



EBU4201 - INTRODUCTORY JAVA PROGRAMMING

Mini Project

Zhonghao Yan - 200983952

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Foreword

This project is developed on macOS 12.4 (21F79) so that if you run it on windows, this project will not display as its best form.

The development environment for this project is IntelliJ IDEA 2021.3.2.

The version of openJDK is 17.0.2

In this project, the meanings of various symbols are as follows

- Rules



- Code

1 #####

- Window



In addition, this project has been open sourced on github and can be found through the link below:

<https://github.com/zzyzh/zWordle>

Users Guide

0.1 Background

Wordle is a word game which was written by Josh Wardle during the COVID-19 lockdown period in the United Kingdom. It became popular, and was sold to the New York Times for a large amount of money.

This project is an extended version of Wordle with Java Swing ordered by EBU4201.

0.2 Rules of the Wordle Game

The aim of the game is to guess a hidden target 5-letter word within 6 attempts. This is a single player game where the player plays against the computer by making guesses of 5-letter words.

An English word consisting of five letters is selected at random (by the computer) from a list of words, but kept hidden from the human player. The player tries to guess the **5-letter word**. The player is allowed to make **6** guesses in total to discover the target word. The player is given feedback after each attempt they make.

The feedback is as follows:

There are three colours that the cells containing the letters can be; green, yellow, or grey.

Green means the letter is contained in the word and is in that position.

Yellow means the letter is contained in the word but not in that position.

Grey means the letter is not contained in the word.

0.3 Procedure

0.3.1 Compile & Run

If you use **IDE** to compile and run this project, you should only import this project to your IDE. Then you can use the hotkey of the IDE to compile and run this project, and you will see the window to play.

Else, if you want to compile and run this project in **cmd**, you can use the following command:

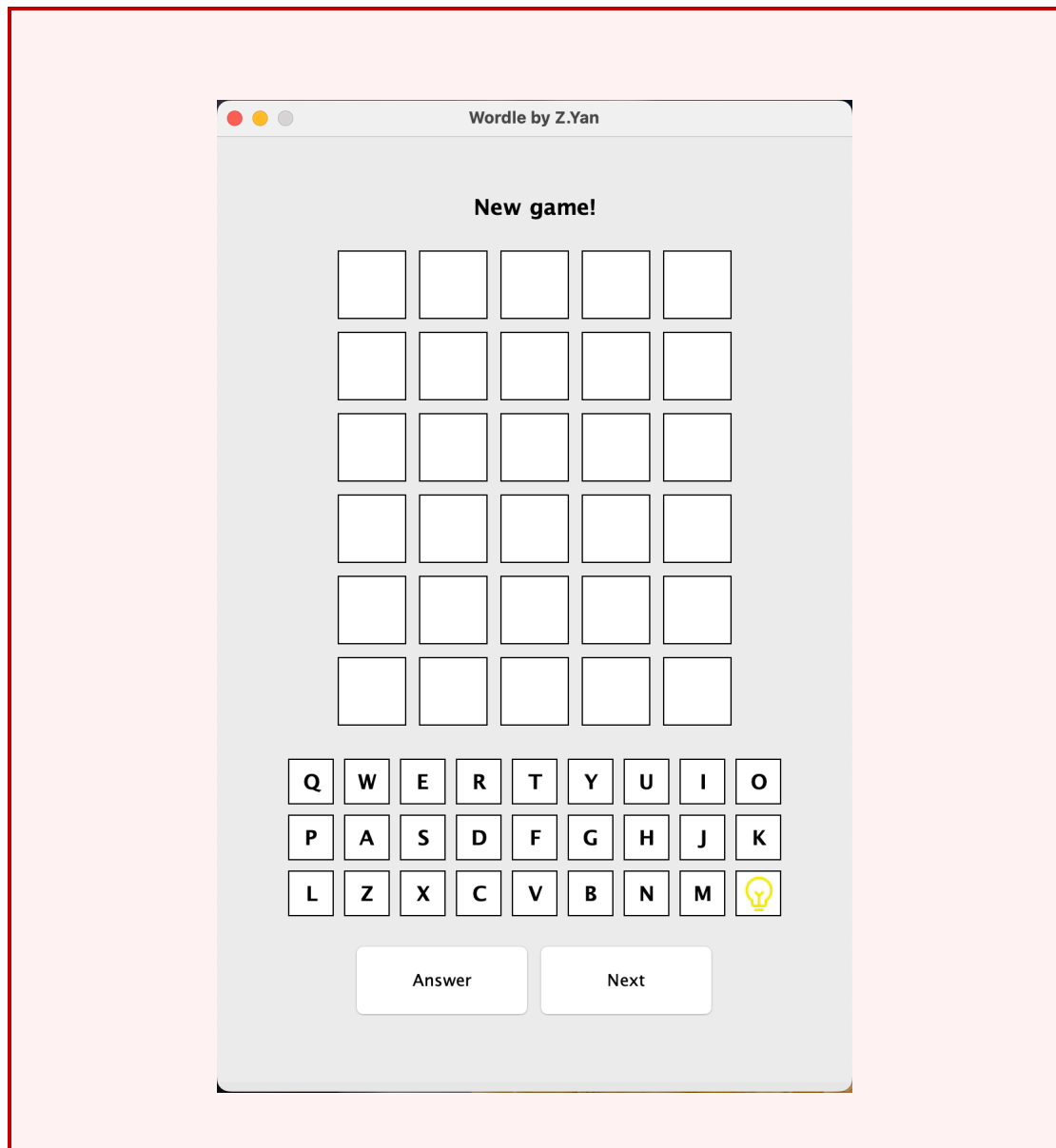
```
1 cd src/MainFrame
2 javac *.java && java zWordle
```

