Logic and Constraint Programming

First assignment - MiniZinc

A.Y. 2021/2022

Please provide a MiniZinc model and 3 different data files generating minesweeper squared schemes. A minesweeper schema is a square matrix where some cells contain mines, while the others contain a number equal to the number of mines it is surrounded by. The model has to take as input the positions of the mines in the schema and, if necessary the size of the square. Then it has to produce as output the schema representation where the mines are denoted by the char 'M' and the other cells provide the correct number of surrounding mines.

For instance, given a mines distribution represented in Figure 1 (a), the MiniZinc model has to write in the console the corresponding schema in a format like the one of Table 1 (b).

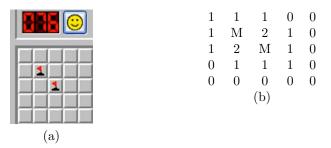|				
1	1	1	0	0
1	M	2	1	0
1	2	M	1	0
0	1	1	1	0
0	0	0	0	0

(b)

(a)

Figura 1: Input mines distribution (a), and output schema (b).