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CS 4323
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Group E Mini-Project Final Progress Report

Patrick Laverty

Patrick was responsible for synchronization and response control from server to client. Responsible also for the debugging process when it came to network synchronization, took many steps to complete the socket receive and return process correctly.

I. Handling of user response
II. Handling of game processes
III. Handling of game instructions.
IV. Debugging synchronization issues

Patrick's code is throughout the program where sockets interact and return information to the client. He tackled issues in synchronization by debugging the program and using statements to figure out where the program was having issues. Due to time constraints and home issues, he was unable to complete a lot of what he was wanting too. In theory, we would have a scoreboard if some issues did not appear in his personal life. He was able to demonstrate an effort for the group by making things that were once barely working to somewhat working.

Adam Loeckle

Adam was originally responsible for creating the POSIX message queue system along with handling the player structs. Due to time constraints and incomplete code, he took over the responsibility of creating the server, server to client communication methods, client to server communication methods, player turn logic for synchronization to the client, along with his initial commitment to building the POSIX message queue system and player structs. He was also responsible for ensuring proper receive and send communication over TCP between the client and server. These methods are shown in the playerTurn(), createServer(), and clientGame() functions in his C file.
Adam completed the entirety of the final server-client architecture, beyond his initially assigned responsibilities due to extenuating circumstances causing unavailability of fellow group members. Krish assisted him in this including the complete rewrite of the entire codebase to align with the control flow of game logic. This became the final submission.
Adam delivered on all allocated workload and responsibilities, going beyond his scope to complete tasks assigned to other teammates due to unavailability, alongside Krish.

Drew Nguyen

Responsibilities initially included client-side communication related tasks and assisting Adam with minor gaps on the client side. However, further progression in the assignment proved difficult to independently keep synchronization of server and client architecture. With this in mind, a transition to assisting Adam over screenshare was made in order to minimize confusion. Assistance included:

I. Initial client structure
II. Client socket
III. Building on to the Client structure that Adam had adapted
IV. Assisting with independent methods that were adapted to server side
V. Assistance with turn passing and penalizations
Vi. Compartmentalization

Drew was unable to attend the initial meetings; however, afterwards was able to properly attend the following meetings with the inclement weather in mind. Deliverables reflected the inexperience in his ability to work on group projects; but, was able to demonstrate an effort.

Krish Ravi

Responsibilities were exclusively game logic - essentially a local implementation of the wordbuilder game with working logic that would then be adapted into the server-client architecture by other group members. This included:
I. Logic to randomly select an input.txt file and display it to the player
II. Logic to randomly select a letter from the select file and display it to the player, then to validate if the starting character is the correct one
III. Logic to validate whether the player has entered a valid wordbuilder word for each subsequent word from the first turn
IV. Logic to check if the the valid wordbuilder word is in dictionary.txt
V. Logic to check if the valid wordbuilder dictionary word has been used this game
VI. Logic to check if the valid wordbuilder dictionary word is already in the input.txt, and append it to the file if it is not
VII. Logic for a Computer turn - to go through the selected input.txt file to select a valid wordbuilder word in response to the player turn that specifically had not yet been used that game
These were all implemented locally as Krish started working on and finished his assigned tasks before server-client architecture was properly implemented by the group.

Once Krish finished his assigned tasks, he helped others in a group context on debugging, testing and researching for their assigned tasks. Krish attended every work session without fail, as reflected on the designated GroupMe and Discord server for the project, including being the one to reach out to group members and set up the same.
Krish alongside Adam also implemented passing and scoring logic as from discussion with the team, this would need to work in tandem with the server-client/POSIX architecture and player struct. Similarly, multiplayer logic was not implemented as it would be a simple adaptation of the Singleplayer logic to do locally, and relied on waiting for the server-client architecture to be in place. Ultimately, the group decided as a whole to drop Multiplayer.
Krish alongside Adam later worked the control flow Krish laid out for the gamelogic into a completely rewritten server file that became the final submission, including implementation of passing logic.
Krish also did the progress report, the final progress report and both UMLs.
Krish delivered on all allocated workload and responsibilities, assisting beyond his scope to help teammates troubleshoot and adapt code as necessary, as well as assisting Adam in filling in for absent teammates. All the code in krishravi.c was used as working game code to adapt for the Singleplayer client-server game.