

# Semester work KAJ

## Client applications in JavaScript

### React Application

#### Whiteboard

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## Content

Introduction	3
Application description and structure	4
User Guide	7
Instructions on how to use the application	7
Explanation of the user interface	7
Common workflows or tasks and how to perform them	8
Mobile version.	10
Conclusion	11

## Introduction

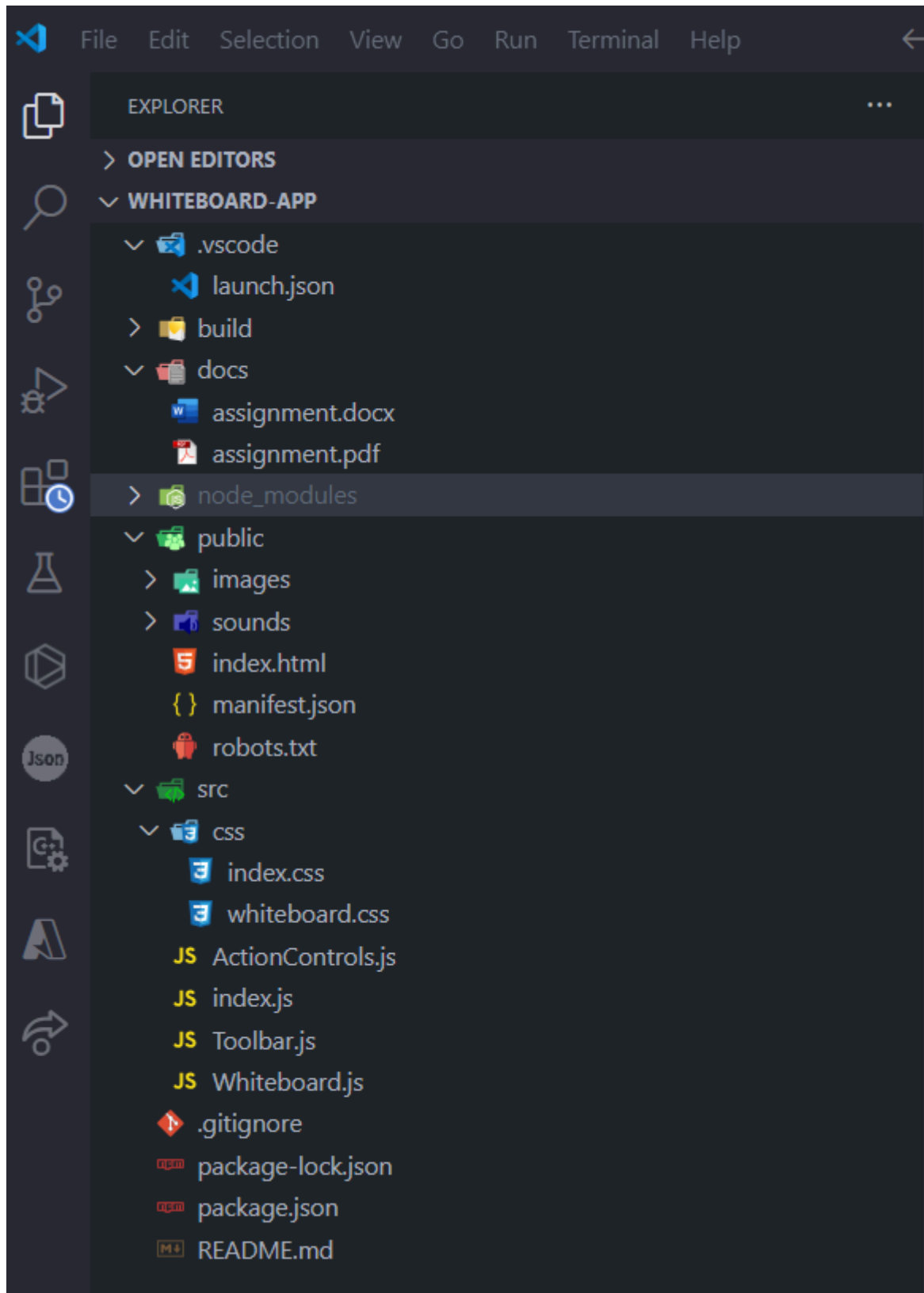
The "Whiteboard React" project is a web application developed using the React library. The primary goal of the application is to create an interactive drawing board with various functionalities.

