Project Documentation: SVG Editing Web App

Introduction:

The SVG Editing Web App is a single-page web application designed to allow users to seamlessly import, manipulate, and edit SVG images within the interface. This documentation provides an overview of the project, detailing the design approaches, implemented functionalities, and evaluation criteria.

Design Approaches: UI/UX

1. Clarity and Simplicity:

- The UI is designed with a clean and intuitive interface, featuring clear icons or buttons for each action (import, scale, rotate, translate).
- Icons are chosen carefully to represent the functionalities straightforwardly, ensuring ease of use for users.

2. Real-time Feedback:

- Visual cues and feedback indicators are incorporated during manipulation to give users real-time feedback on their actions.
- Manipulation handles are highlighted, and scaling/rotation values are displayed dynamically to enhance the user experience.

3. Responsiveness:

- The UI adapts seamlessly to different screen sizes, ensuring a consistent user experience across various devices.

Implemented Functionalities:

1. SVG Import:

- Users can import SVG images by providing initial SVG test data or uploading their own SVG files.

2. Manipulation Features:

- Scaling: Users can scale SVG images to adjust their size.
- Rotation: SVG images can be rotated to achieve the desired orientation.
- Translation: Users can move SVG images to different positions within the interface.
- Flip X and Y: Users can flip SVG images horizontally and vertically within the interface.

3. Live Code Editor:

- Implemented a live code editor feature where users can edit SVG code directly and see real-time previews of the changes.

4. Undo Redo:

- Users can undo and redo their editing actions to revert or reapply to changes made to SVG images.

5. Delete:

- Provides functionality to delete SVG images from the interface.

6. Save:

- Provides functionality to save SVG images from the interface.

Front-end Framework and Tools:

The project is implemented using React.js as the front-end framework for its component-based architecture and efficient rendering. Libraries such as react-codemirror2 and react-copy-to-clipboard are utilized for specific functionalities. Built-in browser functionalities such as DOM manipulation and CSS transforms are leveraged complementarily to enhance performance.

Evaluation Criteria:

1. User Interface (UI):

- The UI is evaluated based on clarity, usability, and visual appeal, ensuring an intuitive user experience.

2. User Experience (UX):

- Ease of use, intuitiveness of interaction, and real-time feedback during manipulation are assessed to enhance user satisfaction.

3. Functionality:

- Successful implementation of SVG import, manipulation features, live code editor, undo-redo, save, and delete functionalities is evaluated.

4. Code Quality:

- Readability, maintainability, and adherence to best practices within the chosen framework are assessed to ensure code quality and scalability.

5. Problem-Solving Approach:

- Creativity and effectiveness in implementing the functionalities are considered, rewarding innovative solutions to challenges encountered during development.

Conclusion:

The SVG Editing Web App is designed and implemented to provide users with a seamless and intuitive platform for importing, manipulating, and editing SVG images. By incorporating user-centric design principles and leveraging modern front-end technologies, the application aims to enhance the user experience and empower users with powerful SVG editing capabilities.

You can explore the SVG Editor web app by visiting the deployed site on

Render.com:https://svg-editor.onrender.com/

GitHub link: https://github.com/ROOHITH/SVG-Editor