

# Netaji Subhash Engineering College

Department of Artificial Intelligence and Machine Learning

B. Tech AIML 2nd Year 3rd Semester

2023-2024

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**Name of the Course:** Data Structure and Algorithms Lab

**Course Code:** PCC-CS391

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## Day 2 - Problem Set

1. Write a C program containing a function which will add two Matrices of same size.
2. Write a C program containing a function which will find transpose of a given matrix.
3. Write a C program containing a function which will multiply two matrices.
4. Write a C program to find sum of all elements of a matrix.
5. Write a C program to find largest element in a matrix.
6. Write a C program to check matrix is a Sparse matrix.
7. Write a C program containing a function which will add two sparse matrices.
8. Write a C Program containing a function which will check whether a given matrix is upper triangular or not and if upper triangular then find the sum of elements of the upper triangular matrix.
9. Write a C Program containing a function which will check whether a given matrix is lower triangular or not and if lower triangular then find the sum of elements of the lower triangular matrix.
10. Write a C Program containing a function which will find sum of each row and column of a matrix.
11. Write a C program to check matrix is a Sparse Matrix.
12. Write a C Program containing a function which will interchange diagonals of a square matrix.