

CS4530 Final Project: ShaqOverflow

We dunk on your bugs!

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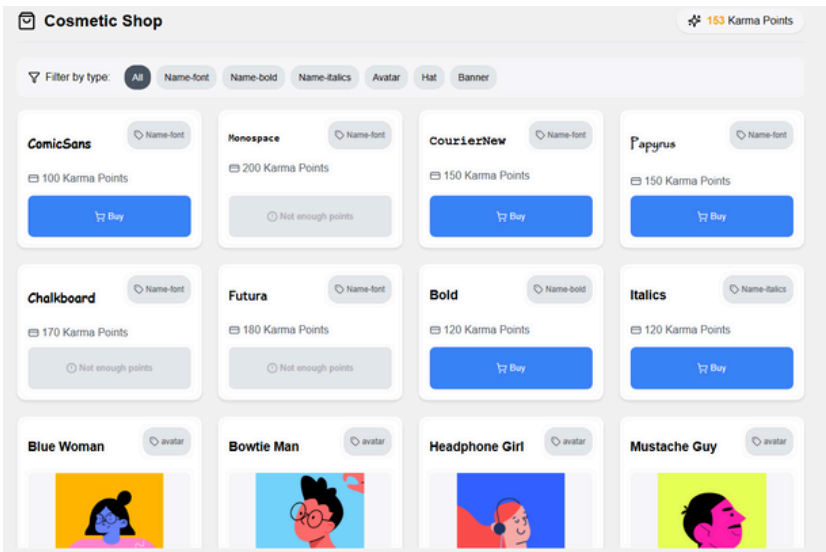
Project Overview

FakeStackOverflow is a valuable platform for developers to ask and answer technical questions. However, the platform lacks certain features that could enhance user experience, accessibility, and engagement. Our team created the following three features to address these gaps:

Accessibility and General UI Upgrades: Adding the creation of custom themes using a color palette as well as copy themes created by other users. Additionally, adding an accessibility menu that allows a user to adjust their font size, toggle a high contrast color-blind friendly theme, and use a screen reader on . This make the platform more inclusive and user-friendly.

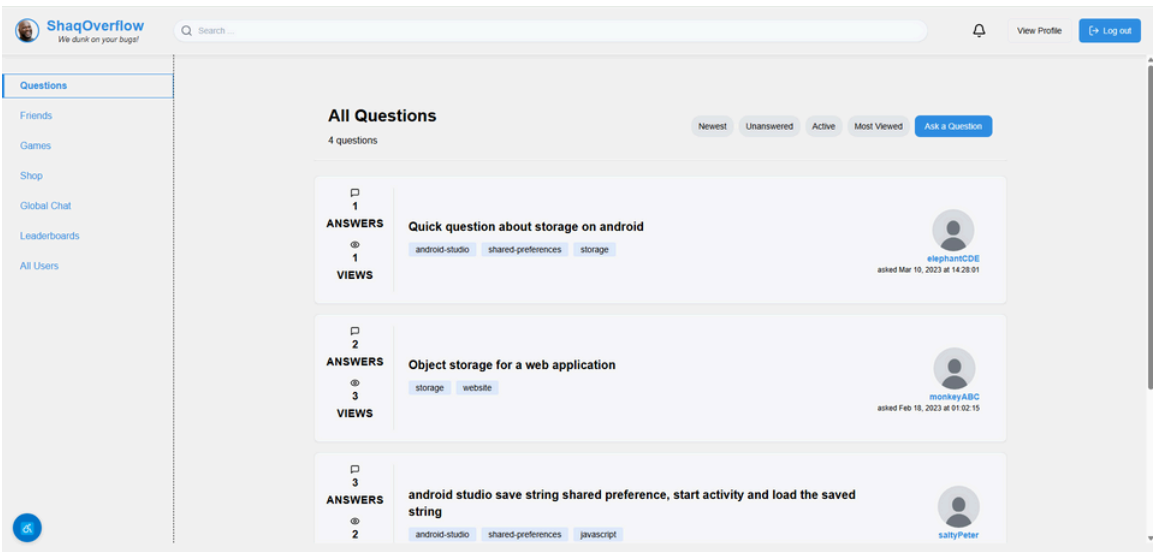
Social Features: Adding the ability for users to friend each other, track the activity of their friends, and engage in direct messaging (DM) or group chats. This fosters a sense of community and collaboration among users.

Karma System: Adding a karma system where users earn points for receiving upvotes on their posts (questions, answers, or comments). Users can spend these karma points on cosmetic upgrades for their profiles, such as themes or avatar enhancements. Users can also earn badges after reaching certain karma point milestones. This system encourages active participation and rewards valuable contributions.



Tech Stack and Design

We built these features off of the FakeStackOverflow codebase. In the backend, tables AvailableCosmetic, Cosmetic, Badge, AvailableBadge, Request, Theme, and Notification were created to handle new features. In the frontend, we utilized React components with Lucide integrated for icons. Full communication between the backend and frontend was established, including real-time updates through sockets and fetching states. Most of the frontend changes were made in the accessibility and UI upgrades while most of the backend changes were made in the friends system and karma points features. To manage state and store information, we used MongoDB and integrated Mongoose as well as Jest for testing. Overall, the system provides an interactive user experience.



Future Work

One area of development could be deepening the customization features, allowing users to create more complete theme packs, including different layouts, animations, etc. Additionally, the karma system could be expanded to include more interactive elements, such as challenges or limited-time events that reward karma points or unique cosmetics. This could also include features such as gifting karma points or wagering karma points against other users in games. Lastly, we could further do UI improvements to give the website a completely new feel.

Demo and Source

Our demo site is available at: <https://cs4530-s25-305.onrender.com/> and our source code is available at: <https://github.com/neu-cs4530/spring25-team-project-spring25-project-group-305>