Submission Worksheet

CLICK TO GRADE

https://learn.ethereallab.app/assignment/IT114-005-F2024/it114-module-4-sockets-part-1-3/grade/kh465

Course: IT114-005-F2024
Assigment: [IT114] Module 4 Sockets Part 1-3
Student: Keven H. (kh465)

Submissions:

Submission Selection

1 Submission [submitted] 10/6/2024 10:18:45 PM

Instructions

COLLAPSE

Overview Video: https://youtu.be/5a5HL0n6jek

1. Create a new branch for this assignment
2. If you haven't, go through the socket lessons and get each part implemented (parts 1-3)
    1. You'll probably want to put them into their own separate folders/packages (i.e., Part1, Part2, Part3) These are for your reference
3. Part 3, below, is what's necessary for this HW
    3. https://github.com/MattToegel/IT114/tree/M24-Sockets-Part3
4. Create a new folder called Part3HW (copy of Part3)
5. Make sure you have all the necessary files from Part3 copied here and fix the package references at the top of each file
    1. Add/commit/push the branch
    2. Create a pull request to main and keep it open
6. Implement **two** of the following **server-side** activities for all connected clients (majority of the logic should be processed server-side and broadcasted/sent to all clients if/when applicable)
    1. Simple number guesser where all clients can attempt to guess while the game is active
        1. Have a /start command that activates the game allowing guesses to be interpreted
        2. Have a /stop command that deactivates the game, guesses will be treated as regular messages (i.e., guess messages are ignored)
        3. Have a /guess command that include a value that is processed to see if it matches the hidden number (i.e., */guess 5*)
            1. Guess should only be considered when the game is active
            2. The response should include who guessed, what they guessed, and whether or not it was correct (i.e., Bob guessed 5 but it was not correct)
            3. No need to implement complexities like strikes

2. Coin toss command (random heads or tails)
    1. Command should be something logical like /flip or /toss or /coin or similar
    2. The result should mention *who* did *what* and got what *result* (i.e., Bob Flipped a coin and got heads)
3. Dice roller given a command and text format of "/roll #d#" (i.e., /roll 2d6)
    1. Command should be in the format of /roll #d# (i.e., /roll 1d10)
    2. The result should mention *who* did *what* and got what *result* (i.e., Bob rolled 1d10 and got 7)
4. Math game (server outputs a basic equation, first person to guess it correctly gets congratulated and a new equation is given)
    1. Have a /start command that activates the game allowing equaiton to be answered
    2. Have a /stop command that deactivates the game, answers will be treated as regular messages (i.e., any game related commands when stopped will be ignored)
    3. Have an answer command that include a value that is processed to see if it matches the hidden number (i.e., */answer 15*)
        1. The response should include who answered, what they answered, and whether or not it was correct (i.e., Bob answered 5 but it was not correct)
5. Private message (a client can send a message targetting another client where only the two can see the messages)
    1. Command can be /pm, /dm followed by the user's name or an @ preceding the users name (clearly note which)
    2. The server should properly check the target audience and send the response to the original sender and to the receiver (no one else should get the message)
    3. Alternatively (make note if you do this and show evidence) you can add support to private message multiple people at once. Evidence should show a larger number of clients than the target list of the private message to show it works. Note to grader: if this is accomplished add 0.5 to total final grade on Canvas
6. Message shuffler (randomizes the order of the characters of the given message)
    1. Command should be /shuffle or /randomize (clearly mention what you chose) followed by the message to shuffle (i.e., /shuffle hello everybody)
    2. The message should be sent to all clients showing it's from the user but randomized
        1. Example: Bob types */command* hello and everyone recevies Bob: lleho
7. Fill in the below deliverables
8. Save the submission and generated output PDF
9. Add the PDF to the Part3HW folder (local)
10. Add/commit/push your changes
11. Merge the pull request
12. Upload the same PDF to Canvas

Branch name: M4-Sockets3-Homework

Group

100%

Group: Baseline
Tasks: 1
Points: 2

COLLAPSE

Task

100%

Group: Baseline
Task #1: Demonstrate Baseline Code Working
Weight: ~100%
Points: ~2.00

COLLAPSE

Details:
This can be a single screenshot if everything fits, or can be multiple screenshots

