

CPSC 473: Front-End Web Engineering - Summer 2018

Homework 5, due 19 July 2018

In this assignment, you will start a new application, **Chattrbox**, and work with **Node.js** to build a custom back-end.

Complete the following:

1. Work through Chapter 15 (Introduction to Node.js) to set up the `chattrbox/` directory and create `index.js`.

2. Complete the *Bronze Challenge: Creating a Custom Error Page* from Chapter 15.

Load the page from `app/error.html`, and include the appropriate image from `https://http.cat/`.

3. Complete the *Silver Challenge: Providing a MIME Type Dynamically* from Chapter 15.

When you push this homework assignment to GitHub, include the files you tested in your `app/` subdirectory.

4. Work through Chapter 16 (Real-Time Communication with WebSockets) to create `websockets-server.js`, install `wscat`, and test the results.
5. Add a `/topic` command to the chat server to track what users are discussing in the chat. If any user types a string like this:

```
/topic Chatting about WebSockets
```

All connected users should receive this string:

```
*** Topic has changed to 'Chatting about WebSockets'
```

Users who are not connected should not see this message (i.e., the `/topic` command should not be saved in the array of previous messages to be sent to each user.)

Instead, the first message that newly connected users should receive is the current topic:

```
*** Topic is 'Chatting about WebSockets'
```

Newly connected users should then receive all the previous messages.

6. Push the contents of your project to a new GitHub repository using a git client (e.g., the [git](#) command-line client, [GitHub Desktop](#), or [GitHub for Atom](#)). Do not submit files using drag-and-drop onto the repository web page, and do not push this assignment to the same repository as your previous homework assignments.

Submission

Turn in the code for this homework by uploading your `chattrbox/` directory to a public repository on GitHub. While you may discuss this homework assignment with other students, the work you submit must have been completed on your own.

To complete your submission, print the following sheet, fill out the spaces below, and submit it to the professor in class by the deadline. Failure to follow the instructions exactly will incur a **10%** penalty on the grade for this assignment.

CPSC 473 Homework Submission 5, due 19 July 2018

Your name _____

Repository <https://github.com/>_____/_____

Verify each of the following items and place a checkmark in the correct column. Each item incorrectly marked will incur a 5% penalty on the grade for this assignment.

| Completed | Not Completed | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Files placed in the <code>app/</code> directory can be viewed at http://localhost:3000 when <code>index.js</code> is running |
| <input type="checkbox"/> | <input type="checkbox"/> | Invalid URLs beginning with http://localhost:3000 result in HTTP 404 and the contents of <code>app/error.html</code> . |
| <input type="checkbox"/> | <input type="checkbox"/> | Files served from the <code>app/</code> directory have the correct MIME type. |
| <input type="checkbox"/> | <input type="checkbox"/> | When <code>index.js</code> is running, chats can be held on <code>ws://localhost:3001</code> as shown in Figure 16.4 |
| <input type="checkbox"/> | <input type="checkbox"/> | The <code>/topic</code> command works as described in Section (5) above. |
| <input type="checkbox"/> | <input type="checkbox"/> | An <code>.eslintrc.js</code> file is present in the root of the repository and all issues detected by <code>linter-eslint</code> have been fixed |
| <input type="checkbox"/> | <input type="checkbox"/> | HTML, CSS, and JavaScript code reformatted with the <code>atom-beautify</code> plugin |
| <input type="checkbox"/> | <input type="checkbox"/> | Project directory pushed to new GitHub repository listed above |
| <input type="checkbox"/> | <input type="checkbox"/> | Project directory has been pushed using a GitHub client, not by manually dragging and-dropping files onto the GitHub web page. |

Comments on your submission