The project's features include the ability to select different markers and an eraser, as well as the option to choose different colors for drawing. Users can easily customize their drawings by selecting an appropriate marker, adjusting the line thickness, and defining the color palette.

In addition to customization options, the application provides users with tools for managing their creations. The "Clear" feature allows users to reset the drawing board, while "Undo" and "Redo" functionalities enable the reversal and restoration of previous actions. Furthermore, users have the capability to save their created images in image format for future use.

In summary, "Whiteboard React" is a convenient and engaging drawing application with diverse functionalities, empowering users with tools for creativity and efficient management of their projects.

## Application description and structure



The file structure of my React project named "WHITEBOARD-APP", here is a brief description of each visible file and directory:

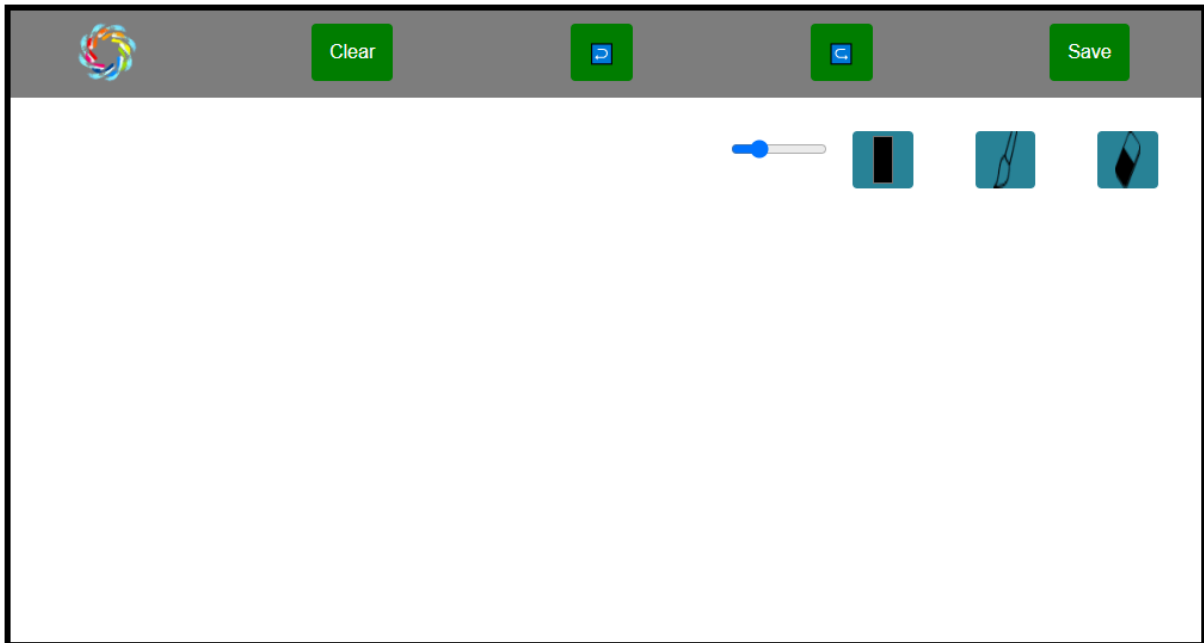
- **.vscode/launch.json**: This is a configuration file for Visual Studio Code that sets up debugging settings for the project.
- **build/**: This directory would contain the production build of your React application after running a build script.
- **docs/**: Likely a directory for documentation. Inside it, there are two files:
  - **assignment.docx**: A Word document, possibly containing assignment or project requirements.
  - **assignment.pdf**: A PDF document, likely a converted version of the Word document for easier viewing or distribution.
- **node\_modules/**: This directory contains all the npm packages and dependencies your project needs.
- **public/**: The public directory holds assets that will be used directly without being processed by Webpack:
  - **images/**: A subdirectory for image files used in the application.
  - **sounds/**: A subdirectory for sound files used in the application.
  - **index.html**: The main HTML file that will be served by the React application.
  - **manifest.json**: A JSON file that defines metadata about the application, used primarily for mobile devices.
  - **robots.txt**: A text file that tells search engine crawlers which pages or files the crawler can or can't request from your site.
- **src/**: The source directory where the main application code resides:
  - **css/**: A subdirectory for CSS stylesheets:
    - **index.css**: The main stylesheet for the application.
    - **whiteboard.css**: A stylesheet likely specific to styling the whiteboard component of the application.
  - **ActionControls.js**: A JavaScript file for React components that handle user actions.
  - **index.js**: The entry point JavaScript file for the React application.
  - **Toolbar.js**: A JavaScript file for the React component that represents the toolbar, possibly containing tools for the whiteboard.
  - **Whiteboard.js**: A JavaScript file for the React component that represents the whiteboard functionality.

