***Documentation Packet [ 15 13 12 24 ] Dec 13th 2024***

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| Student Name: |  |
| Goals:  1. Explore websockets with socket.io more 2. Learn about nodejs custom modules 3. Get caught up with past work | Events:  1. Keystones this week |
| Included Documentation  1. SocketIO Rooms 2. Reflections 3. Job Openings | Required Documentation:  1. SocketIO Rooms 2. Reflections |
| Changes/Notes:  * None | |

# Job Openings

Review the Job Openings in DocPac 15. Pick one or more positions and apply to them by the instructions.

# SocketIO Rooms

SocketIO (officially “socket.io”), is a free library for Javascript that simplifies the use of websockets. One of the great features of socket.io is automated management of “rooms”, which are subdivisions of a socket connection. When broadcasting to multiple users, you can easily select all users in a single room, instead of every user connected to the server.

In this assignment, create a chatroom like Websockets Chat. You will not need the user list for now.

1. Create a NodeJS application that has an express HTTP Listen server as usual
2. Use your own login system or Formbar Oauth2 to get the user’s name.
3. Import Socket.IO and set up according to documentation.
   1. websocket protocols require an HTTP listen server to attach to. You can store the return value of your app.listen() to have a server to attach to socket.io to, like this:

const server = app.listen(PORT, () => {

    console.log(`Server is running on port ${PORT}`);

});

const io = socketIo(server);

1. When a user connects to the websocket server, immediately place them general
2. If a user sends a message that startsWith(‘/’), it is a “slash command”.
   1. Remove the ‘/’ from the message string
   2. Use split(‘ ‘) to split the message into commands and arguments separated by a space
      1. The first element of the new list is the command. Each element after is an argument.
   3. If the command was “join”, move the user into the room with the same name as the first argument of the command.
   4. Likewise, if the command was “leave”, remove the user from the room with the same name as the first argument of the command.
   5. If the command was “users”, send that user a list of all users in the room they are currently in.
3. When connecting, joining, or leaving, send the user a “roomsList” message containing a list of names of every room they are in.
   1. Update a series of buttons or tabs on the user’s page displaying each room the user is in.
   2. When a user clicks on a button, it change which rooms their messages will go to.
4. If the user receives a message, display it in the main chat window with the user who sent it, the time they sent it, and the room they sent it to.
5. Test your work.
   1. Do your messages only go to the selected room you are chatting in, and not all rooms you are in?
   2. Do others see your message if, and only if, they are in that room as well?
   3. Does /join and /leave work correctly? Does it also send a roomList?
   4. Do roomList messages update which rooms you are in and do the buttons/tabs switch which room you are sending messages to?
   5. Are you unable to send messages if you are not logged in?

# Reflection

**If you did not apply to any Job Openings last week or this week, why not?**

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**What was one mistake you made in school or otherwise that you can recognize? What can you do in the future to prevent it from happening again?**

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**What personal projects are you working on. If you are not working on any, why not?**

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**How difficult was the assignment this week? What made it difficult/easy for you?**

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# A picture containing text, monitor, screen, clipart Description automatically generatedGrading

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| 10 | You went above and beyond expectations. You applied knowledge that was not taught in this class in addition to what was taught. Additional rewards are given | * ***If the assignment does not have its own rubric, it will default to the rubric on the left.*** * All assignments start at 10/10 possible points * 1 point is deducted per infraction   + Lateness   + Mistakes   + Unprofessionalism   + Not following instructions * Outstanding submissions, or submissions on assignments not marked in “Required Documentation” can reward pogs |
| 10 | You performed as well as can be expected for this class. You show a complete understanding and made no mistakes. You have mastered the subject. |
| 8 | Assignment is complete. You show a good understanding of the subject, but there are mistakes or minor incorrect details. You are ready to move to new subjects. |
| 7 | You show and understanding of the subject, but there are serious errors, or there are pieces you can practically use without understanding them. Remediation needed. |
| 6 | Assignment is incomplete but/or you showed that you understand at least the fundamentals of the subject. Assignment is low effort. Serious need of remediation. |
| 5 | You show minimum effort, assignment is incomplete, or have serious mistakes. You did not demonstrate that you understand the content or purpose of the submission. |
| 0 | The work was not submitted, damaged, seriously incorrect, or unprofessional. The submission is rejected. |

# SocketIO Rooms

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| **8a** | Do your messages only go to the selected room you are chatting in, and not all rooms you are in? |  |
| **8b** | Do others see your message if, and only if, they are in that room as well? |  |
| **8c** | Does /join and /leave work correctly? Does it also send a roomList? |  |
| **8d** | Do roomList messages update which rooms you are in and do the buttons/tabs switch which room you are sending messages to? |  |
| **8e** | Are you unable to send messages if you are not logged in? |  |

# DocPac and Reflection *DocPac Submission Rules, DP09*

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| **1** | DocPac is turned in on time |  |
| **3** | a. DocPac is neatly folded |  |
| **3** | b. DocPac is not stained or damaged |  |
| **3** | c. No doodles, scribbles, or unnecessary writing |  |
| **4** | a. Answered each question in each prompt |  |
| **4** | b. Spelling and handwriting |  |
| **4** | c. No repeated answers from other DocPacs |  |
| **4** | d. Did not paraphrase assigned work |  |
| **6** | You are prepared to justify the use of any AI (you know what it does and why) |  |