator/?i=%5B%5B1%2C2%2C3%2C4%2C5%5D%2C%5B5%2C1%2C4%2C3%2C2%5D%2C%5B3%2C5%2C1%2C2%2C3%5D%2C%5B4%2C3%2C2%2C1%2C5%5D%2C%5B3%2C4%2C5%2C2%2C1%5D%5D&m=g>

2) 4\*4



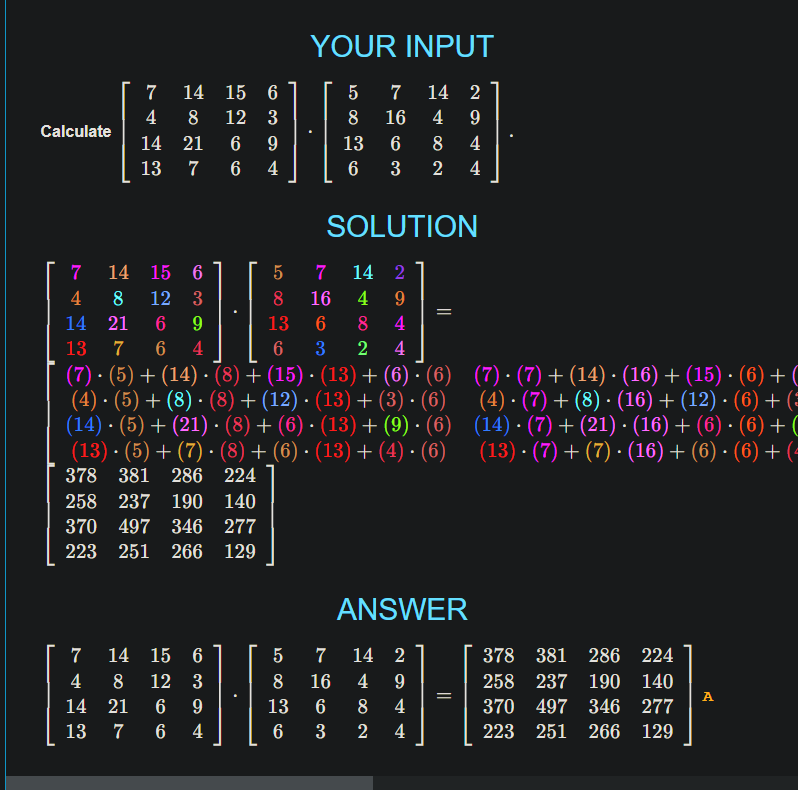


