3. Black-out

Program Name: Black.java Input File: black.dat

Black-out is a computer game that is played with a 5x6 grid of "buttons" that are drawn in either black or white. When a player "clicks" on a button, the color of that button is reversed and the color of each adjacent button is also reversed.

For the purpose of this program, the buttons will be displayed as a 5x6 matrix of letters. The letters will be a B for Black or a W for White. A sample Black-out board is displayed to the right.

B	B	B	W	W	W
B	W	B	B	W	W
W	B	B	W	W	B
B	B	W	W	W	B
B	B	W	W	B	W

The object of the game is to Black-out the board, which means to turn all the buttons to B, while abiding by the following rules:

- A button is selected.
- That button and all of its adjacent letters are reversed (B's are changed to W's and W's are changed to B's).
- Buttons are considered to be adjacent only if they touch either horizontally or vertically.

You are to write a program that simulates this game. The rows are numbered from 1 to 5 and the columns are numbered from 1 to 6. Given a list of ordered pairs in the form `row column`, simulate the game and print the state of the game after all ordered pairs have been executed. It is possible for a button to be clicked more than once.

Input

- The first line of input will contain a single integer `n` that indicates the number of games to follow.
- Each game will consist of:
  - 5 lines with six letters on each line, each separated by a space
  - 1 line with an integer `m` denoting the number of ordered pairs to follow.
  - `m` lines, each with an ordered pair in the form `row column`

Output

For each game, print the state of the board after all ordered pairs have been executed. Print exactly one blank line between games.

Example Input File

```
1
B B B W W W
B W B B W W
W B B W W B
B B W W W B
B B W W B W
5
1 1
1 4
5 3
2 1
4 5
```

Example Output to Screen

```
B W W B B W
B B B W W W
B B B W B B
B B B B B W
B W B B W W
```