MATRIX OPERATIONS

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Task Description

Develop a program for matrix operations.

This includes:

- Finding solution of equation with gaussian elimination (if rank allows).

- Finding the determinant.

- Print the given matrix.

On the basis of a txt file and user input, creates a html file that includes outputs above.

Input

The input data stored in .txt file (input.txt).

Program accepts only one matrix.

Input have to contain:

- A number at top to specify size of matrix. → (row X column)
- A square matrix.
- At the bottom line, right sides of the equations.

The visual explanation of input:

```
2
a    b
c    d          →    |a        b    |e |
e    f               |c        d    | f |
```

Code Structure

The code contains main function and support functions.

The main function calls support functions.

Support functions:

- o Hails the user and give information about program.
- o Open and reads input file.
- o Find solution with gauss elimination.
- o Find determinant.
- o Print output to console and create a html file
- o Controlling the input file name's format.

Output

On the basis of the input file, program print result to console also create a html file.

Possible outputs:

- Printing the given matrix.
- Determinant of the given matrix.
- Solution of equations (if rank allows).

If program encounter any error it print an unique error message to console.

Thank you