Columns: 1

Sub-Task

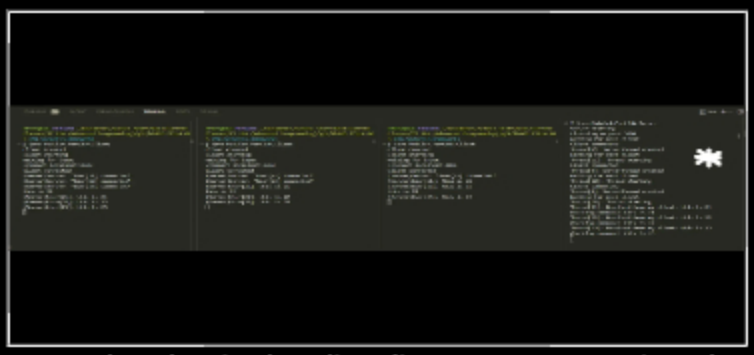
100%

Group: Baseline
Task #1: Demonstrate Baseline Code Working
Sub Task #1: Show and clearly note which terminal is the Server

Task Screenshots

Gallery Style: 2 Columns

4 2 1



Screenshot showing baseline client/server connection. The white star denotes the server.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

Sub-Task

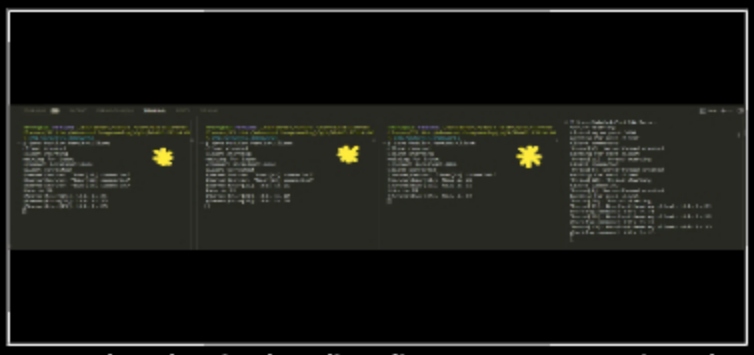
100%

Group: Baseline
Task #1: Demonstrate Baseline Code Working
Sub Task #2: Show and clearly note which terminals are the client

Task Screenshots

Gallery Style: 2 Columns

4 2 1



Screenshot showing baseline client/server connection. The yellow stars denotes the clients.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

Sub-Task 100%

Group: Baseline
Task #1: Demonstrate Baseline Code Working
Sub Task #3: Show all clients receiving the broadcasted/relayed messages

Task Screenshots

Gallery Style: 2 Columns

4 2 1

Screenshot showing baseline client/server sending and receiving messages. White denotes server, yellow denotes clients.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

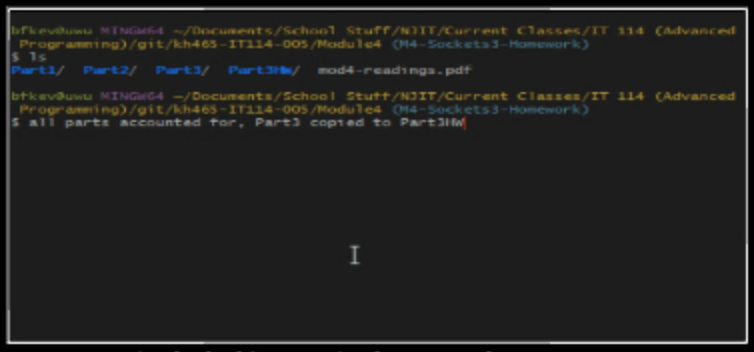
Sub-Task 100%

Group: Baseline
Task #1: Demonstrate Baseline Code Working
Sub Task #4: Include a screenshot showing you grabbed Parts 1-3 correctly and have them in your repository alongside Part3HW

Task Screenshots

Gallery Style: 2 Columns

4 2 1



Comment included in terminal screenshot.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

