

Use a GUI to open the file and display words

Create another class called WordGUI that will be a complete JFrame with a menu bar and menus. There should be two menus: one called File and another called List. The File menu should have the menu items Open and Quit. The List menu should have five menu items: A, E, I, O, U.

The content pane of the GUI should have a grid layout of one row and two columns. Clicking on File > Open should allow the user to choose a file. That file should be displayed in the left column, with the lines numbered (starting at 1). When the user clicks on List a choice can be made of one of the five vowels. Clicking on a vowel should list all the words starting with that vowel in sorted order in the right column. Each word should have the line number on which it appeared.

Create a class to record the word and its line number

Create a class called WordLine that will have two instance variables: a String for the word, and an int for the line number on which the word appears. There should be a two-argument constructor, and error checking with an exception thrown if the line number is less than 1. You may store the WordLine objects in either an array or a linked list.

The exception thrown should be an InvalidWordLineException which you can create by extending IllegalArgumentException as shown in lecture.