SpeedTyper

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CS461P Open Source Software Development

Project Information

Project Name: SpeedTyper

License: GNU General Public License v3.0

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Project Purpose

- SpeedTyper intended as a free and fun way to test and hone typing skills.

- Intended Users:
  - Professionals who need solid typing skills for work.
  - Schools for use with students and teachers.
  - Users who want to kill time productively.
- Other Options:
  - Typeracer.com
  - Mavis-Beacon software

Project Scope

- SpeedTyper is a web-app that randomly selects from a variety of phrases.
- Users must type in the phrase as fast as possible and accurately to win.
- SpeedTyper tracks Words Per Minute, and errors.

- Implemented using Javascript and HTML.
- Used an open source HTML5 game framework called Phaser.
- Game moves through states to allow users to repeatedly play the game and update the display.
- Not currently hosted anywhere on the web.

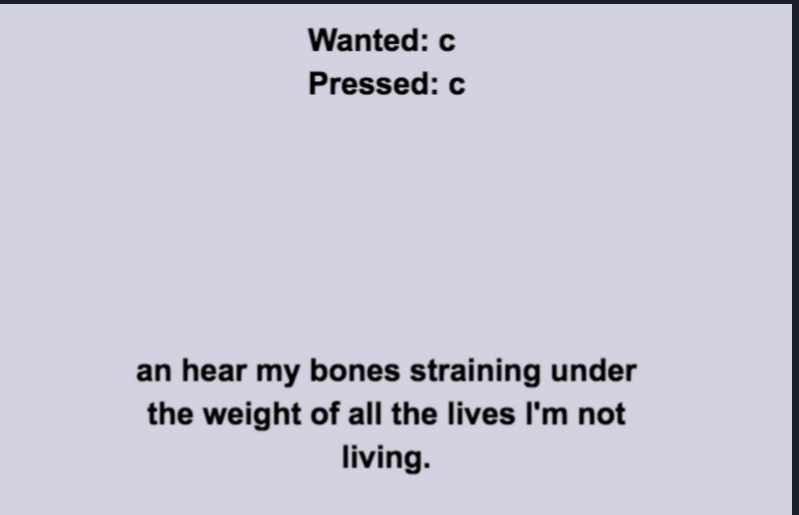
Opening Screen - State 1

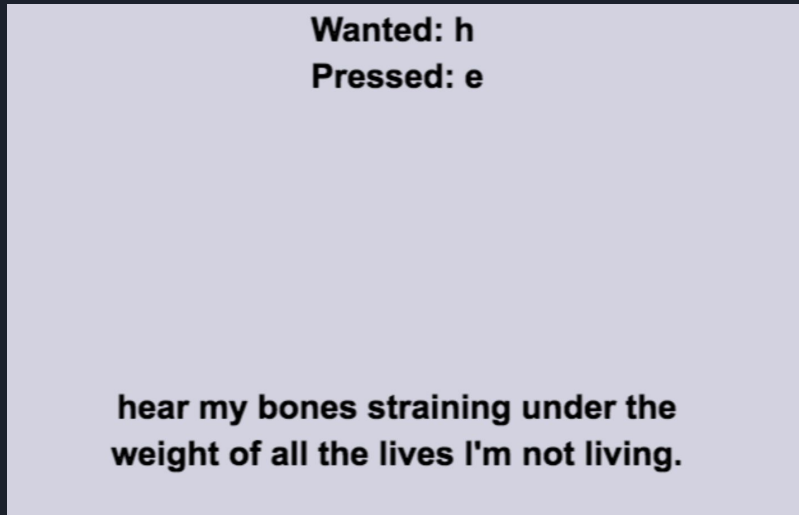
Interactive button to move to the “game” state

Game Screen - State 2

The game first randomly selects a phrase.

All input is tracked by the game and it updates the display to show what the user pressed vs. what is needed. Only correct input allows the user to move forward with typing the phrase.

