Word Puzzle

Given a list of words and a two dimensional array of characters, find all the valid words contained in the array. A sequence of characters in the two dimensional array is a valid word if it is included in the given word list. We consider three directions in the two dimensional array in identifying valid words in the array: horizontal, vertical, and diagonal. Note that the directions are all bidirectional.

List of words and puzzle are given in two separate files. For the word list file, each line contains a separate word. For the puzzle file, the first line contains the dimension of the puzzle. That is, if the puzzle is N by N, then the first line contains integer N. The following N lines contain the puzzle (see Figure 1.1 in the textbook).

The program runs as follows: word_puzzle.x [word_list_file], where the optional parameter gives a word list file. After the program starts, it supports the following commands:

- q: to quit from the program;
- l word_list_file: to load a new word list file;
- p puzzle_file: to solve a puzzle

See files words.txt and puzzle1.txt for examples of the word list file and the puzzle file.