A

In a file named "words.txt" there are all lowercase words, given one on a line. The lines with words also include a pair of row—column coordinates of the word to be placed, and a direction: H for horizontal, and V for vertical. You are supposed to place the given words in a 9 × 8 crossword puzzle, which should be printed to file "puzzle.txt". The common letters should be capitalized as seen in the example below. All the empty positions should be filled with stars ('*'). The given words have up to two letters in common.

Sample contents of input file "words.txt":	Sample contents of output file "puzzle.txt":
amiral 1 1 H ce 3 6 H arde 5 2 H era 6 6 H ara 7 1 H con 8 4 H ci 9 2 H unt 9 6 H maria 1 2 V rac 7 2 V repede 1 4 V lac 1 6 V nu 8 6 V om 1 8 V pradat 4 8 V	 Note that here the output is colored in order to help you. Your output does not have to be colored :-)

Design and implement a commented modular C program for solving this problem.

B

In a file named "puzzle.txt" there are lines of all uppercase letters and stars. The number of lines in this file is not given. Each line of this file contains one line of a crossword puzzle, where black squares are marked with stars ('*'). You are supposed to extract every word in the puzzle and write the words to file "words.txt", as follows:

- every line starts with a all lowercase word
- two numbers follow: the first one is the row and the other one is the column position of the beginning of the word in the puzzle
- a third element indicates the direction of the word: 'H' for horizontal, and 'V' for vertical.
- all these elements are separated by a single space

Sample contents of input file "puzzle.txt":	Sample output ("words.txt"):
A M I R A L * O * A * E * A * M * R * P * C E * * I * E * * * P * A R D E * * R * * * E * E R A A R A * * * * D * A * C O N * A * C I * * U N T Note that here the input is colored in order to help you. Your output does not have to be colored :-)	amiral 1 1 H ce 3 6 H arde 5 2 H era 6 6 H ara 7 1 H con 8 4 H ci 9 2 H unt 9 6 H maria 1 2 V rac 7 2 V repede 1 4 V lac 1 6 V nu 8 6 V om 1 8 V pradat 4 8 V

Design and implement a commented modular C program for solving this problem.