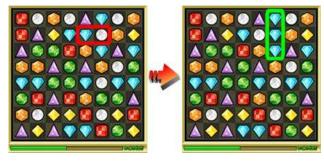
Problem E- Bejeweled Help

Bejewled is a game about swapping gems. You are given an 8×8 board filled with different types of gems, like the sample at right. Each cell can be described by its row and column coordinates, with origin from the upper left corner. For example, the (0,0) cell (at row 0 and column 0) is a red ruby. Cell (1,4) is thus a sapphire (aqua blue).



In this game, you are allowed to alter the board by swapping two neighbouring gems (left \leftrightarrow right OR top \leftrightarrow bottom). In the board shown at right, there are no three in a row nor three in a column. However, if you swap cell (1,4) with cell (1,5), you get three in a column.



Any consecutive N gems will score you N points. The three in a column sapphires thus translate to 3 points. In the board below, if you swap cell (4,5) with cell (5,5), you will have three in a row of diamond and another three in a row of purple amethyst, translating to 6 points.

Please note that overlapping gems are not double counted:

| | | XXXX |
|-------|-------|--------|
| X | XXXX | Y X |
| XXX | X | Y X |
| X | X | YYYY |
| 5 pts | 6 pts | 12 pts |

In this problem, you will write a program that takes in a board without any three in a row/column gems. Find the best swap that alters the board for a maximum number of points.



Input Specification:

The first line of input will contain an integer $1 \le T \le 100$, the number of test cases. T test cases will follow.

Each test case will be presented in 8 lines, each containing 8 characters, representing the 8 × 8 board. Each type of gem is translated to a unique letter (A-Z, a-z).

Output Specification:

For each test case, first print a line containing the maximum score you can get from a single swap. After that, print out the swap that attains that score in the format: <row> <col> <direction>, where the direction is either 'D' for down or 'R' for right.

If there is more than one possible swap, print all of them by ascending order of row, then ascending order of columns, then 'D' before 'R'.

Sample Input:

2

WOYGRGWY

PYWRPYGY

GWOGWBBW

PORBYOWO

GYYWWPRR

OYBBRWPP

BRRYGGBY

BPPORGOG

ABABABAB

AABABABA

CBABCBAB

BABCAABA

ABABCBAB

BABABABA

BBABABAB

CABABABA

Sample Output:

6

4 5 D

8

1 2 R

3 6 R

6 2 R