



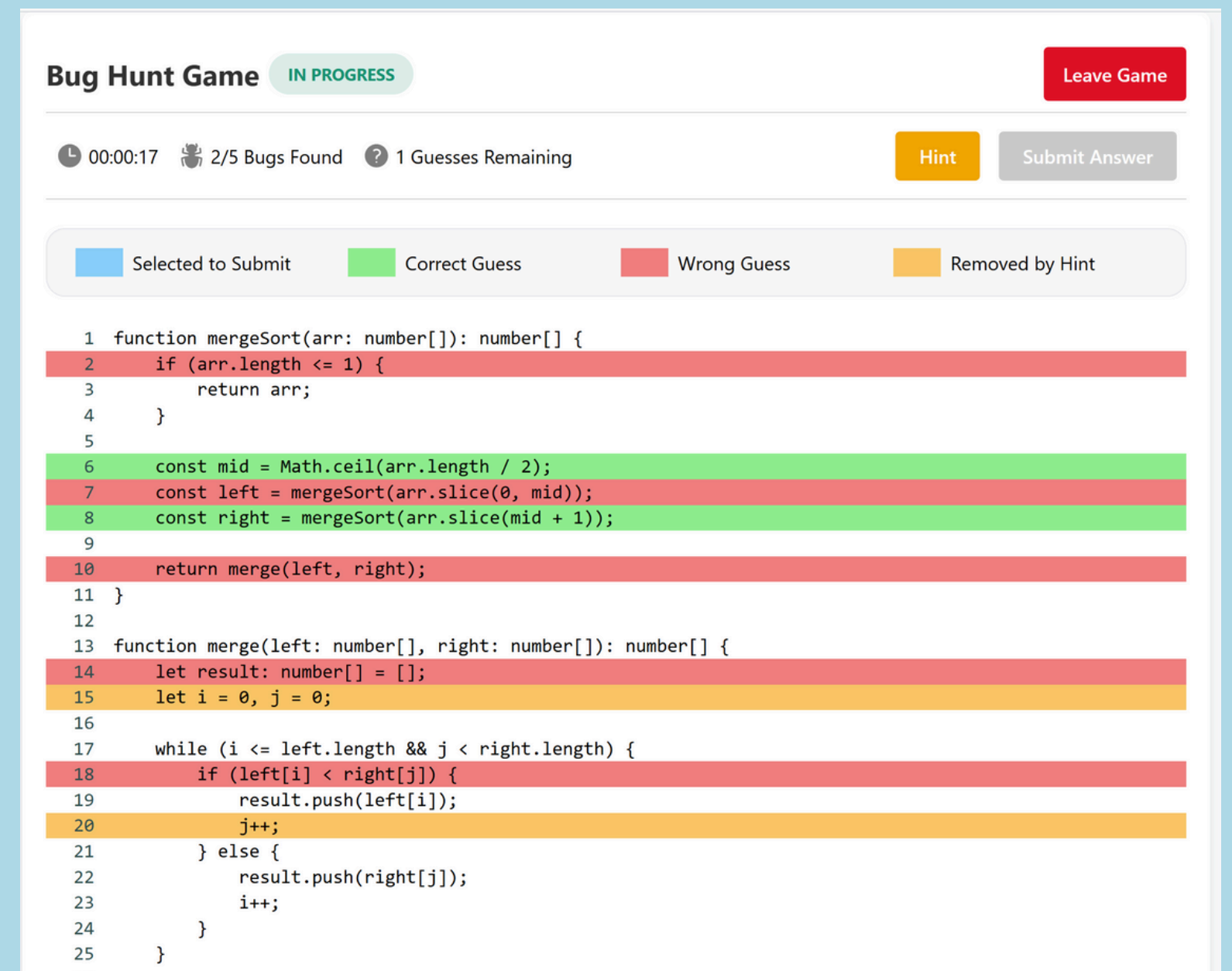
CS 4530 Final Project: Bug Hunt



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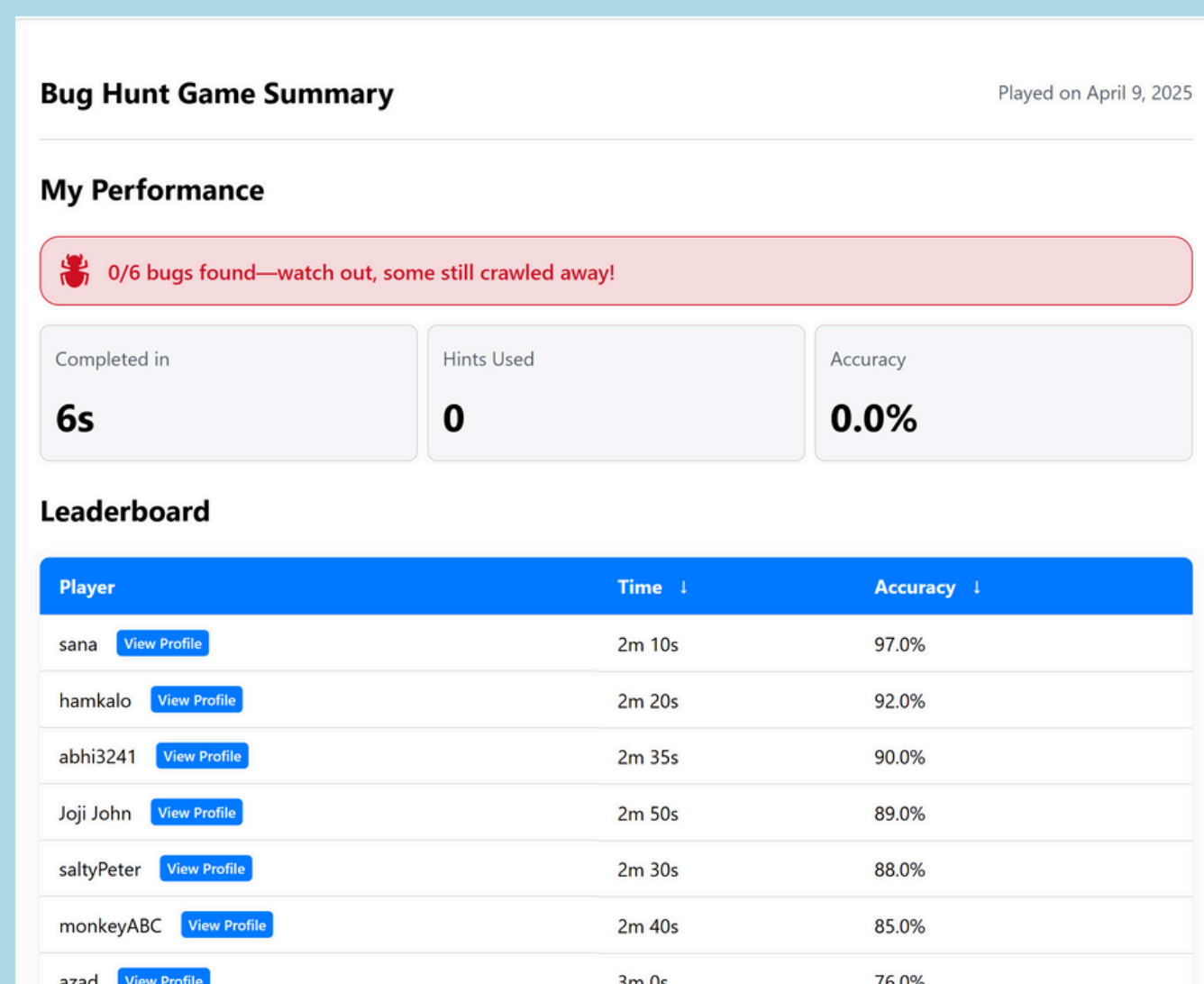
Our Feature: Bug Hunt Game

To enhance the StackOverflow application, we introduced Bug Hunt, a daily coding challenge designed to test and improve developers' ability to identify coding errors. This new game provides users with a code file containing intentional bugs, requiring them to analyze the code and identify the errors under a time constraint. By making a daily challenge game and incorporating community matchmaking, we encourage continuous usage, helping developers sharpen their debugging skills in an interactive format. For the daily challenge, all users will be presented with the same code snippet, ensuring a shared experience and possible discussion about the bugs. For the multiplayer option users can challenge each other to compete on who can solve the same buggy code the fastest. For all bug hunt results, users are able to view a leaderboard as well as analytics on their coding accuracy so they can strive to get the best score.