What you need to pay attention to is that you should **cd** the MainFram package of the project at first, and then you should use ***** to compile all classes simultaneously.

0.3.2 Start to Play

When you compile this project successfully, you will see a window as following in the center of your screen:

(Tips: You can drag the window, but not change its size.)



0.3.3 Try to Input

Each game allows users to attempt to enter a legal 5-letters-word six times. The legal 5-letters-word means that your enter word should be included in the dictionary.txt. You will get a feedback after every attempt, either enter a legal 5-letters-word or not. The users guide will show you each feedback you will get during a game.

(Tips: All letters entered will be converted to uppercase and displayed.)

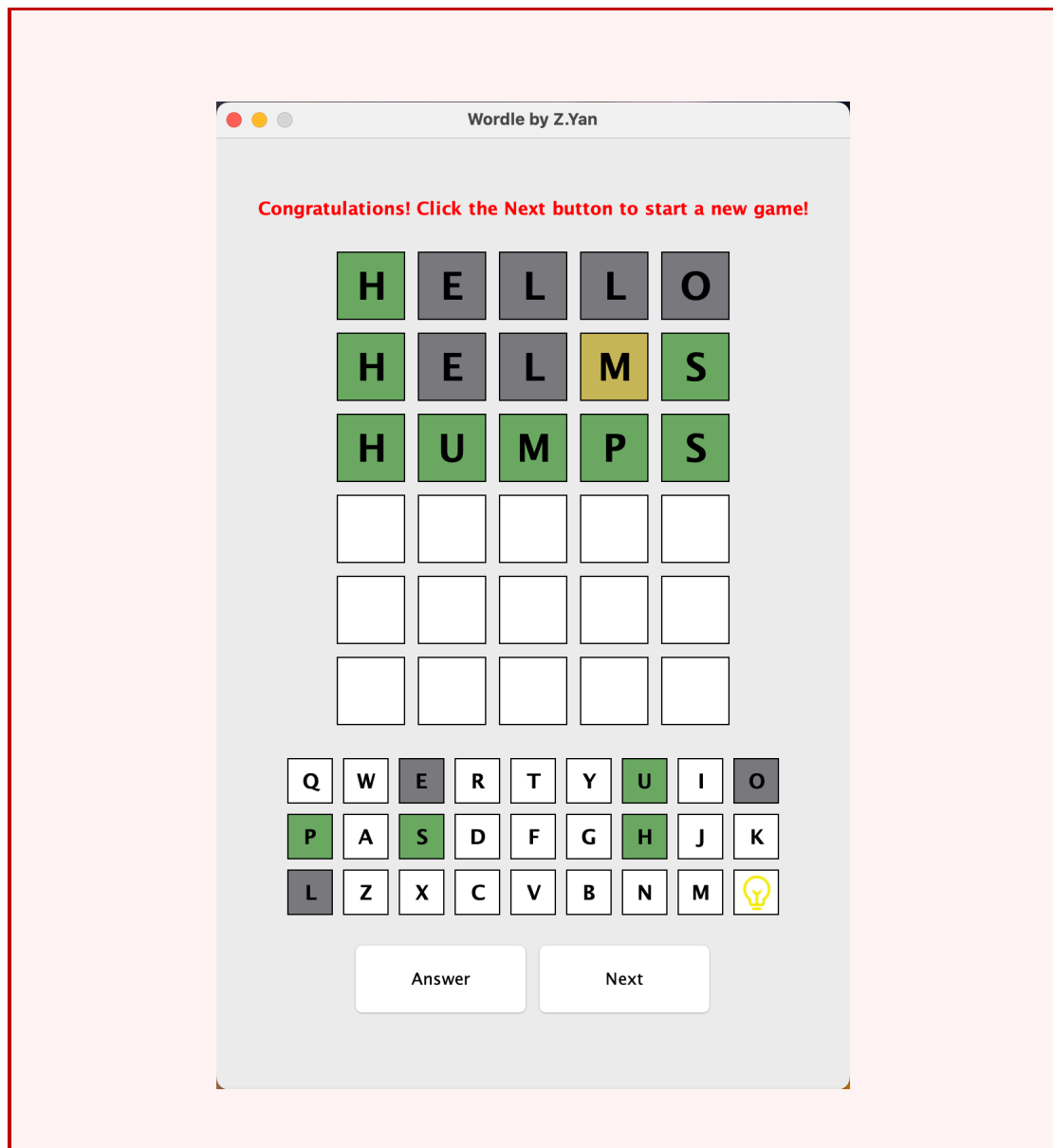
0.3.3.1 Legal Enter

