In this assignment , I have implemented scalar and matrix functions to be performed on a input file .

It consists of Logger, ExtractOps, MatrixOps, ManageOps classes .

Logger class consists of logg() method . which is used to log error messages and exceptions messages in a log file .

ExtractOps class consists of extract_data() method , which is used to extract data from a input log stream .

MatrixOps class consists of various functions responsible for matrix operations .

ManageOps class consists of the methods for managing the matrix operations

Functions in MatrixOps Class:

opdata doAdd(vector<opdata>): It determines how the data to be added and gives output in opdata format.
vector<vector<double>> getAdd(double num , vector<vector<double>> temp):
Performs addition of a matrix with a scalar value;
vector<vector<double>> getAdd(vector<vector<double>> temp1,vector<vector<double>> temp2):
Performs matrix-matrix addition .

opdata doSub(vector<opdata>): It determines how the data to be subtracted and gives output in opdata format.
vector<vector<double>> getSub(double num , vector<vector<double>> temp):
Performs subtraction of a matrix with a scalar value;
vector<vector<double>> getSub(vector<vector<double>> temp1,vector<vector<double>> temp2):
Performs matrix-matrix subtraction.

opdata doMul(vector<opdata>): It determines how the data to be multiplicated and gives output in opdata format.
vector<vector<double>> getMul(double num , vector<vector<double>> temp):
Performs multiplication of a matrix with a scalar value;
vector<vector<double>> getMul(vector<vector<double>> temp1,vector<vector<double>> temp2):
Performs matrix-matrix multiplication.

opdata doDiv(vector<opdata>): It determines how the data to be divided and gives output in opdata format.
vector<vector<double>> getDiv(double num , vector<vector<double>> temp):

Performs division of a matrix with a scalar value;

opdata doTranspose(vector<opdata>): It determines how the data to be Transposed and gives output in opdata format.
vector<vector<double>> getTranspose(vector<vector<double>> temp):
Performs Transpose of a matrix .

opdata doDet(vector<opdata>): It determines how the determinant is calculated and gives output in opdata format.
double getDet (vector<vector<double>> temp):
Performs determinant of a matrix

Functions of ManageOps class :

string decode_cmd_opt(int argc , char* argv[]) :
It determines the cmd operations .

vector<opdata> get_operands(int i , char sw):
It is responsible for getting the operands required for a operation .

Int perf_cmd_ops(string cmd_opt):
It performs the cmd operations for each cmd operation.