Typing War

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Background & Purpose

As a part of our CIS 526: Web Interface Design course, we needed to create a website for our final project. We wanted to use the topics that we've learned so far in the class, including routing, authentication, incorporation of a database, and the use of websockets.

Typing War is the result of our brainstorming. It pits two users against each other in a speed typing challenge where you can mess with your opponent!

Results

The end result of our production is a web-application based on node.js, using Express and many other node modules for its running.

Sign up or don't, the choice is up to you! People who don't have an account can hop on and play against an opponent anytime, although signing up as a user is easy and certainly has its perks. Users can keep track of their max scores and past games, and can appear on our scoreboard of top players! User information is stored in a sqlite3 database for use by the server.

Our sign in page uses RSA-2048 asymmetric encryption coupled with SHA-256 signature hashing to protect user information on its way to the server, so that attackers listening to your connection can't get their hands on your data! Session persistence is secured with AES-256 Counter Mode symmetric encryption, so that users don't have to worry about attackers messing up their user experience.

Users are matched in an invisible lobby when they choose to start a challenge. Upon being matched, websocket connections are made so that players can see each other's input, and know exactly how well their opponent is doing! Before the timer runs out, users must type the prompted text from one of three available sections in order to build common phrases or sayings. If an opponent completes the word before a user, then the challenge updates, and the user has lost his chance to complete that word! All is not lost however, because users can always go to their opponents text prompt and delete their words! Users must be careful when deleting an opponent's text though, since an opponent can always catch a user that is active in their text box, stunning them for a few seconds. Once the game is done, player's scores is calculated by the words completed, with longer words awarding more points. The player with the most points wins!

We would simply use a Creative Commons LLC license for our project. This license allows us to share the software and source code for modification and use, however does not allow people to sell the software for commercial use. We would market this software by making it a public Github repository to allow people to visit the repository and get the source code, as well as publishing links to the project on our personal web pages. We would not be able to pursue a patent for this software because patents are typically for inventions, and for software to qualify for this it would need to follow very specific requirements which our app does not meet. The goal of this project is to allow for open use of the project for learning purposes, not for commercial.

Conclusion

We divided work among the three of us:

Matt-
- Authentication and security
- Websocket connections
- Game challenge logic

Jake-
- Dynamic Web Pages
- User Interface
- Database creation

Gannon-
- Game features
- Poster designer
- Concept designer

We used Github as our versioning control, and we worked pretty well together using Agile methodology and keeping track of our work on a Kanban style board using Tello.

Recommendations for Future Work

In the future we plan to implement more features such as profile information, and sending friend requests. This can be used in the real world as a starting point for people to learn how to do things like user authentication or dynamic page development. Since we are releasing under a Creative Commons LLC license, our project can be improved by anyone seeing as it is open source license.