

Project Summary

Overview

This project was a comprehensive learning experience aimed at advancing my development skills. Despite the delay in submission, I have implemented several core and additional features to enhance the functionality and user experience.

Implemented Features

Basic Authentication

Implemented a login system with username and password authentication.

Canvas Drawing Tools

Developed a white canvas with various drawing tools:

- Selection tool
- Text addition
- Line and shape drawing
- Added a colour picker for changing tool colours.

Editing Tools

Integrated undo, redo, and clear all buttons for enhanced user control.

Export Functionality

Added an export button to save the canvas as an image.

User Information Box

On the right side of the canvas, a user box displays:

- User image and name
- Count of users joined
- Names of users (future update)

Live Chat Interface

Developed a live chat interface for potential integration of collaborative features.

Additional Features Attempted

WebSocket and Key cloak Authentication:

- Tried to integrate WebSocket for real-time collaboration.
- Implemented Key cloak for secure user authentication.

Infinite Canvas and Zoom Controls:

- Experimented with an infinite canvas and grid.
- Added zoom controls with limits, but these features were not fully integrated due to time constraints.

Challenges

Integration Issues: Real-time collaboration and infinite canvas features consumed significant time and were not fully operational.

Learning Curve: Typescript and Key cloak were new to my skill set, requiring additional time for learning and implementation.

Conclusion

Despite some challenges and the time consumed by attempting advanced features, this project has been a valuable learning experience. It has enhanced my understanding of development, particularly in real-time collaboration and user authentication. Special thanks to ChatGPT for aiding in the comprehension of new concepts.

This project, while not yet fully incorporating all the desired features, is a testament to my dedication and growth in development skills. I am committed to completing these additional features promptly to ensure the project meets my high standards of satisfaction and functionality.