End of Task 1

End of Group: Baseline
Task Status: 1/1

Group

100%

Group: Feature 1
Tasks: 1
Points: 3

COLLAPSE

Task

100%

Group: Feature 1
Task #1: Solution
Weight: ~100%
Points: ~3.00

COLLAPSE

Columns: 1

Sub-Task

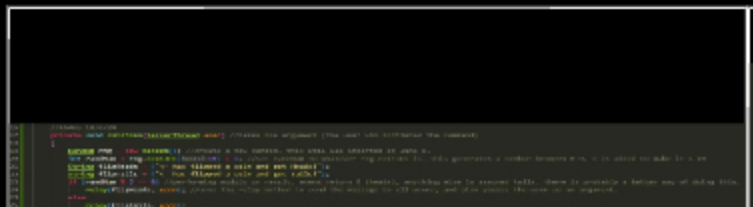
100%

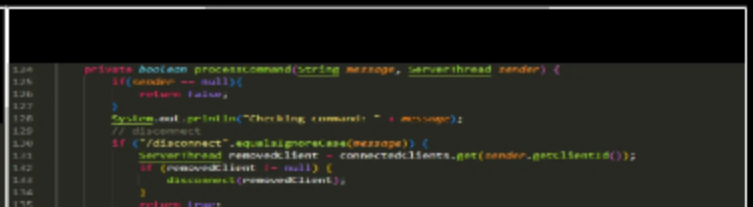
Group: Feature 1
Task #1: Solution
Sub Task #1: Show the code related to the feature (ucid and date must be present as a comment)

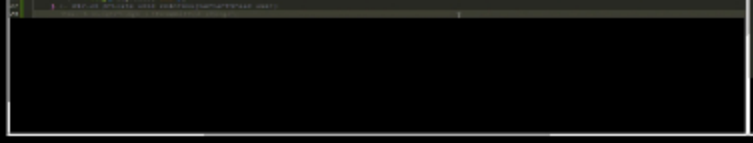
Task Screenshots

Gallery Style: 2 Columns

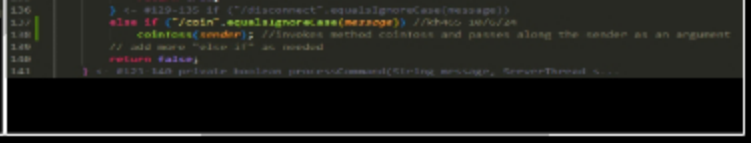
4 2 1







Code relating to flipping a coin. UCID and date are included in the screenshot.



Command in processCommand to start coin flip. UCID and date are included in the screenshot.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

Task Response Prompt

Mention specific feature and explain sufficiently and concisely the implementation (should be aligned with code snippets)

Response:

A new method called coinToss was created, which creates a new Random, sets the int randNum to whatever nextInt returns (which has a boundary of 10 + 1 so it's 1-10 inclusive), performs modulo on randNum to determine if it's heads (randNum % 2 == 0) or tails (randNum % 2 !== 0). Depending on if the modulo equals 0 or not, the relay method is used to send this message to the server and all other users connected.

Sub-Task

100%

Group: Feature 1

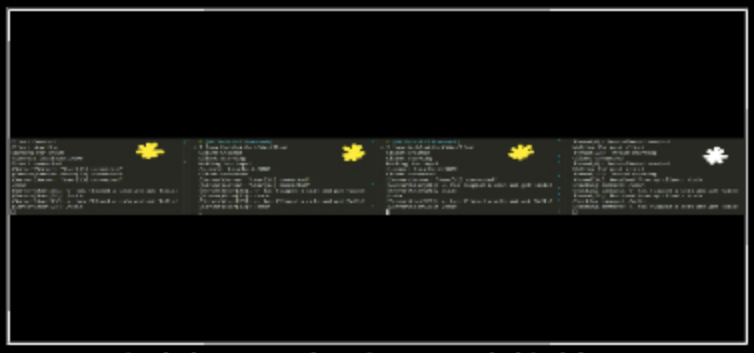
Task #1: Solution

Sub Task #2: Show the feature working (i.e., all terminals and their related output)

Task Screenshots

Gallery Style: 2 Columns

4 2 1



Two terminals have used /coin, server (white) has responded to both but relayed it to all connected clients (yellow)

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

End of Task 1

End of Group: Feature 1

Task Status: 1/1

Group

Group: Feature 2

100%

Tasks: 1
Points: 3

COLLAPSE

Task

100%

Group: Feature 2
Task #1: Solution
Weight: ~100%
Points: ~3.00

COLLAPSE

Columns: 1

Sub-Task

100%

Group: Feature 2
Task #1: Solution
Sub Task #1: Show the code related to the feature (ucid and date must be present as a comment)

Task Screenshots

Gallery Style: 2 Columns

4 2 1

Code relating to rolling dice. UCID and date are included in the screenshot.

