

CS4530 Final Project: `r/overflow`

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Our Features:

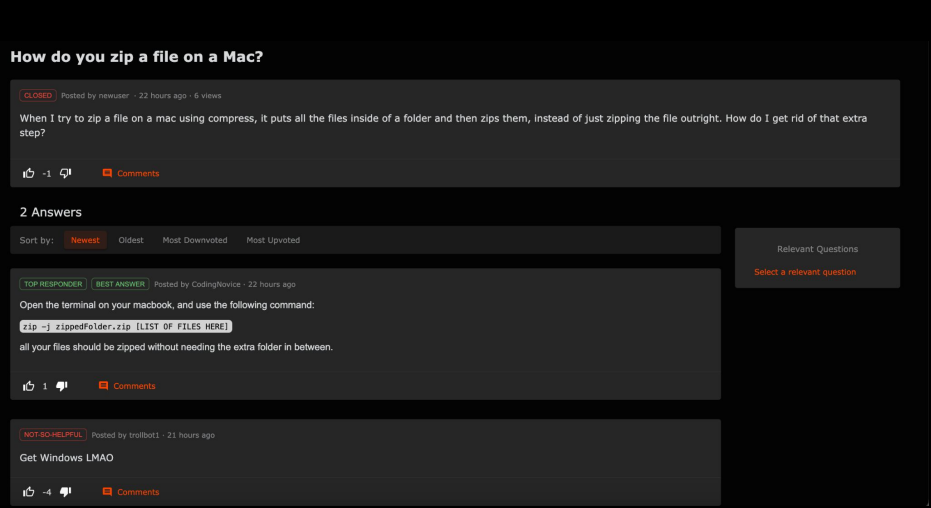
Fake Stack Overflow, the code base that r/overflow is based on was missing many of the quality-of-life features that most other question and answering platforms have. Therefore, we decided to implement some of the most prominent features used by those platforms. Firstly, a reputation system for answers and users ensures trust, and question organization features: the ability to close questions so that it cannot be answered with a best answer so that future browsers know the solution, as well as relevant questions to browse through if the question viewed was not exactly what the user needed. Additionally, we added a collaborative canvas. This collaborative canvas will serve as a way for users to connect with each other and display their individuality. Finally, we added the ability to switch between plain text and markdown for questions and answers so that users will have an easier way to format text to their liking.

Demo and Source Code:

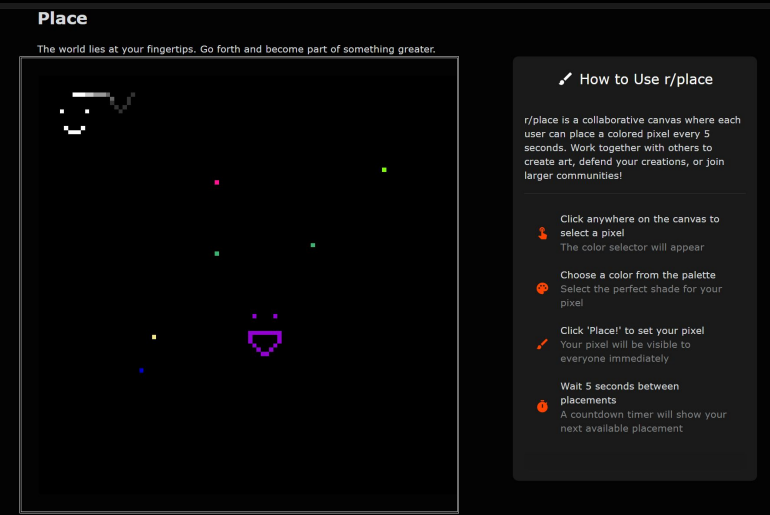
Our demo site is available at: <https://cs4530-s25-106.onrender.com/>

Our source code is available at:

<https://github.com/neu-cs4530/spring25-team-project-spring25-project-group-106>



A closed question with our new functionality. A closed question is determined by the closed question badge. You can see the best answer pinned at the top of the answer list, as well as the status of the two answerers.



Place, our collaborative canvas for users to work together to create an image with a large palette of colors to work with. It is its own tab on the sidebar, as seen above.

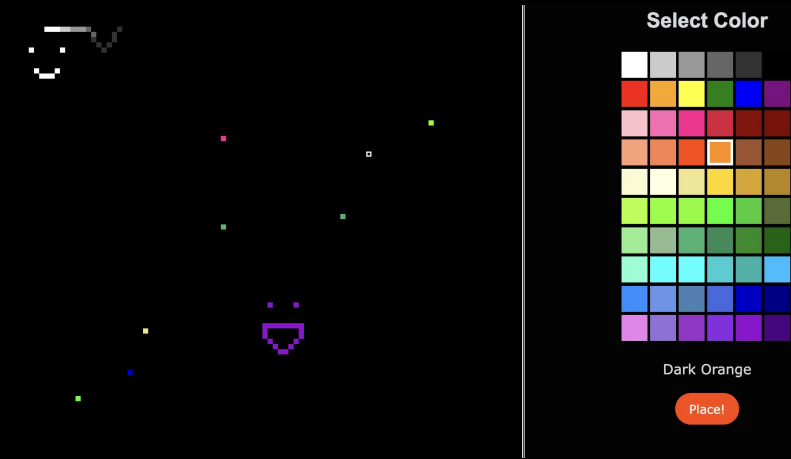
Our Technology Stack and Design

We implemented all of our features in the original Fake Stack Overflow codebase. All of the question and answer functionality was implemented on the already existing backend by modifying the mongoose schemas and adjusting the frontend to match. Markdown is mostly displayed in the front end, with only a boolean in the schema to determine whether or not the front end should attempt to render it as such. Place is run using completely new schemas for each pixel, which stores the data on the backend and is then called upon by the front end to show the full canvas. The colored panel of the right of the canvas selects a color which is then associated with a selected pixel, allowing the canvas to be continuously drawn upon by multiple users. Our continuous integration pipeline runs an automated test suite on any push to our Github for both front end and backend, which is then deployed using Render for both the server and client.

Future Work

For many of our changes, there were repeated aspects of different components across different pages. Since everything was worked on separately, there are many abstractions that can be made. Future work could be going through the frontend and backend and abstracting components as necessary.

In addition, our Place functionality could be improved in several ways. First, the ability for users to zoom into the pixel canvas. This will allow for our canvas to be larger as well. Additionally, another future task could be the ability to see which other users are active and which pixels they are currently selecting.



Finally, as one more future task, we could replace our color selection with a color picker with some default colors, thus allowing the users more creative freedom on the canvas.