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https://github.com/NobleWolf42/CSC108-Tutor

Weekly Progress Report – 03/15/25

Last Week – 03/08/25:

I got the backend to work with message history, while my teammate set up the front-end storage that I then passed to the backend. It is now fully functional across the board. I added the missing animations and a clear history button. I had a friend test it and for the most part she thought it worked fine, but was having issues seeing chapter 4. After my teammate cleaned up the text files the results got a lot better. As of right now we still need to do more testing, mainly asking questions form the first 4 chapters of the ZyBooks for CSC108. I want to look deeper into the first chapter’s usefulness because at least some of the sections don’t seem to be helpful and seem to be hyper-fixated on by the AI (Specifically 1.09 for some reason). I also added a logging function that saves a log of all messages and responses; however, this was finished after my friend had tested it earlier. I am hoping to get more info from people during class on Saturday.

Based off of my limited testing it does prompt for mor info on vague questions, it has issues recognizing the user’s code, It can answer some conceptual questions, but it has issues with loops because the RAG seems to get stuck on chapter 3 and not 4, It provides a lot of info for debugging if you pass the code directly, It does explain concepts relatively well, but the depth could use some adjustment.

Have people ask it questions from beginning (cin/cout) through loops, but not beyond that as for right now it does not have that information.

This Week - 03/15/25:

This week I was focused on adding the feedback features. The Tutor now covers all of CSC-108. It has a section select feature that helps the responses to be more on point (no more trying to pull from chapter 2 for a question about loops). The Prompts have been refined so that it is overall better at seeing the separate elements (message history, context data, user question, user code) as separate elements. I also made the scrolling when a message was received from the bot default to the top of the bot’s message instead of the bottom. I added a built-in feedback form for easier feedback submission. I also did some backend work to make it so we are not using weird ports on the live web version (It now works on campus). I also added a memory system so if you reload the page, it remembers your history, chapter, and code from the last submission. Overall, the responses are more focused, accurate, and aware, but it will still occasionally grab the wrong context information. I set up the big version of the poster PowerPoint based oof of a normal PowerPoint my teammate gave me.

Next Week - 03/22/25:

Improve the poster based off of this week’s feedback.