



PROJECT REPORT

SLOT 11 Group 1

Team Members

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1. INTRODUCTION

The name of our program is THE MATRIX.

The program will help one to perform some basic and advanced operations on matrices and get the answer immediately instead of calculating it. So , it would be helpful for verification purposes and save time.

Also , it would leave out the scope of silly mistakes while calculating the answer or evaluating a matrix to get some desired output.It also includes a very addictive game named the HIT THE MATRIX by us.

2. Functional specification-

The following functions are used in the program-

2.1.Void Addition()

The function takes two matrices of same order as input and computes their sum or difference.

2.2.Void Multiplication()

The function multiplies two matrices of the type $m \times n$ and $n \times p$.

2.3.Void Trace()

The function calculates the trace i.e the sum of the diagonal elements of a $n \times n$ matrix.

2.4.Void Determinant()

The function calculates the determinant of the given $n \times n$ matrix by using a recursive function.

2.5. Void Inverse()

This function takes input of a matrix and then calculates its inverse and prints it on the screen.

2.6 void eigen2()

The following function takes a 2x2 Matrix as an input and then prints the eigen values of the given matrix by solving a quadratic equation.

2.7 void checkeigen()

This function takes a nxn matrix as an input and then takes a value as input. The function checks whether the input value is an eigen value of the given matrix or not.

2.8 void game()

This function is about the game that we have made using simplecpp. The game is called Hit the matrix. It displays a 3x3 matrix with 9 squares of black colour. One square turns red randomly and we have to click on it in under one second. The Game gets over if you take more than one second to react or click at the wrong place.