# Introduction

Matrices are amongst the most widely used concept in all fields of mathematics and now are dominantly used in Graphics Designing, Processing, Numerical Method Analysis and etc. Matrices are what lead to the mathematical representation of the Concept of Vector. Matrix Multiplication is one of the most time consuming methods that one could go for. The most commonly used method of Matrix multiplication is Iterative Multiplication whereas the Strassen’s Algorithm is the most efficient method of attaining the dot product of 2 matrices.

# Approach

The Library/Header file created consists of a class that allows the user to make an object that has a 2 dimensional dynamic array. This class is populated with functions pertaining to the object. These include the functions for matrix multiplication, initialization and printing. However this implementation aims to avoid any kind of memory leaks via the usage of auto pointers.

# How to Run

The header File is to be included in your .cpp project and auto pointers for the matrix class are to be created. Once 3 objects are created (2 matrices to be multiplied and a matrix to store the result in) the iterativemul function is to be called. This function is to be called as a function of the first matrix object and the second matrix object is to be passed to the function as an argument. The function returns a matrix object which is to be stored in the third matrix.

Github Repository: https://github.com/haseeb090/MMC