**Ex No.** Numpy Arrays

**Date: 04-09-2022**

1. Write a python program to perform matrix operations on an M x N matrix and solve a system of linear equations. Use inbuilt functions to implement the operations. Get two matrices from the user. The program should support the following Menus,

1. Matrix Addition
2. Matrix Subtraction
3. Scalar Matrix Multiplication
4. Elementwise Matrix Multiplication
5. Matrix Multiplication
6. Matrix Transpose
7. Trace of a Matrix
8. Solve System of Linear Equations
9. Determinant
10. Inverse
11. Singular Value Decomposition
12. Eigen Value
13. Search an Element
14. Difference of Sum of Upper and Lower Triangular Matrix
15. Exit