

# Netaji Subhash Engineering College

Department of Artificial Intelligence and Machine Learning

B. Tech AIML 1st Year 2nd Semester

2022-2023

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**Name of the Course:** Programming for Problem Solving

**Course Code:** ES-CS291

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## Week 4 - Problem Set

1. Write a C program that will perform Matrix addition.
2. Write a C program that will perform Matrix Transpose.
3. Write a C program that will perform Matrix Multiplication where ‘m’ and ‘n’ order of a matrix (using function call).
4. Write a C program that will perform Matrix Inverse (using recursion).
5. Write a C program that will perform searching of a number (in a single dimensional Array/multidimensional array).
6. Write a C program that will perform Ackermann function computation (using recursion).
7. Write a C program that will compute the roots of a quadratic equation.
8. Write a C program that will implement a framework to run sorting algorithms viz., Selection Sort, Bubble Sort and Insertion Sort (both ascending and descending order).
9. Write a C program that will perform Quick Sort (using recursion).
10. Write a C program that will perform Merge Sort (using recursion).