- **.gitignore**: A configuration file for Git that specifies intentionally untracked files to ignore.
- **package-lock.json**: An automatically generated file for any operations where npm modifies either the **node\_modules** tree or **package.json**. It describes the exact tree that was generated, such that subsequent installs can generate identical trees, regardless of intermediate dependency updates.
- **package.json**: A file that holds various metadata relevant to the project. This file is used to give information to npm that allows it to identify the project and handle the project's dependencies.
- **README.md**: A Markdown file typically used to explain what the project is, how to set it up, and how to use it.

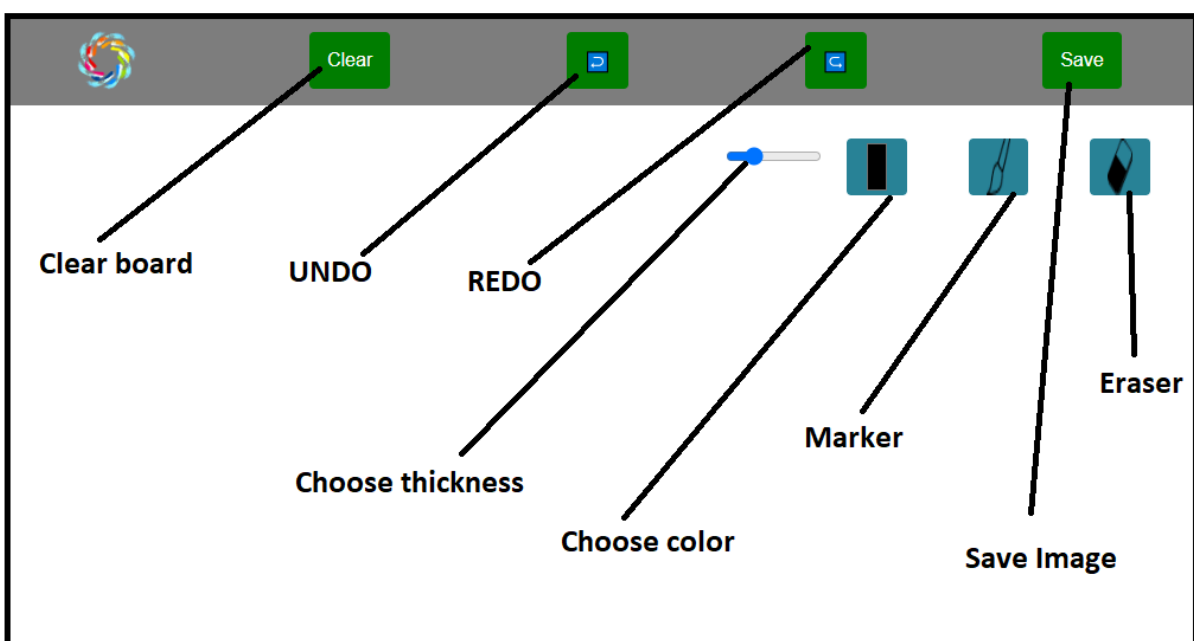
## User Guide

### Instructions on how to use the application

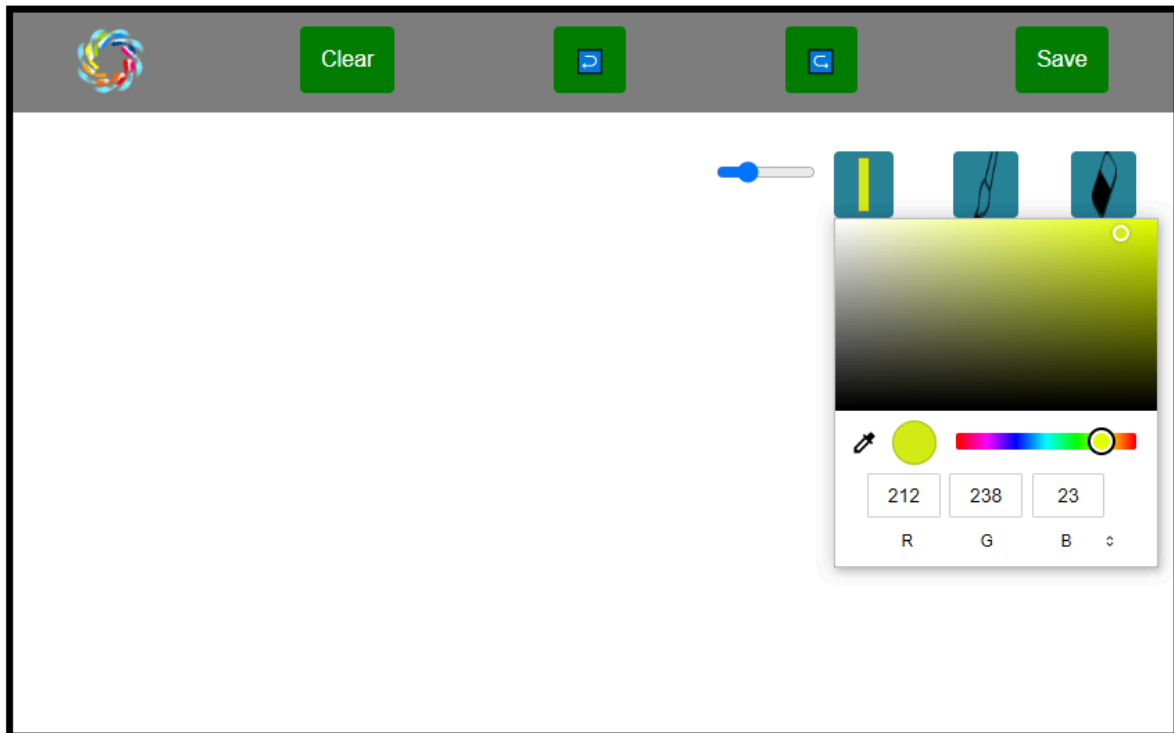
Open this website: <https://mathewtroy.github.io/whiteboard/>



### Explanation of the user interface

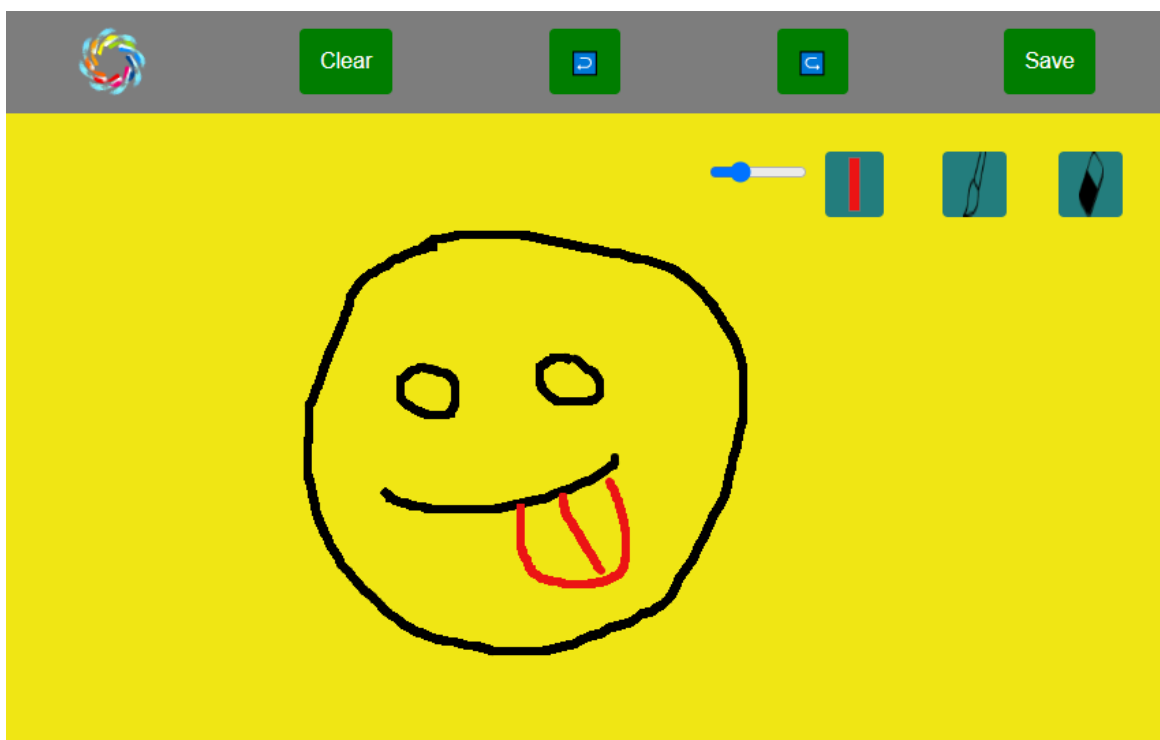


Choose color.