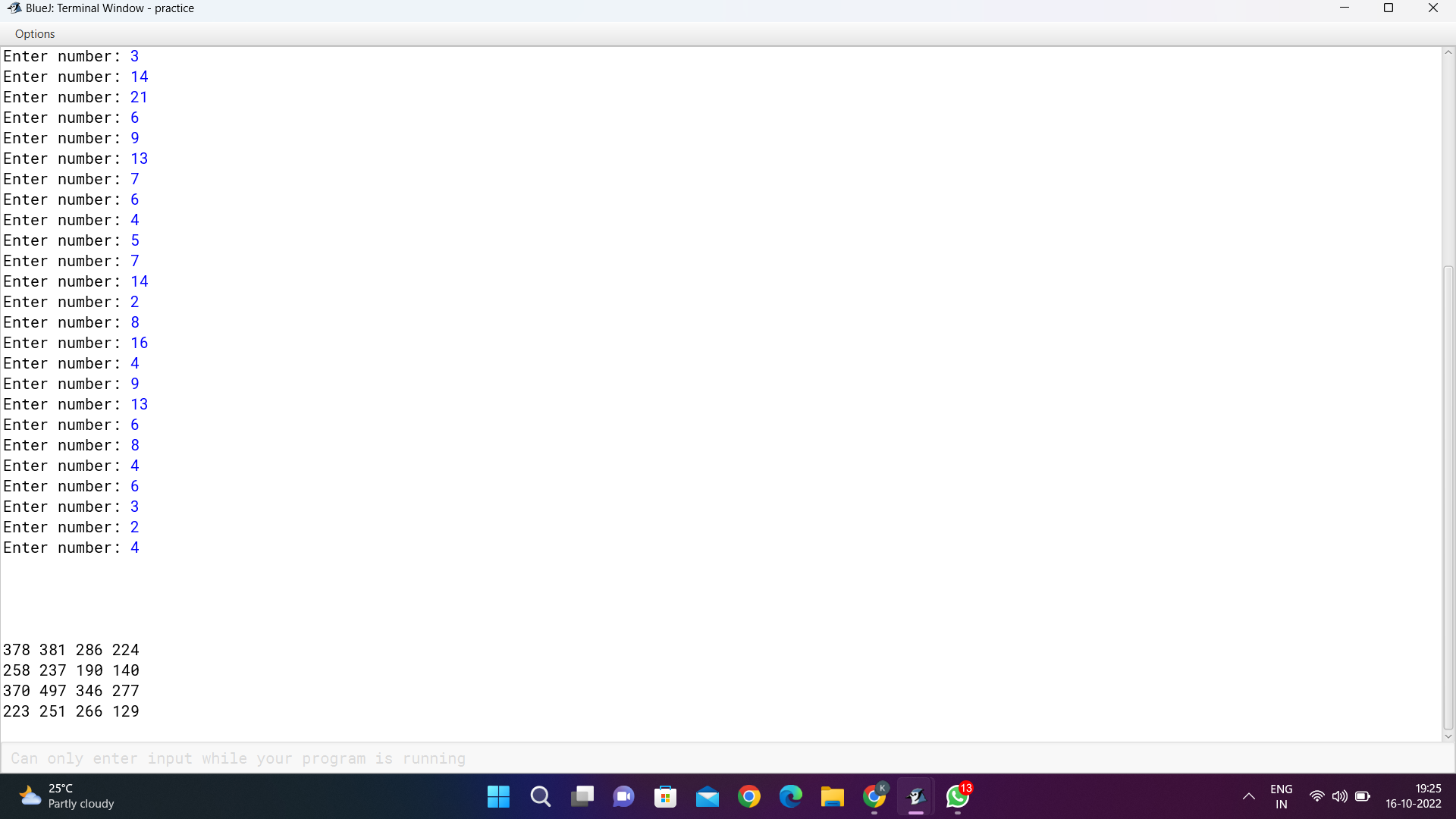
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B. Multiplication of a Matrix:

Test Case Link:

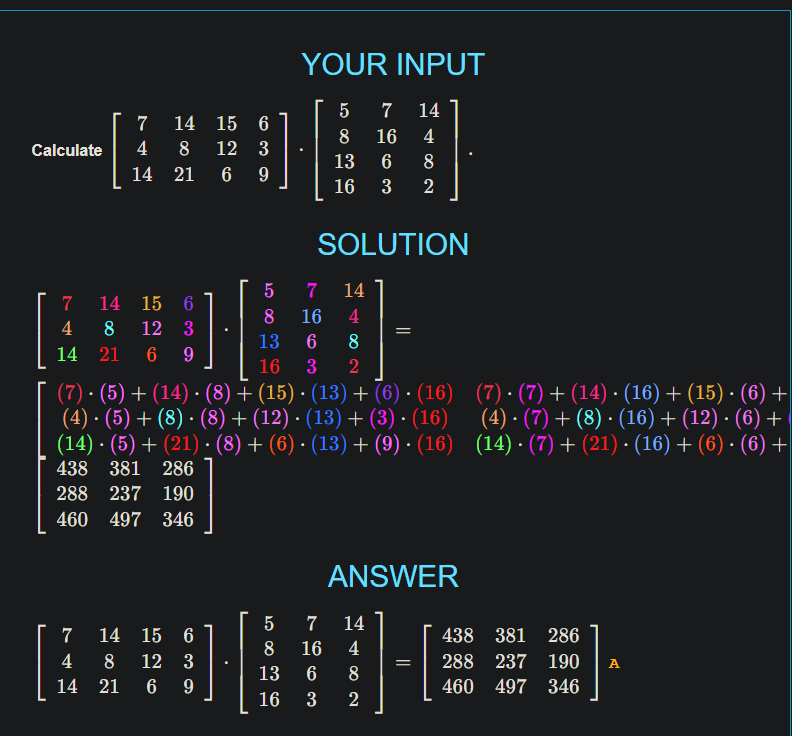
1) (4\*4) x (4\*4)