”Legal Enter” means that yours enter is a 5-letters-word included in dictionary.txt so that this project can compare yours enter with the word you should find out.

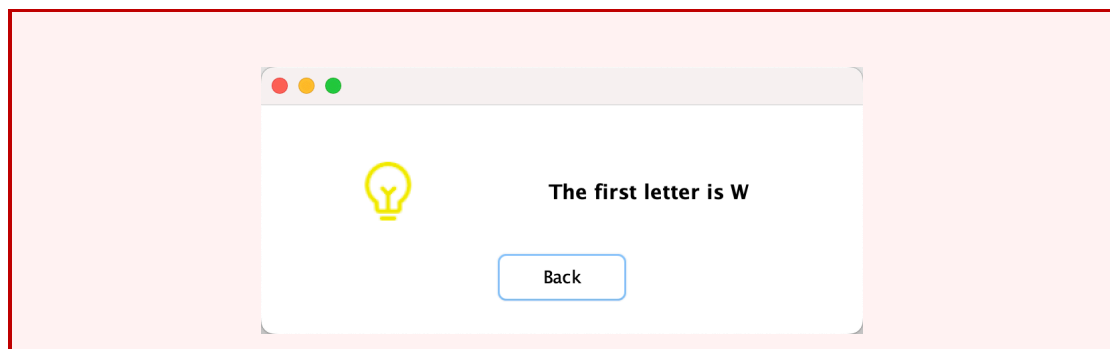
- If the letter is contained in the word and is in that position. The cell containing the letter will change to **green**.
- If the letter is contained in the word but not in that position. The cell containing the letter will change to **yellow**.
- If the letter is not contained in the word. The cell containing the letter will change to **yellow**.

- The cells of the virtual containing corresponding letter will change the same background color as above cells.

The result of legal enter is as following:



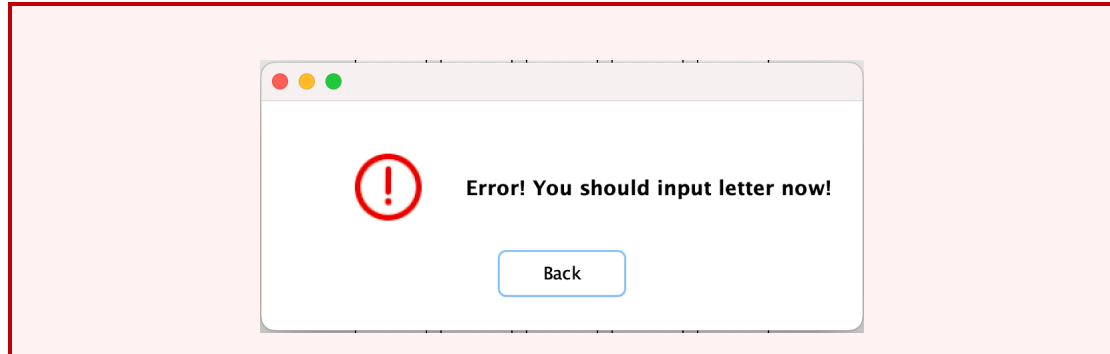
If you have no idea which letter to type and want to have a tips, you can click on the light bulb located in the lower left corner of the virtual keyboard. And then, you will get a message about a letter of the word randomly.