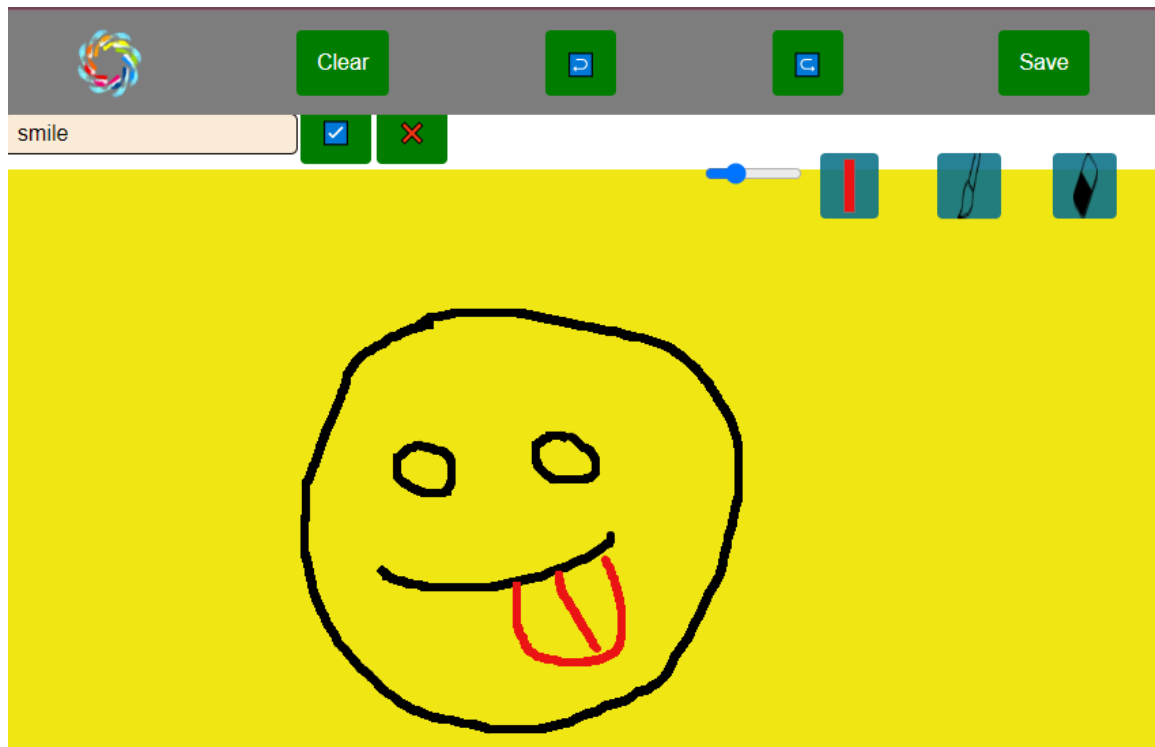
## Common workflows or tasks and how to perform them

Try to draw something.





