Feature Overview and User Manual

Building The App

Skip to the next section "Using The App" if you wish to use the hosted demo instead of building the app yourself.

Prerequisites: MongoDB with a local running database (or you can use a hosted database such as via MongoDB Atlas provided you have a valid connection string), NodeJS v22, NPM.

The first step in deploying our upgraded version of FakeStackOverflow is to download the code. Our code is stored in this repository, and you can download the release zip and unpack it. Once downloaded, navigate into the "server" directory in a new terminal window from the root project directory and run `npm install`. Do the same with the "client" directory in a second terminal window.

Next, create a file ".env" in both the client and server directories. In the client env file, add the single environment variable `REACT_APP_SERVER_URL=http://localhost:8000`. In the server env file put the variables `MONGODB_URI=<your_local_or_remote_connection_string>`, `CLIENT_URL=http://localhost:3000`, and `PORT=8000`. If you wish to run the server in another configuration than localhost these values can be changed.

Now you must populate the database. In the server directory in your terminal and type `npm run populate-db`. If you wish to remove the database you can use the command `npm run delete-db`. If using a remote database, you'll need to use different commands, `npx ts-node populate_db.ts <your_connection_string>/fake_so` and `npx ts-node remove_db.ts <your_connection_string>/fake_so`.

With the database populated, you're now ready to run the app. In your separate terminal windows, in both the client and server directories type `npm run start` to start the client and server programs and begin running the app. Once the client has
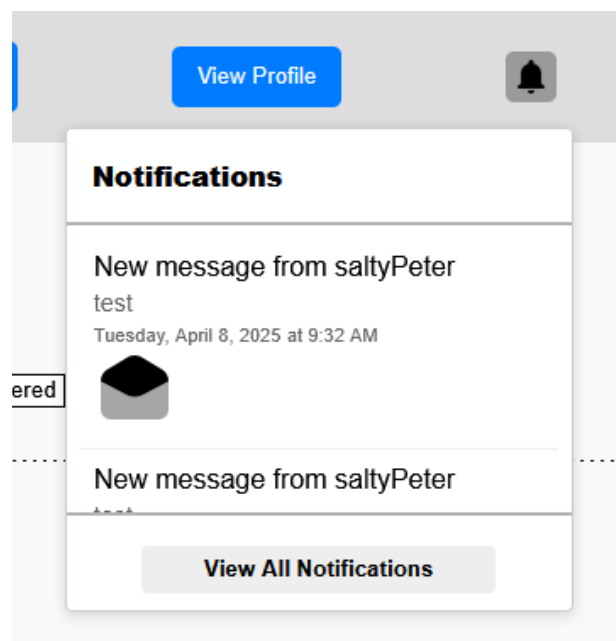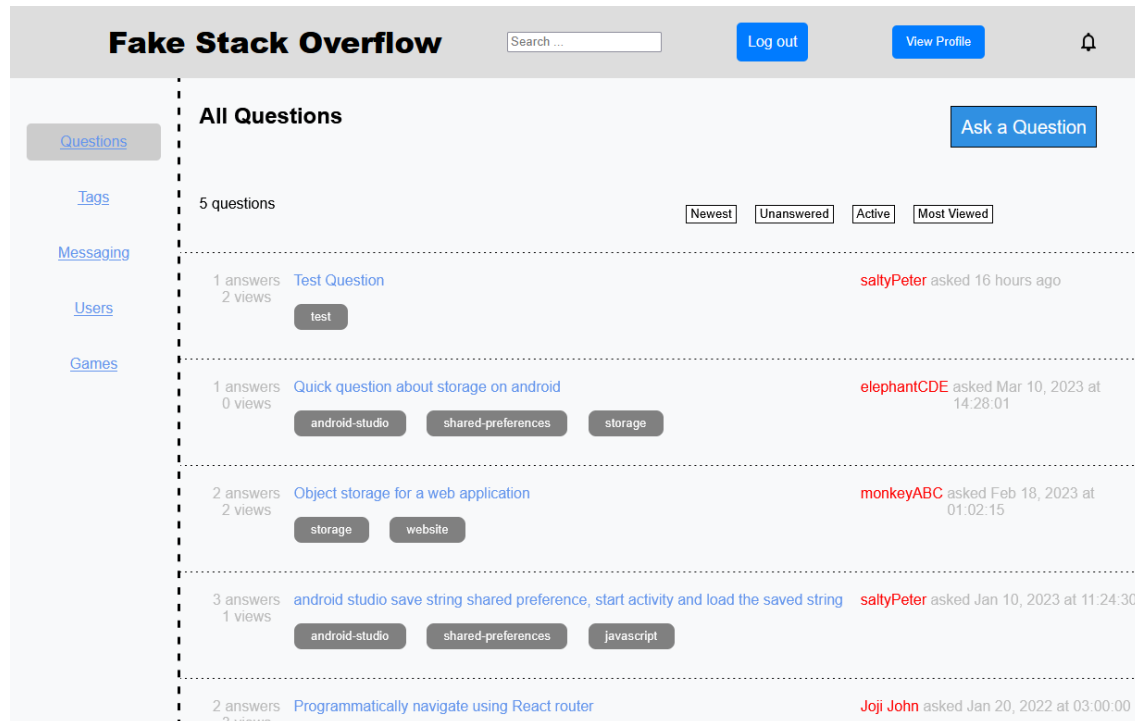
started it should open the app in a new browser tab automatically, but if this doesn't happen the URL for the default configuration described above is http://localhost:3000/. You now have a running version of FakeStackOverflow!
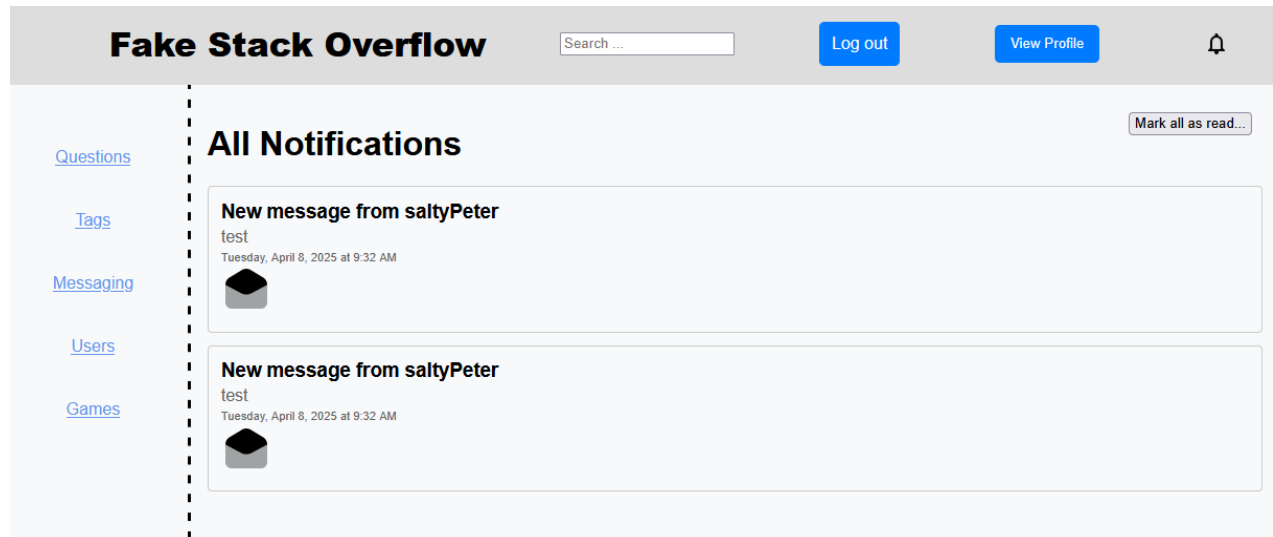
Using The App