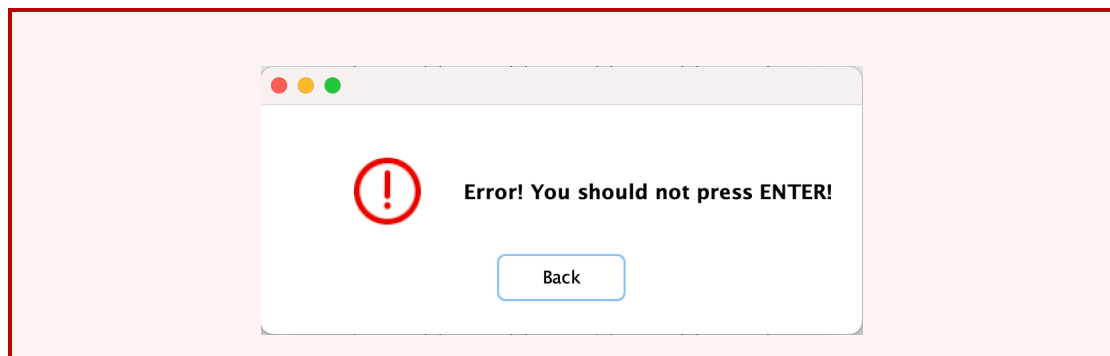
0.3.3.2 Illegal Enter

”Legal Enter” means that your enter is not identifiable. It has different types and each type will feedback a new window to show you error message.

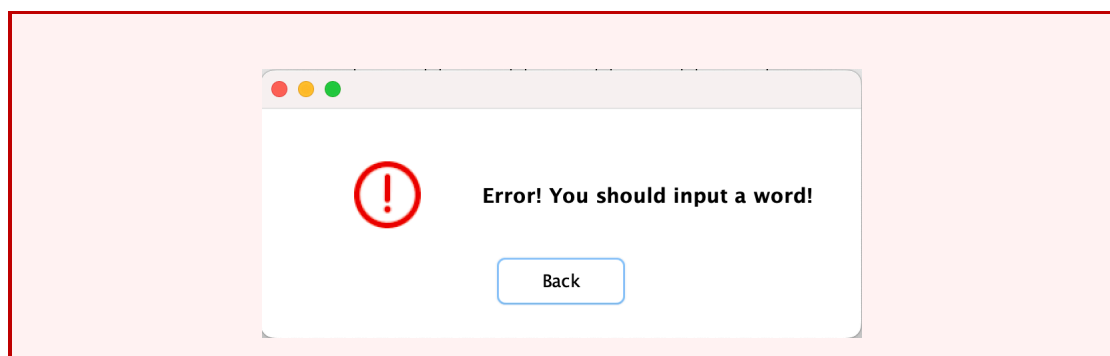
- If you enter a letter that is not an English alphabet, you’ll be show an error message as following:



- If you enter key ”ENTER” before your have entered 5 legal letters, you’ll be shown an error message as following:



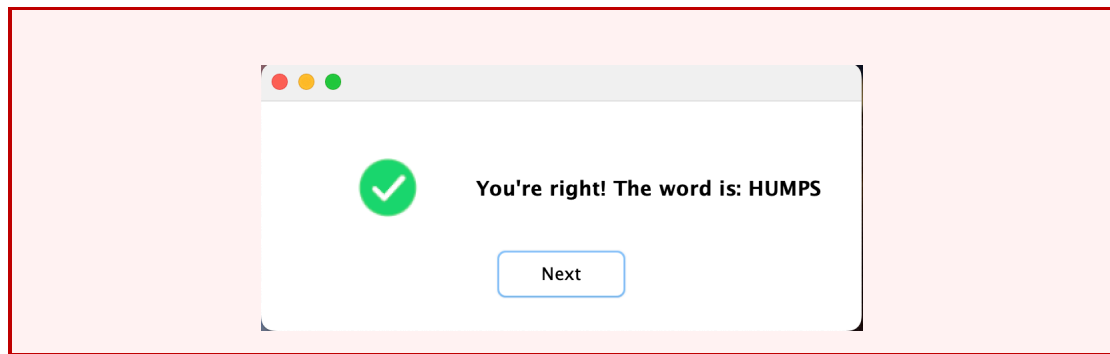
- If you have entered 5 legal letters, but the word consisting of these five letters is not a legal word, you’ll be shown an error message as following:



0.3.4 Game Over

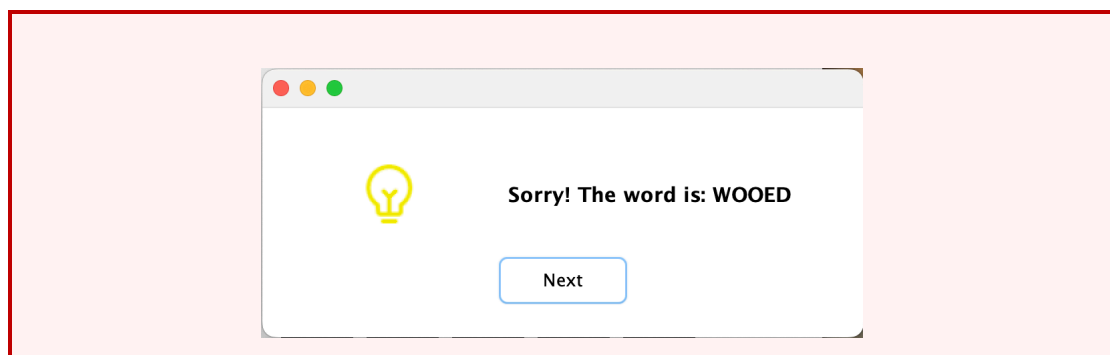
0.3.4.1 Win the game

If you find the word and enter it successfully in 6 times, you will win the game! And then, You will receive a message telling that you’re correct and correct word.



0.3.4.2 Fail the game

If you try to enter a valid word 6 times without finding the correct word, you will receive a message telling you the correct word and game over.



0.3.5 Encourage words

After each failed attempt until the end of the game, the label at the top of the interface prints **a word of encouragement**. Also considerately, words of encouragement are related to the number of attempts.

0. New Game!
1. Try again!
2. Come on!
3. Hurry up!
4. Don't give up!
5. The last chance!

At the same time, if you find the word, the label will prints **Congratulation!**

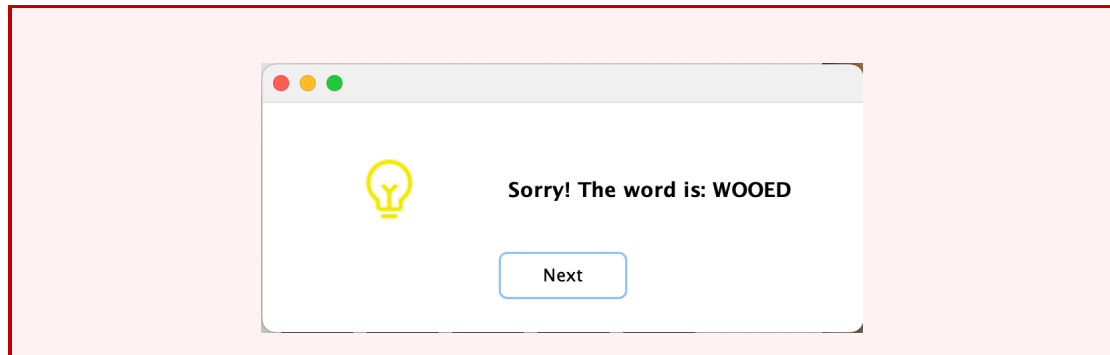
0.3.6 Buttons

For all buttons in the message prompt box, if it is the back button, you can return to the original interface after clicking. And if it is the next button, you can start a new game after clicking.

Here is the information and function of the two buttons at the bottom of the game interface.

0.3.6.1 Answer button

You can get the current word by clicking the answer button. Note that you can only start a new game when you know the word via this button. And then you'll know the word from the message as following:



0.3.6.2 Next button

You can start a new game by clicking the next button. Note that starting a new game will clear the interface and you will lose all input.

0.4 Developer's words

The above is the zWordle user guide for version 1.3.