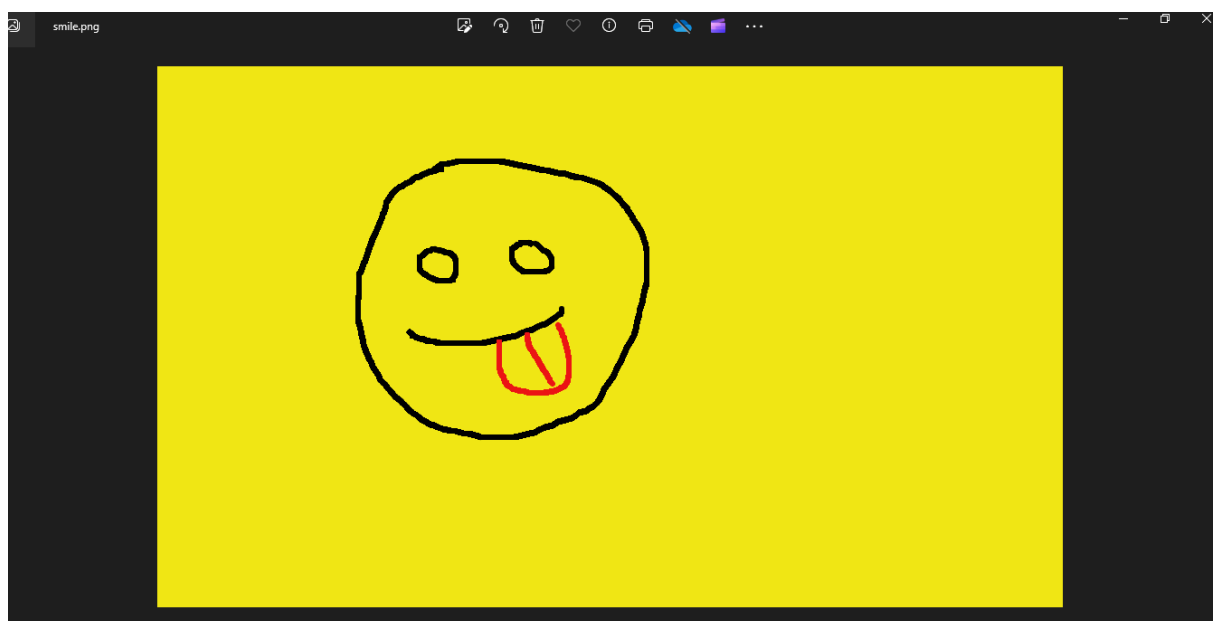
Then you can save this image. Press Save button.



