EE/CprE/SE 491 WEEKLY REPORT #4

Feb 20 – Feb 26

Group number: sddec23-15

Project title: Discord Bot Integration for Replit Teams for Education

Client &/Advisor: Joseph Zambreno

Team Members/Role: Cole Mullenbach, Kristen Nathan, Kyle Rooney, Patrick Demers, Sophie Waterman Hines

---

- **Weekly Summary**

We started diving into the creation of our own bots after getting the go ahead from Dr. Zambreno last week.

- **Past week accomplishments**

Kyle Rooney

I was able to successfully set up my own discord bot for testing purposes using python. I just created basic responses to test interactions for the bot. I was successfully able to send a message in a discord channel and have the bot reply back to me with a preset message. I was even able to create a function where if the message starts with a “?” the bot will send a reply back in the form of a private direct message. Lastly, I did some research on using emojis to interact with the bot and was able to find some success using them. I created a function that identifies if a message has been interacted with. I am hoping to soon figure out how I can use this knowledge to create replies that will help out the CPR E 161 class.

Kristen Nathan

Learned how to import a bot into discord. Created a text channels for the team to being testing the bot. Started to design and brainstorm how the bot will interact with students. This includes going into user interaction and user experience. Started developing example responses for students questions including examples of how to use functions or make changes depending on the errors given.

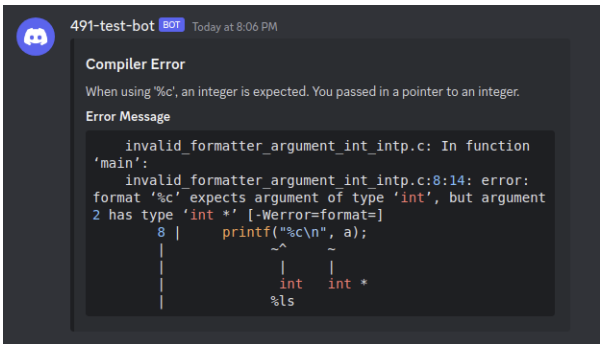
Cole Mullenbach

Started working on my own bot and got the framework down. Will be working on implementing everything this week. I did some research on how to get the emojis to be used in the response to the bot to get more feedback or to let it know you need higher level help or you figured it out. That will be what I am going to work on implementing this week also.

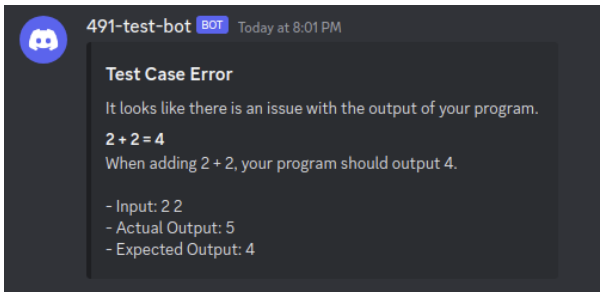
Patrick Demers

Now that the error parser is complete, Patrick worked to document the codebase. Documentation includes Python type hints, docstrings, and a README. During the design phase, it is important to document exploratory work that is performed. When looking at this work come implementation time, it will be much easier to understand.

Patrick also began creating example interactions a student may have with the Discord bot. The two examples show proposed output from the bot when an analyzed program 1) finds a compiler error and 2) runs a test case which yields invalid output. Screenshots are shown below.



Example output when the bot analyzes a program which generates a compiler error.



Example output when the bot analyzes a program which does not meet test case requirements.

Sophie Waterman Hines

I finally began testing discord bot capabilities and began work on the git wiki pages. Since we established roles last week, I've begun to compile a list of what will need to be documented during the course of the project. The purpose of documentation for this project is twofold: having a comprehensive list/log of changes made to the bot and an overall timeline of progress, as well as having a user manual to make importing and understanding the bot easier. I also began to research human/machine interactions to learn more about making our bot easy to engage with.

- **Pending issues**

Kyle had a weird issue where simple code that should be working was not. He eventually closed the program and tried it the next day and it worked as expected without changing anything. Hoping that this issue does not keep happening and that it does not happen to anyone else.