Due to time reasons, it may not be perfect, and there are still many interesting features that have not been added in time. If you have any suggestions or interesting ideas in the process of playing, you can contact the developer through the following email address:

z.yan@se20.qmul.ac.uk

or leave me a message at github in the Foreword:

<https://github.com/zzyzh/zWordle>

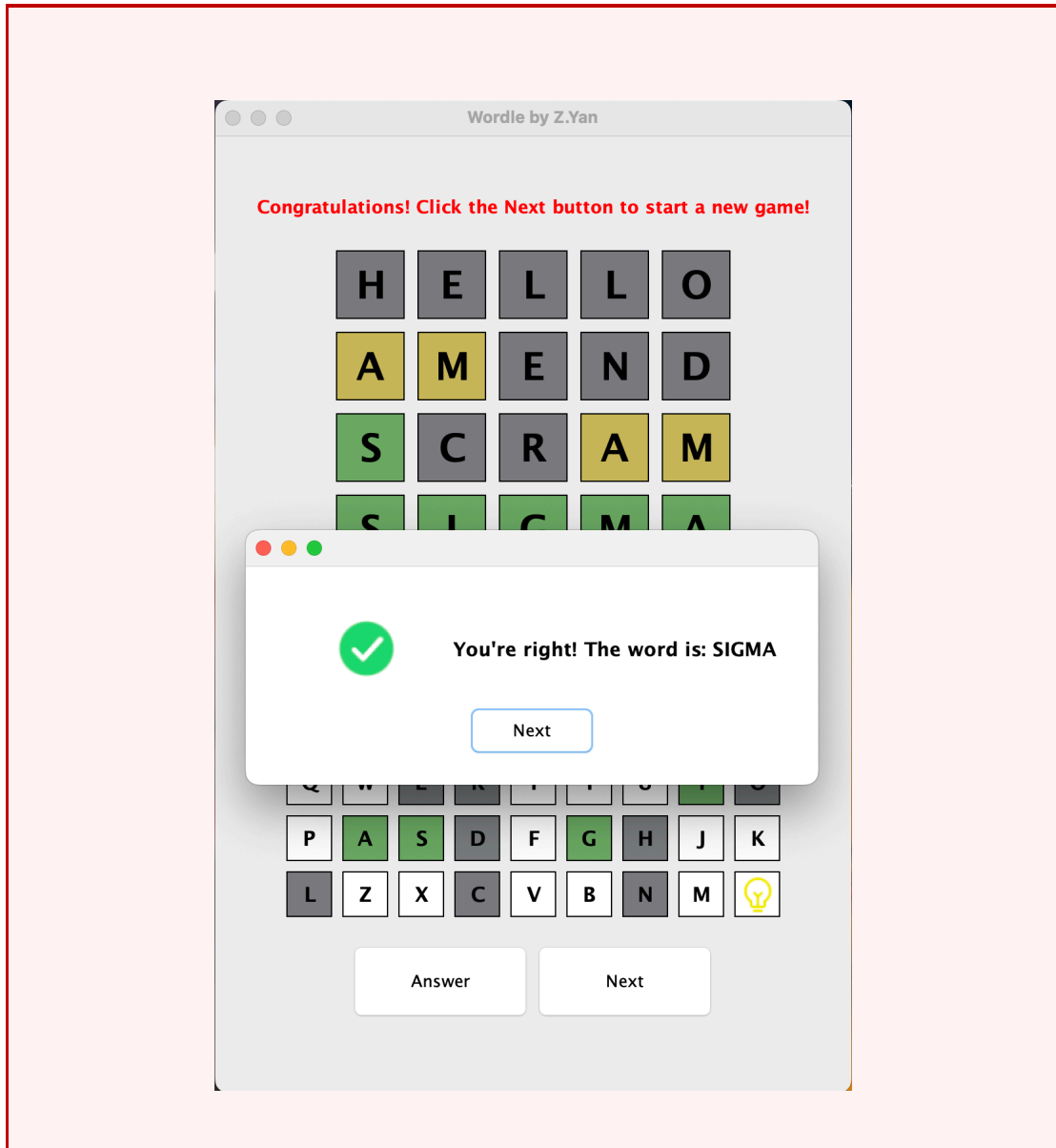
Your suggestion will help me do better, thank you for playing!

Appendix

Test evidence of zWordle.

Win

Current word is **SIGMA**.



Fail

Current word is **WIDER**.