Command in processCommand to start dice roll. UCID and date are included in the screenshot.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

Task Response Prompt

Mention specific feature and explain sufficiently and concisely the implementation (should be aligned with code snippets)s

Response:

A new method called diceRoll was created which accepts three arguments, int diceAmount, int diceSides, and the user who called the method. The method creates a new Random named rng, creates an array of ints named diceVal, which is the length of diceAmount. A for-loop then iterates through the length of the amount of dice, and sets the index of diceVal to whatever the current value of rng.nextInt is, which is bound by diceSides. This is then put into a String named diceRoll for easier reading, and finally the relay method is used to send the message to the server and all other users connected.

Sub-Task

100%

Group: Feature 2
Task #1: Solution
Sub Task #2: Show the feature working (i.e., all terminals and their related output)

Task Screenshots

Gallery Style: 2 Columns

4 2 1

A client has used /2d6 twice with different results; visible to all other clients. White denotes server, yellow denotes clients.

Caption(s) (required) ✓

Caption Hint: *Describe/highlight what's being shown*

End of Task 1

End of Group: Feature 2
Task Status: 1/1

Group

100%

Group: Misc
Tasks: 3
Points: 2

COLLAPSE

Task

100%

Group: Misc
Task #1: Reflection
Weight: ~33%
Points: ~0.67

COLLAPSE

Sub-Task

100%

Group: Misc
Task #1: Reflection
Sub Task #1: Learn anything new? Face any challenges? How did you overcome any issues?

Task Response Prompt

Provide at least a few logical sentences

Response:

I have learned a lot from this homework assignment. I have never done anything server related in any of my other programming classes, and this was very interesting, somewhat fun and very complicated. The main challenge was figuring out how to properly process the command and send it to both the server and all clients connected. In addition, creating the diceRoll method was more complicated than I initially thought it would be due to not knowing how to properly use RegEx. After reading some documentation and experimentation, I was able to somewhat properly use RegEx. I believe if I continue to have assignments similar to this I will be more comfortable coding for client/server interactions and using RegEx.

End of Task 1

Task

100%

Group: Misc
Task #2: Pull request link
Weight: ~33%
Points: ~0.67

COLLAPSE

Details:
URL should end with /pull/# and be related to this assignment

Task URLs

URL #1
https://github.com/kh465/kh465-IT114-005/pull/11

URL
https://github.com/kh465/kh465-IT114-005/pull/

End of Task 2

Task

100%

Group: Misc
Task #3: Waka Time (or related) Screenshot
Weight: ~33%
Points: ~0.67

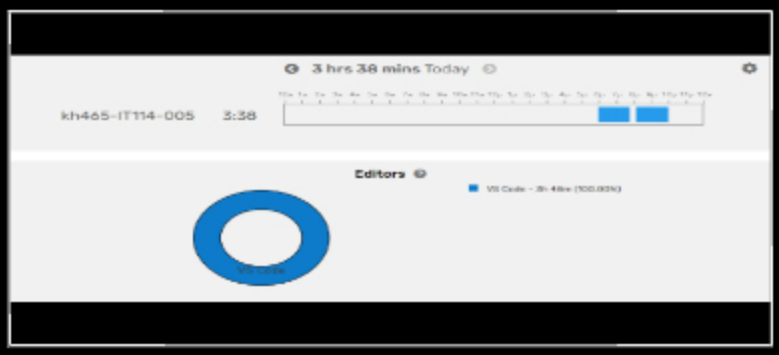
COLLAPSE

Details:
Screenshot clearly shows what files/project were being worked on (the duration of time doesn't correlated with the grade for this item)

Task Screenshots

Gallery Style: 2 Columns

4 2 1



WakaTime from today (10/6/24)

End of Task 3

End of Group: Misc
Task Status: 3/3

End of Assignment