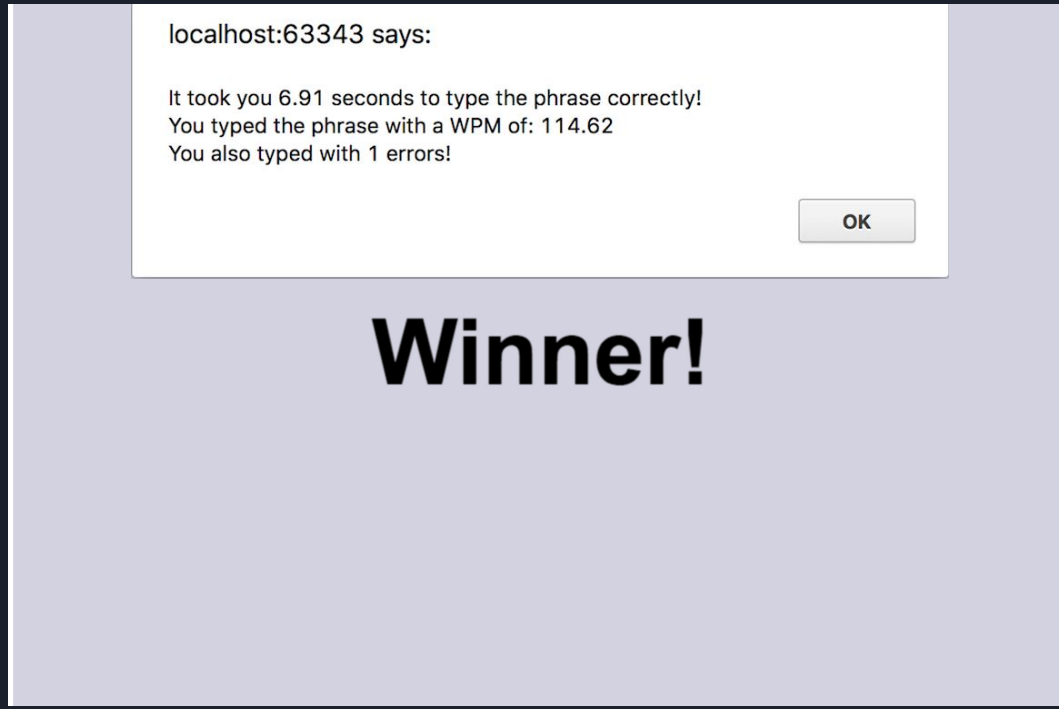




Win Screen - State 3

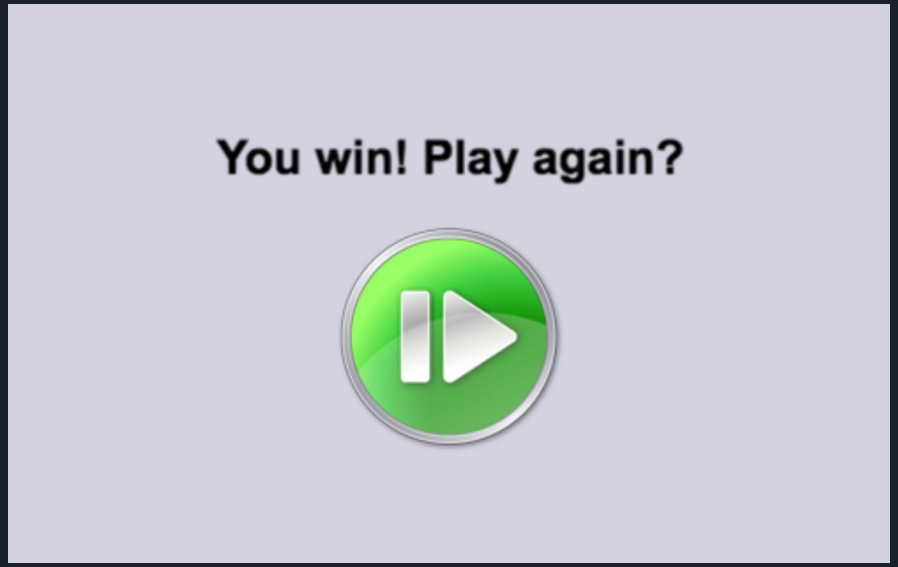
Game state passes relevant information to the Win Screen which then alerts the user e.g. Elapsed time, WPM, and errors.

Pressing OK moves us to the final state



Restart - State 4

Pressing the button moves us back to state 2 - the game screen and plays the game again.



Project Design - Successes

- Decided on JavaScript and HTML because I have never done development using those tools.
- Using the open source Phaser library allowed me to control game states easily.
- Phaser also allowed for easy control over keyboard input, which is integral to the project's success.
- Implementing the project in JavaScript and using Phaser will allow for further development to be scalable and turn the project into a fully-featured web-game.

Project Design - Failures

- Originally implemented the project in Python, but found the PyGame library to be subpar for the project.
- Ramping up on web development and JavaScript/HTML took more time than intended coming from a non-web background.
- Due to switching implementations the project is not as fully featured as it would be had I stuck with one language throughout.

- First time doing an open-ended solo project in a limited timeframe. Learned why proper implementation planning and scope decisions are important.

Future Improvements

- Host the project on a proper domain.
- Connect SpeedTyper to a database; allowing for expanded options of phrases to choose from.
- Use database to implement User information and allow for saving scores, and tracking progress.
- Update graphics and sounds for the game to make it more attractive.
- Add better error analysis to show users what mistakes are the most common.
- Develop multiplayer functionality to allow users to race against each other in real time.

Questions