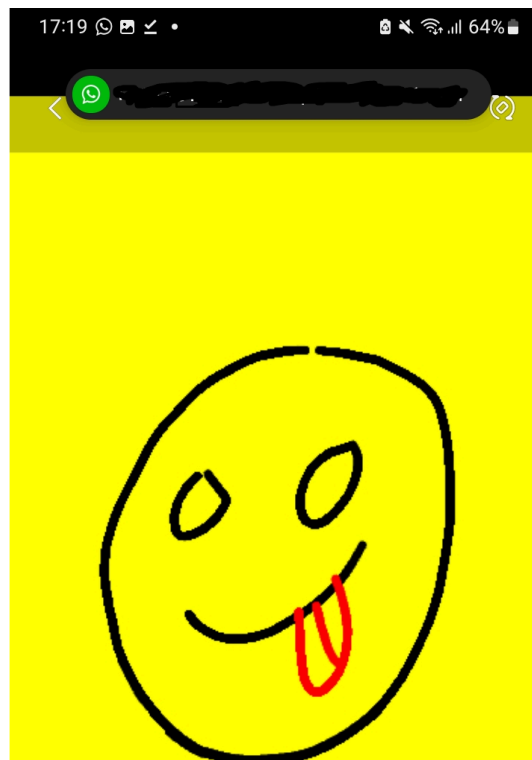
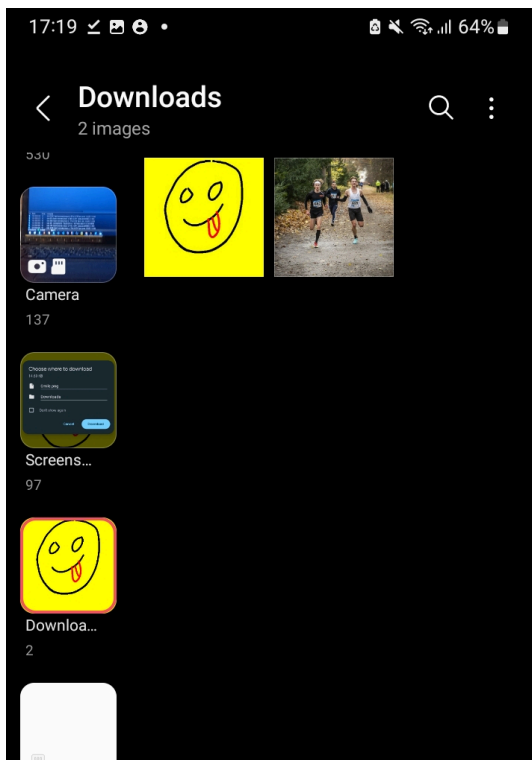
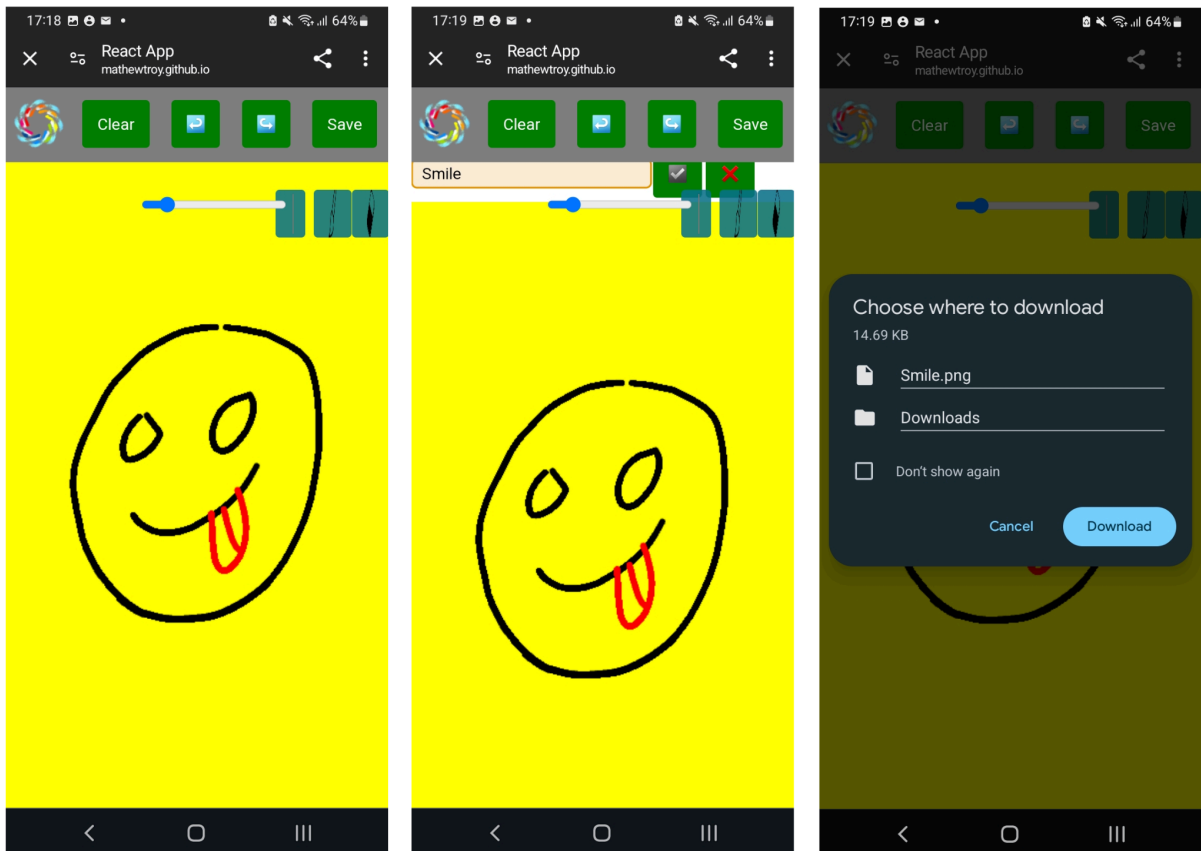
Type a name for your image. Use only Latin letters.

Then choose ☒ button.

And the open Downloads folder.



## Mobile version.



## Conclusion

In working with the React application, I have acquired new skills and experiences. Creating this website on GitHub provided me with an excellent opportunity to familiarize myself with the technologies and methodologies used in web application development with React.

The use of Pointer Events was particularly interesting, enhancing the user interaction experience. Additionally, working with the application introduced me to utilizing Media API for handling video and sound. The implementation of functional history (REDO UNDO) added convenient features for undoing and redoing actions, making the application more flexible.

Applying the React JavaScript library and its components significantly streamlined the development process, while the use of CSS3, vendor prefixes, and advanced pseudo-classes contributed to creating a stylish and responsive interface.

Overall, the experience gained from working on this project has been a valuable step in mastering web development technologies, and I am ready to continue advancing my skills in this direction.