If you want to use the hosted demo instead of building the program yourself from source, that demo can be found here.
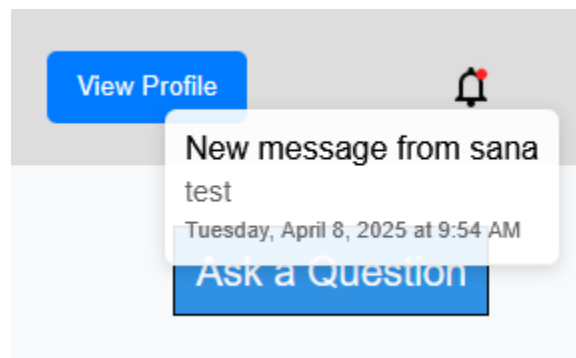
Notifications

The primary extension of FakeStackOverflow we made was to add a notification system to the site. We added notifications for comments and answers in reply to questions a user has posted, as well as new messages in direct message chats the user is in. As seen in the below screenshot, a notification tray was added to the upper-right side of the page where notifications are shown to the user. By clicking the icon the user can expand the tray to see notifications. When a user has an unread notification this icon has a small indicator of unread notifications, which persists until all notifications have been read. The notification tray itself shows a maximum of 3 most recent notifications, with all notifications visible on the "all notifications" page after clicking "view all".

When unread, notifications display a closed envelope icon to indicate their unread state, and upon clicking the notification to take the user to the source of the notification, the notification will be marked as read. On the "all notifications" page there is additionally a "mark all as read" button which will mark all notifications for a user as read.

In addition to the unread notification indicator, users will receive a popup for new notifications that lasts for a short duration. This popup will present in the top right of the screen, displaying details about the notification so a user can then check their notification tray if desired.

Subscribing to Notifications

As mentioned previously, notifications exist for comments/answers on a question, and direct messages. However, users can choose what notifications they wish to receive.

When a user creates a question, that user is automatically "followed" to that question, meaning they will receive notifications for updates to the question in the form of comments and answers to the original question. Users can follow or unfollow any question with a dedicated follow button, including questions they created. When a question is followed by a user, that user will receive all notifications for that

question. When a question is not followed by a user that user will receive no notifications for that question.

When a user creates a chat, a similar behavior occurs. All users in the chat are automatically subscribed to notifications on creation. In the chat, a similar button has been added allowing users to mute/unmute chat notifications. When muted, the user will receive no notifications from that chat, and when unmuted they will receive a notification for every message sent to that chat.

Direct Messages

In order to better take advantage of the new notification system, we also added the ability to create group chats in the direct message feature. Now, when creating a chat, users can simply select multiple users from the users list to add multiple people to the created chat. If the user selects a user and wishes to change their mind they can simply select the user again to remove them from the list to add.

Hide Create Chat Panel

Selected user: ihba001, saltyPeter

Create New Chat

Users List Search Usernames ...

12 users

sana	joined Mon, 11 Dec 2023 08:30:00 GMT
ihba001	joined Sun, 11 Dec 2022 08:30:00 GMT
saltyPeter	joined Mon, 11 Dec 2023 08:30:00 GMT
monkeyABC	joined Sat, 11 Nov 2023 08:30:00 GMT
hamkalo	joined Sat, 02 Dec 2023 08:30:00 GMT

With the addition of group chats comes complexity for the user, keeping track of who's following communication. To improve the user experience we also added read receipts. When a user reads a message in a chat, their name appears as having read the message, so that people in the chat know who has seen a given message.

Chat Participants: sana, saltyPeter

Mute

sana test	1 hours ago	Read by: saltyPeter
sana test 2	1 hours ago	Read by: saltyPeter
saltyPeter test	1 hours ago	
sana test	1 hours ago	

Type a message...   Send