

## **CSE 312 Project**

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### **SocketIO Report**

For this project, when dealing with the web sockets/long polling requirement, we utilized web sockets, to make sure that any tab that had our site open would have the same content. This required using, two libraries/tools. One for the backend and one for the front end. For the front - end we used, SocketIO. The idea is that SocketIO will work with Flask SocketIO. Socket.IO is a library that consists of a Node server and a Javascript Client for the browser. It also has the functionality to understand when the socket connection has been severed and can close the socket. While this is not an implementation of Web Socket(this is handled by Flask Socket IO), this library is responsible for ensuring all of the socket data displays synchronously and finding out the status of each socket. It is responsible for the communication between the client and the server. It has support for auto reconnection. This means that it will constantly try to keep the server and client and will try to keep connecting them forever unless told to disconnect. Through this library and the Flask Socket IO library, we have concurrent web sockets abstracted away for us. The job of handling, updating and sending information to the web sockets is taken care of. SocketIO is also responsible for making sure that the connection lives on between the client and the server. It ensures, that this connection. It uses engine.io, which essentially starts by developing a long polling connection and if given the chance upgrades to WebSocket if needed. The idea is that through SocketIO, we are given the functionality to update the front end easily

when the backend client updates the WebSockets. SocketIO is responsible for the client-server connection for sockets and to ensure that the frontend displays.

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### A Couple of Links to the SocketIO Code and Documentation

SocketIO Documentation:

<https://socket.io/>

SocketIO Github Code Repo:

<https://github.com/socketio/socket.io>

Socket IO Engine.io Web Server Code:

<https://github.com/socketio/engine.io-client>

<https://github.com/socketio/engine.io/blob/master/lib/server.js>

- This code specifically sets up the client-server which will be connected to the server to update the sockets

Socket Code:

<https://github.com/socketio/engine.io/blob/master/lib/socket.js>

- This code works on the functionality for sockets and for things like when to close them, and how to keep running them forever.