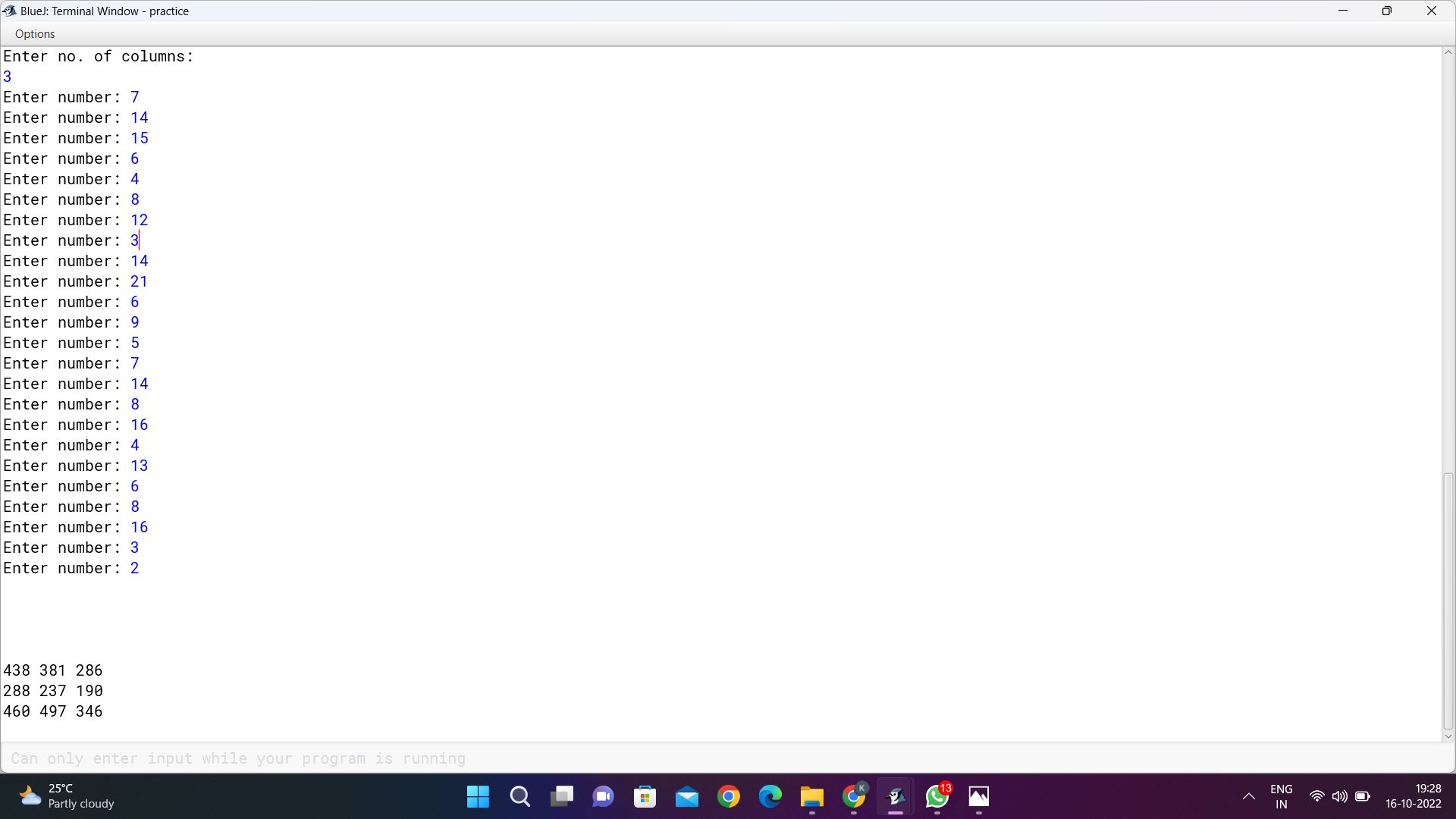




<https://www.emathhelp.net/calculators/linear-algebra/matrix-multiplication-calculator/?a=%5B%5B7%2C14%2C15%2C6%5D%2C%5B4%2C8%2C12%2C3%5D%2C%5B14%2C21%2C6%2C9%5D%2C%5B13%2C7%2C6%2C4%5D%5D&b=%5B%5B5%2C7%2C14%2C2%5D%2C%5B8%2C16%2C4%2C9%5D%2C%5B13%2C6%2C8%2C4%5D%2C%5B6%2C3%2C2%2C4%5D%5D>

2) (3\*4) \* (4\*3)