- **Individual contributions**

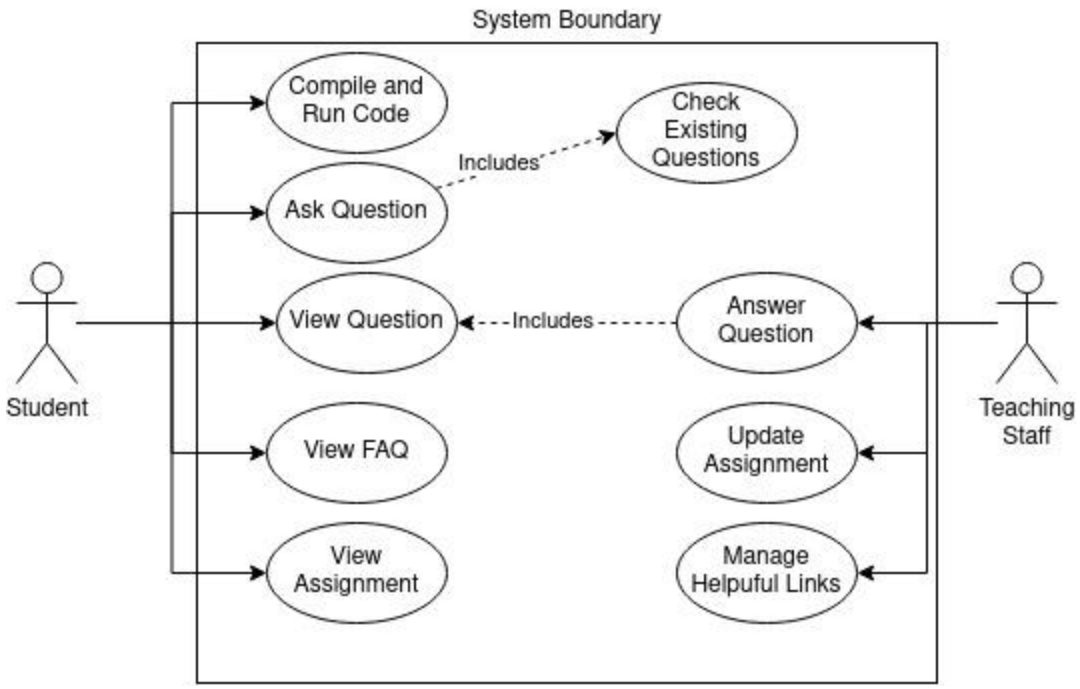
NAME	**Individual Contributions** (Quick list of contributions. This should be short.)	**Hours this week**	**HOURS cumulative**
Cole Mullenbach	Learned about the emoji responses in a discord bot	4	12
Kristen Nathan	Starting designing user interface and interaction. Began creating examples for the bot responses.	2	8
Kyle Rooney	Created my own bot for testing. Was able to create a few functions involving interactions with the bot.	5	13
Patrick Demers	Document error parsing codebase, create a testing Discord bot, generate sample interactions.	6	22
Sophie Waterman Hines	Created my own discord bot for testing, began writing git wiki pages, researched user/machine interactions.	6	15

- **Plans for the upcoming week**
    - Sophie Waterman Hines: Complete git documentation skeleton and continue work on discord bot development.
    - Patrick Demers: write a design document detailing options for fetching student code.
    - Kristen Nathan: Create a full list of examples that can be used when a student asks how specific functions work. Create mock ups of bot and user interaction as well as instructor and user interaction. Add a testing bot to my testing channel in discord. Document potential responses that can be given based on specific student questions.
    - Kyle Rooney: Dive deeper into the potential of using emojis to react to messages. I want to be able to have different emojis do different things when used.
    - Cole Mullenbach: Work on implementing emoji responses on my bot

- **Summary of weekly advisor meeting**

The team did not meet with Dr. Zambreno this week.

Use Case Diagram


System Boundary
Compile and Run Code
Check Existing Questions
Includes
Ask Question
View Question
Includes
Answer Question
Student
Teaching Staff
View FAQ
Update Assignment
View Assignment
Manage Helpful Links