CS4530 Final Project: Code Ducky

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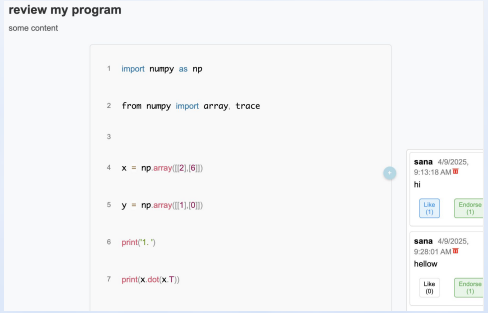
Our Feature: Code Reviews

Fake Stack Overflow is a platform for people to improve as software developers and get answers to difficult questions they may have in the world of software. While the existing questions tab does provide some avenue for code feedback, it was lacking in the rich functionality needed to efficiently and effectively provide feedback on code snippets. To address this, we built Code Ducky, an extension of the Fake Stack Overflow interface that includes code reviews. These code reviews include syntax highlighted pieces of code that reviewers can both suggest edits for and provide inline comments to individual lines. Users can also run the provided code snippets to see the current code output. Additionally, we added groups to allow users with different interests to find each other, and to allow code reviews to be assigned to specific groups. There is also a reputation system with a leaderboard to allow users to determine the best feedback for their codebase

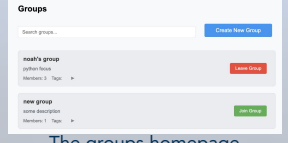
Demo & Source

Demo: https://cs4530-s25-502-frontend.onrender.com
Source Code: Link

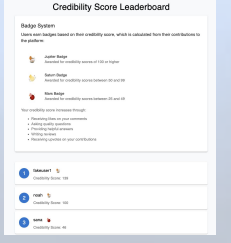


Our code review page with inline comments shown

A code execution user manual diagram



The groups homepage



The leaderboard with the credibility system explained

Tech Stack and Design

Our feature is built on top of the Fake Stack Overflow codebase to implement code review panels, and groups. Reviews allow users to upload their code and receive feedback on it in a window from other users in the form of edit suggestions and inline comments. Our primary review areas are managed by a reviewController, a snippetController, and sub-controllers for any specific features like edits or inlineComments. We utilized the flexibility of our nested sub-controllers to enable and extensible feature that can further be improved with minimal developer lift.
For UI we use Prismjs for syntax highlighting. We also enable the running of uploaded code snippets. Using groups, we can enforce membership requirements for specific reviews and provide moderation capabilities. All of our data is stored in a MongoDB database. All of this makes for an extensible code system that enables code reviews in an efficient and effective manner.

Future Work

In future work, we would like to allow users to assign badges to specific comments or edits as a way of signifying that a review has specific qualities. The reputation system could generally be expanded to have more depth, especially in a group specific context. Features like having a credibility score within a group and having perks come from that would add to the depth of the site, encouraging users to share their specific expertise.

Group 502