<https://www.emathhelp.net/calculators/linear-algebra/matrix-multiplication-calculator/?a=%5B%5B7%2C14%2C15%2C6%5D%2C%5B4%2C8%2C12%2C3%5D%2C%5B14%2C21%2C6%2C9%5D%5D&b=%5B%5B5%2C7%2C14%5D%2C%5B8%2C16%2C4%5D%2C%5B13%2C6%2C8%5D%2C%5B6%2C3%2C2%5D%5D>

C. System of Linear Equations:

Test Case Link:

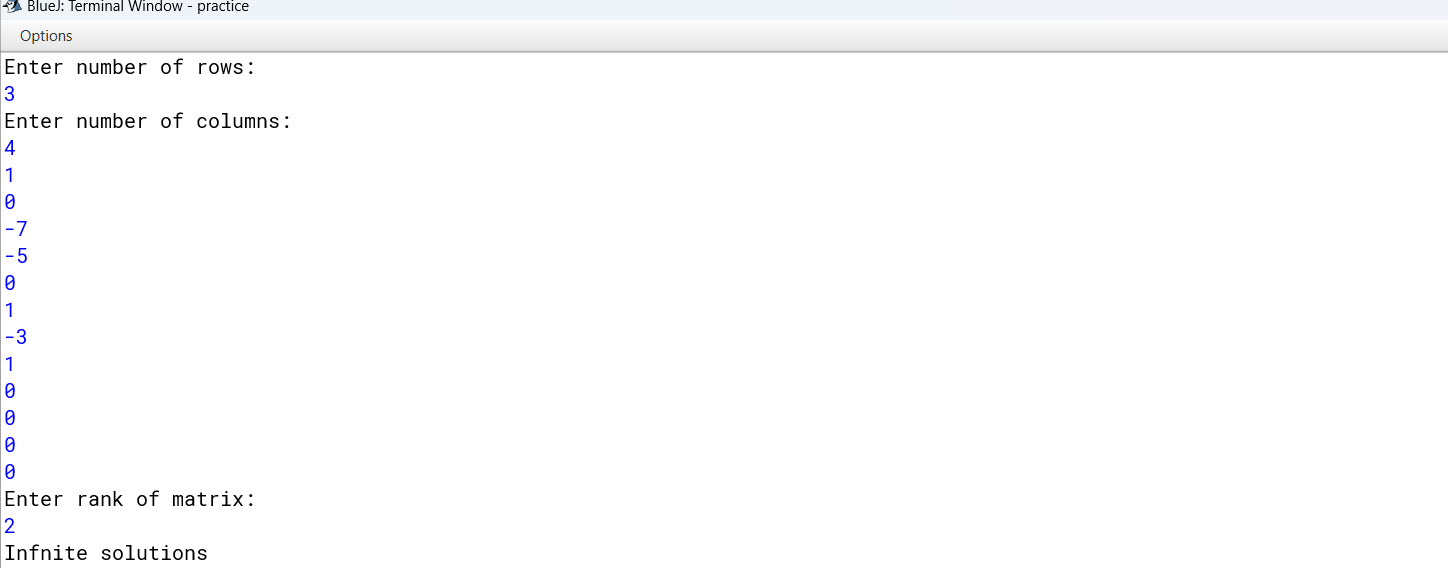
1) (3\*4)

