Problem #8

Computer Science is all about Matrices and Binary Numbers

You are working for a company that crunches a lot of data that comes in from various sources. All of the data that you work with is represented by matrices. The matrices come in in streams of data one at a time where each line of the matrix is delimited by a #.

For this particular project you're on, they want you to write a program that can read in a matrix a value and a command {LT,GT,EQ} where LT = Less than, GT = Greater than and EQ = equal. Your program should then look in the matrix entries and find all the entries that are LT/GT/EQ to the value input and return a binary mask of its findings, where an entry that meets the criteria is represented by a 1 and an entry that doesn't meet the criteria is represented by a 0.

Keep in mind that each entry is 4 digits long. So each entry can range from 0000 to 9999.

The output should consist of the matrix that was input and the binary mask as follows.

Example

input> #01990057#01240075 150 LT

output>

Matrix

0199 0057
0124 0075

LT 150

0 1
1 1