

For your third project, you will create a GUI-based Boggle game.

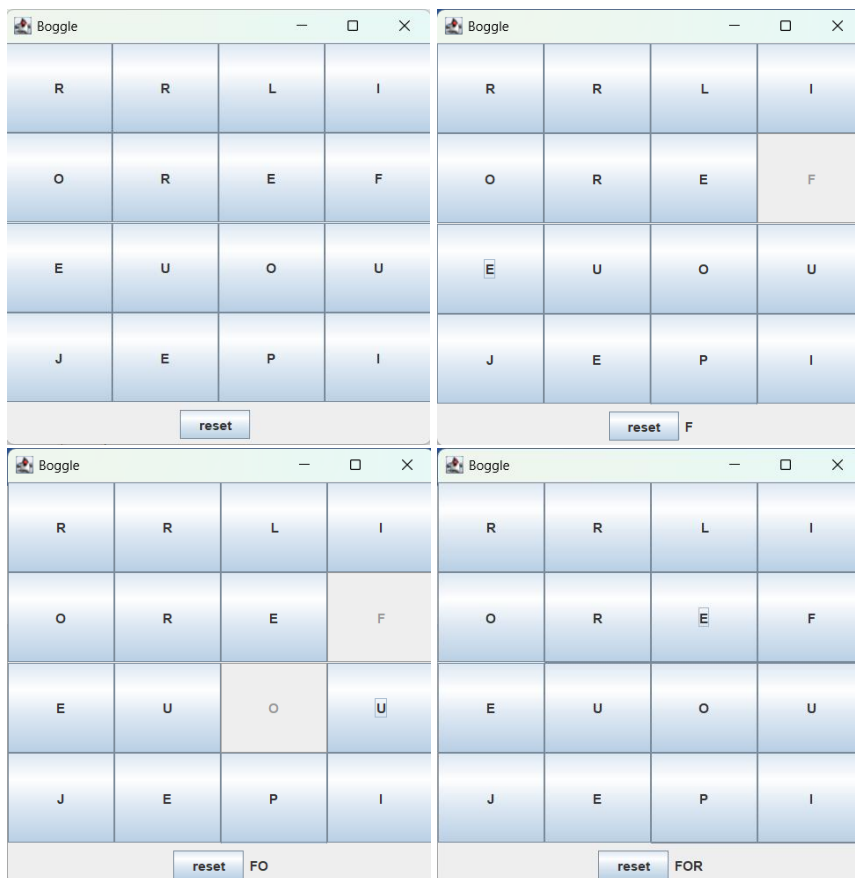
The program must do the following:

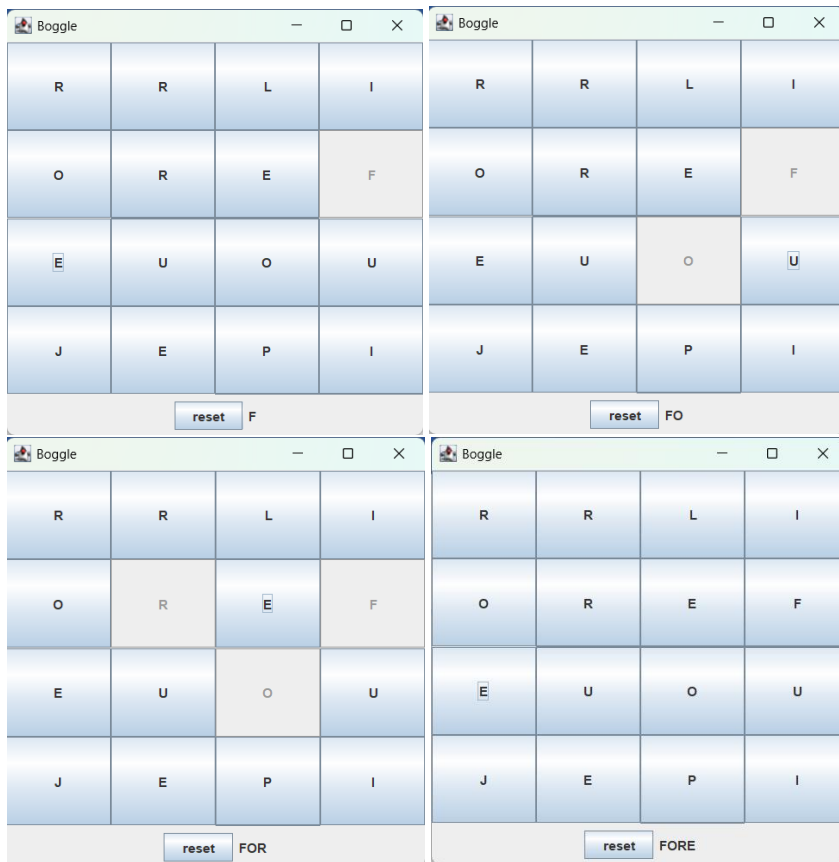
1. Read the file “words.txt” and store all words from the file with three letters or more. Your program must read the file only once.
2. Set up the GUI. The GUI contains a four-by-four grid of buttons, each with a random letter. The random letter should be a vowel or consonant with a 50% chance of each. The GUI also contains a bottom section to hold the reset button and the word so far.
3. Begin an output file called “savedWords.txt” with no words in it so far.
4. Whenever the user clicks a letter button, if all buttons are enabled or the letter is orthogonally or diagonally adjacent to the previous letter clicked:
  - a. Disable the button.
  - b. Add the letter clicked to the word so far.
  - c. If the word so far is in the list of words but has not yet been found, add it to the output file and enable all buttons.
5. Whenever the user clicks the reset button, enable all buttons.

For full credit, write a good Javadoc comment for each of your classes, methods, and global variables.

See <https://www3.cs.stonybrook.edu/~cse214/Javadoc.htm> to get started.

Consecutive screenshots from a sample run of the program:





At this point, the output file reads:

FOR

FORE