<https://chbe241.github.io/Module-0-Introduction/MATH-152/Unique%20Solution,%20No%20Solution,%20or%20Infinite%20Solutions.html>

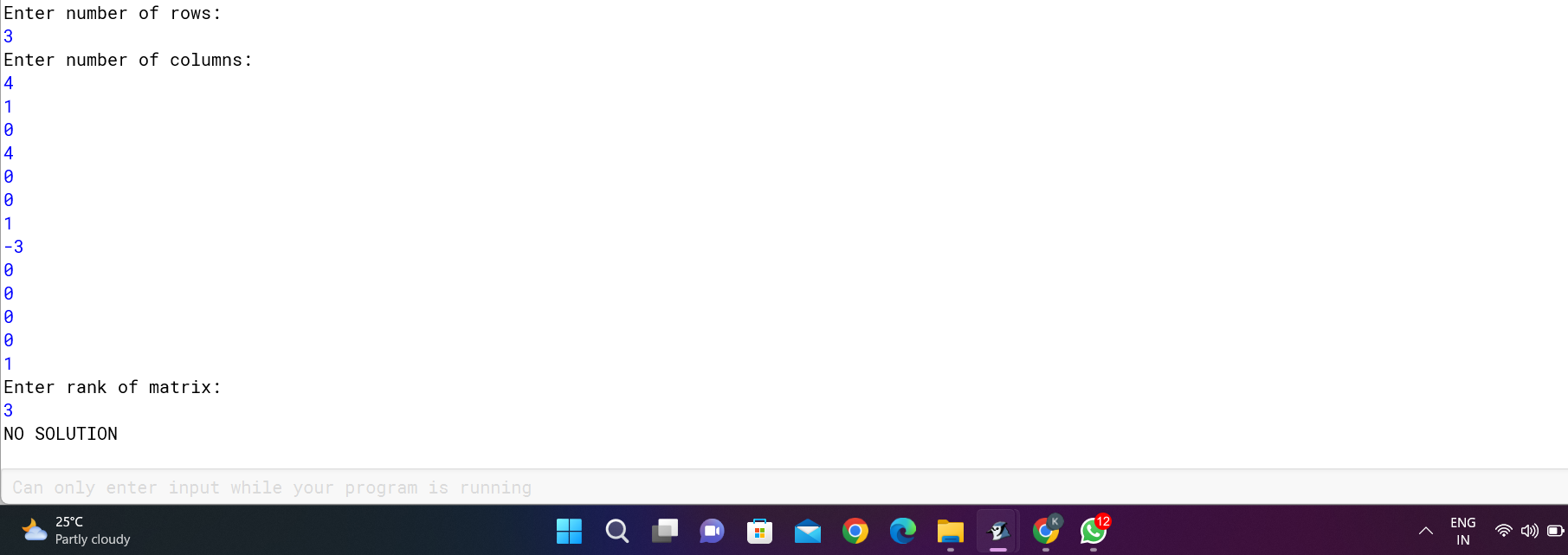


2) (3\*4)