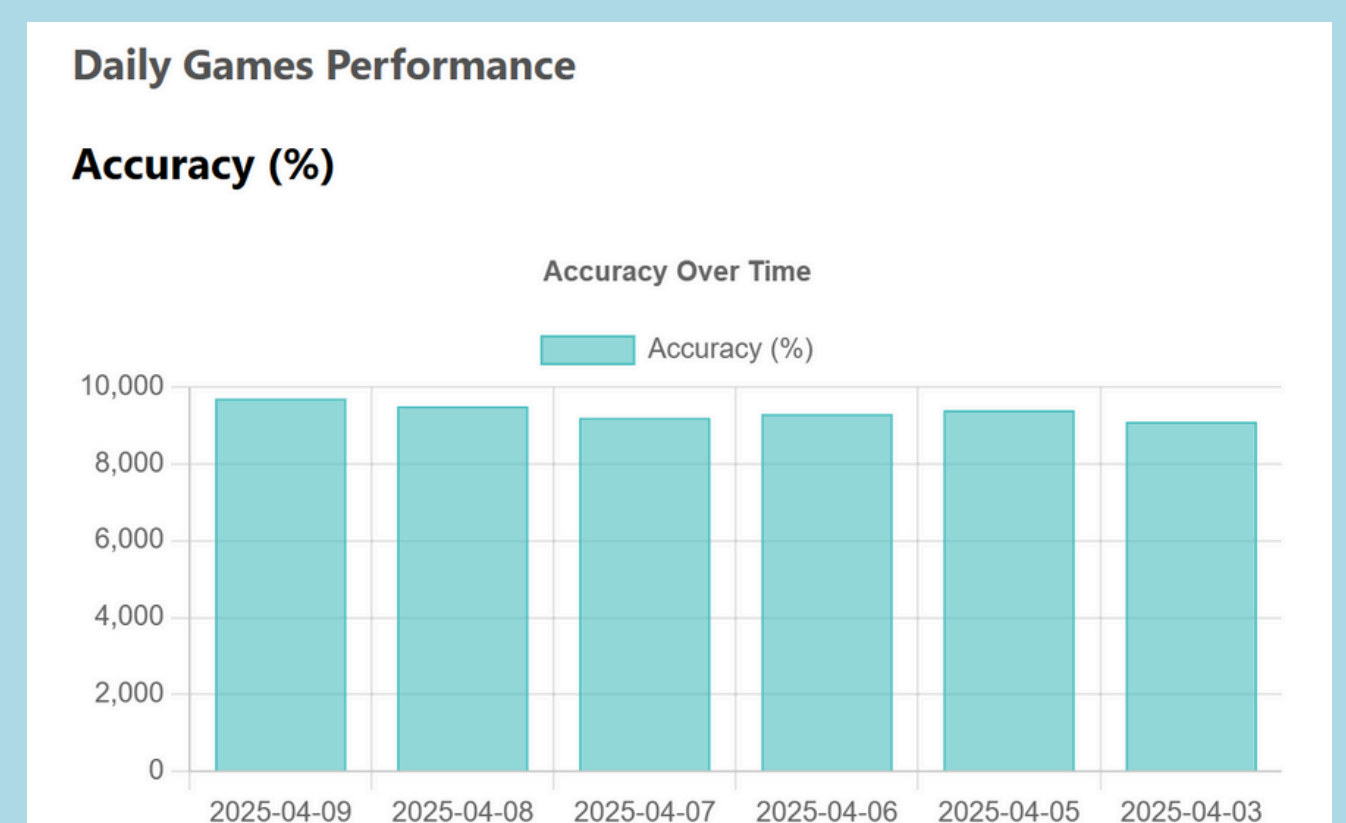
Technology Stack and Design

We implemented a game on top of the existing game management system, which was provided in the starter code. Users can create their own game or participate in a daily NYT-like game. Even though these are separate use cases for the game, we use the same page to facilitate gameplay for both. The actual gameplay uses a custom-built code view React component to present the buggy code file. The user can click on lines, which selects them for a submission; rather than having to manually enter line numbers. After the player's final submission, the backend calculates a score and accuracy based on their guesses. To view past performance, players can see their stats in a custom-built leaderboard or visualize them through charts, implemented with Chart.js.



Future Work

In the future, we hope to implement more community features for BugHunt. One of the main features is a live chat where users can send messages while they play the game to add a degree of competitiveness. Another feature we hope to implement is the ability to share a history of your BugHunt performances with a link so users can show off their coding skills to different platforms. Apart from communities, we plan on adding a feature where users can submit their own buggy code, that they were able to fix with the help of Bug Hunt's Questions and Answer features, to be included in future BugHunt games.



[Demo Site](#) | [Git Repo](#)