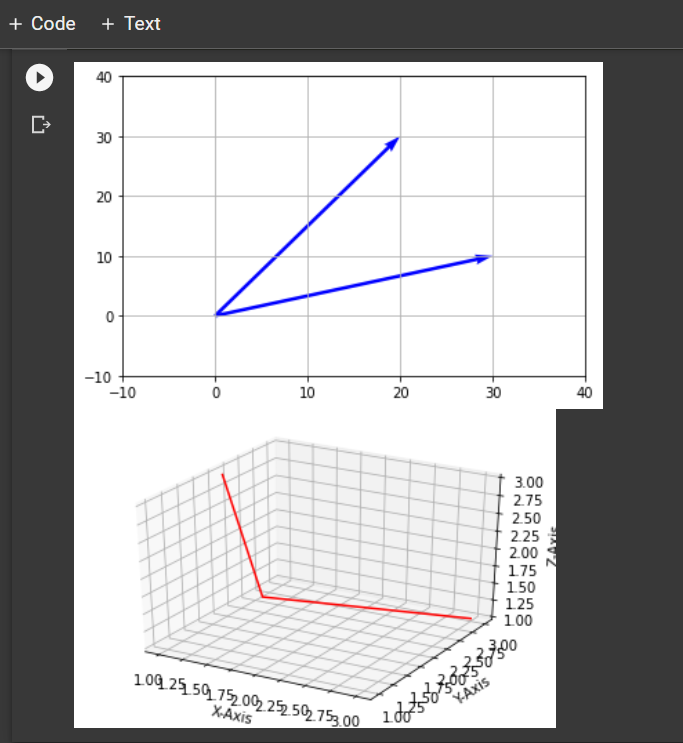
<https://chbe241.github.io/Module-0-Introduction/MATH-152/Unique%20Solution,%20No%20Solution,%20or%20Infinite%20Solutions.html>



3) (3\*4)



D. Vector Representation:

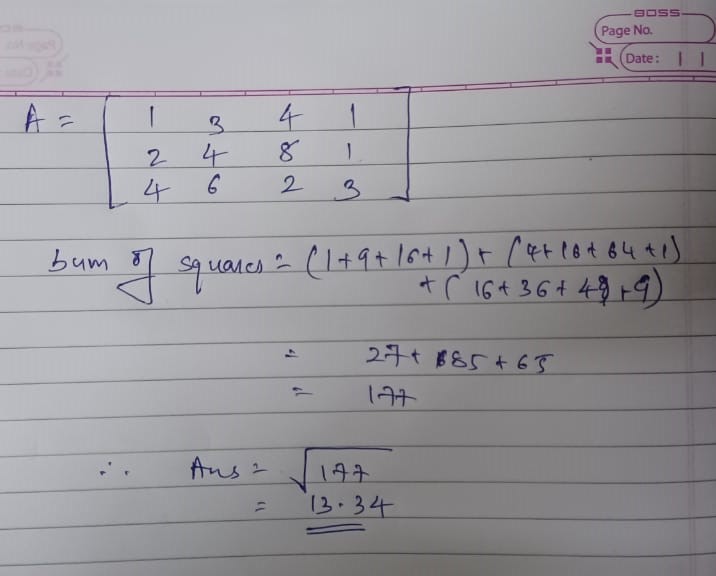


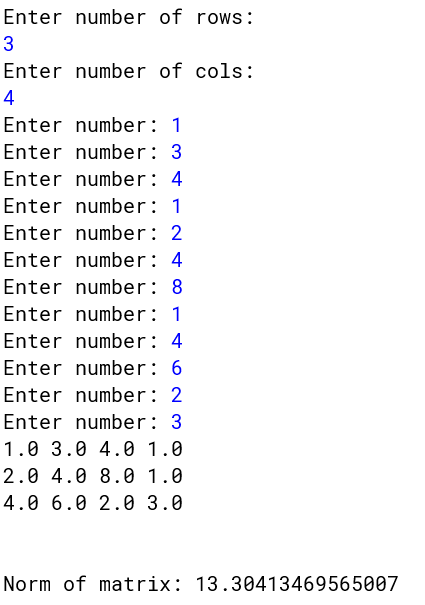
Colab Link:

<https://colab.research.google.com/drive/1Pw39Sngpj4FO7kOZ1Q92K1uNJYhc9BdD>

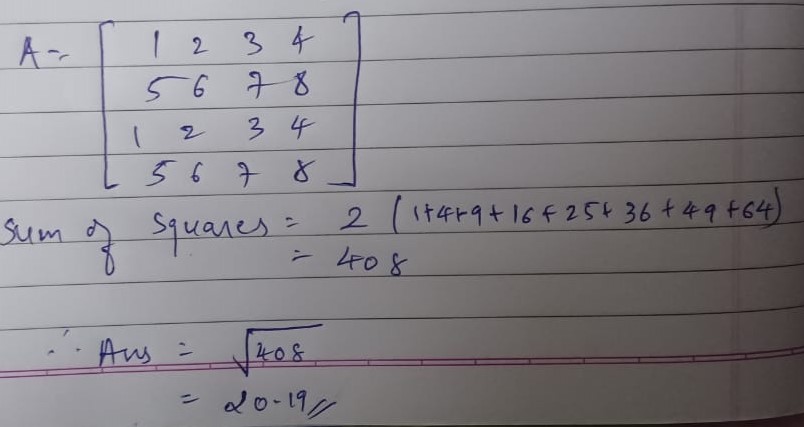
E. Norm of Matrix:

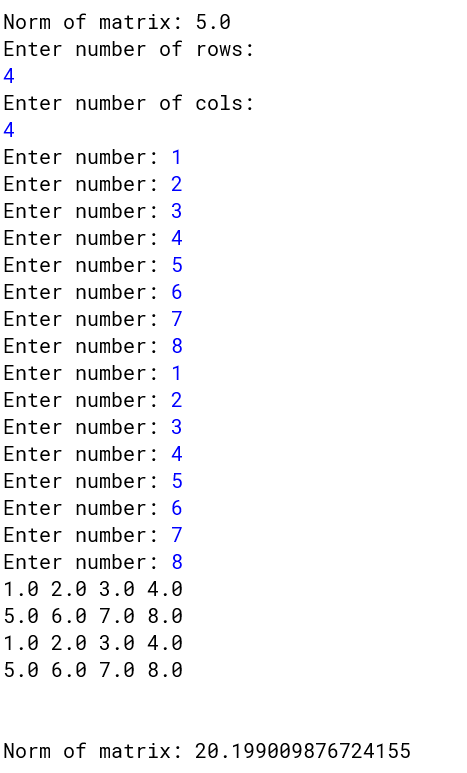
1. 3\*4





1. 4\*4

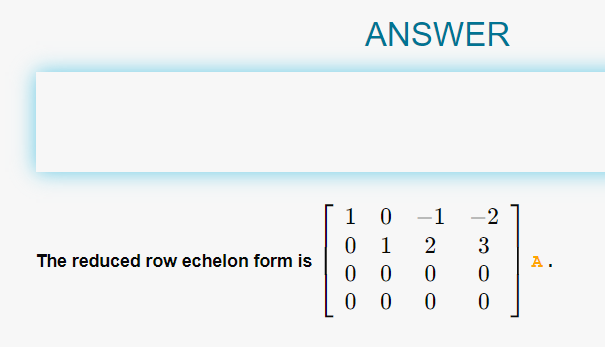




F. Row reduction Of Matrix:

Test Case Link:

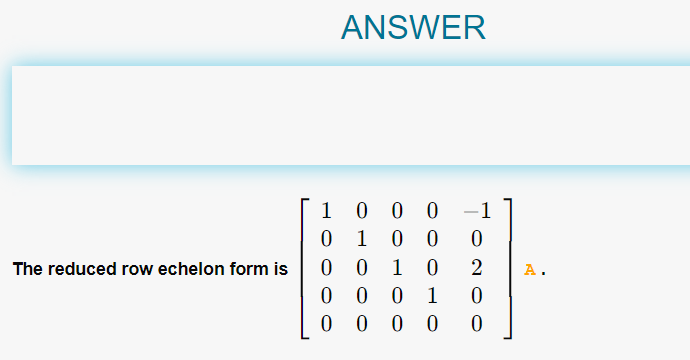
1) 4\*4

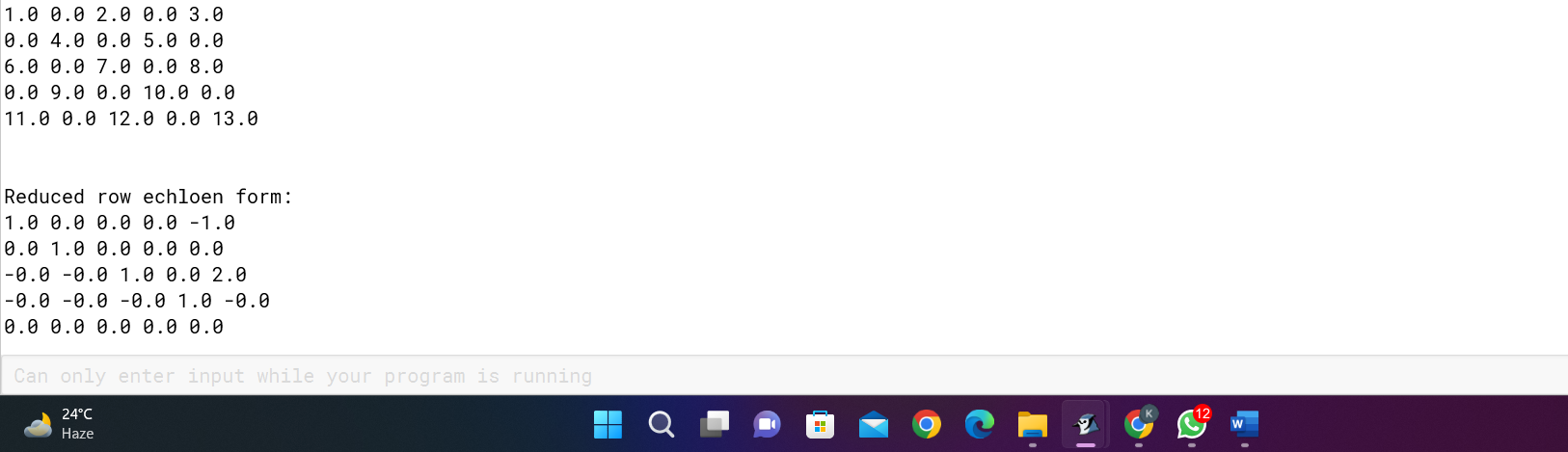




<https://www.emathhelp.net/calculators/linear-algebra/reduced-row-echelon-form-rref-calculator/?i=%5B%5B1%2C2%2C3%2C4%5D%2C%5B5%2C6%2C7%2C8%5D%2C%5B9%2C10%2C11%2C12%5D%2C%5B13%2C14%2C15%2C16%5D%5D&reduced=on>

2)5\*5

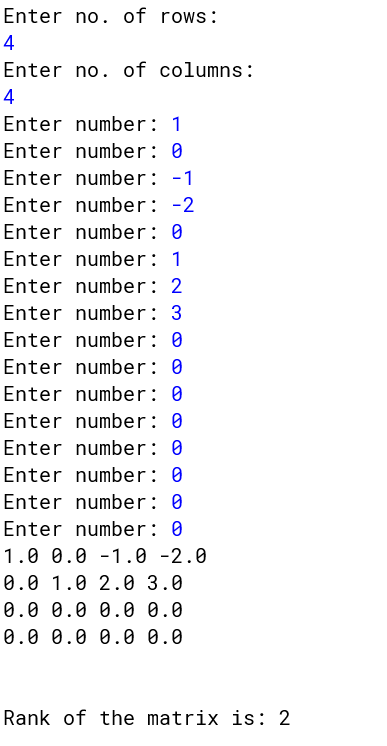




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G. Rank of Matrix:

1. 4\*4



1. 5\*5

