

# Architecture for counter app project

## 1. Project Structure

**Root Directory:** Contains configuration files and directories for your project.

``public/``: Contains static files that are directly served to the client.

``index.html``: The main HTML file where your React app will be mounted.

``src/``: Contains all the source code for the application.

``assets/``: Directory for static assets like images or fonts.

``components/``: Directory for React components.

``Counter.js``: The Counter component which contains the logic and UI for the counter.

``styles/``: Directory for CSS files.

``index.css``: The main CSS file where Tailwind CSS and custom styles are imported.

``App.jsx``: The root React component that renders other components.

``main.jsx``: The entry point for the React application, which renders the ``App`` component into the DOM.

``.gitignore``: Specifies files and directories to be ignored by version control systems like Git.

``package.json``: Contains metadata about the project, including dependencies and scripts.

``postcss.config.js``: Configuration file for PostCSS, used by Tailwind CSS.

``tailwind.config.js``: Configuration file for Tailwind CSS, where you can customize themes and plugins.

``vite.config.js``: Configuration file for Vite, where you set up build options and plugins.

## 2. File Descriptions

``public/index.html``: Contains the HTML structure for the application, with a root `<div>` where the React app is mounted.

``src/assets/``: Used for any static files required by the application, such as images or fonts.

``src/components/Counter.js``: Defines the Counter component, which includes state management and UI elements for incrementing and decrementing the counter.

``src/styles/index.css``: Imports Tailwind CSS utilities and can include additional custom styles.

``src/App.jsx``: The main React component that encapsulates the Counter component and other potential components.

``src/components/Navbar.jsx``: This contains navbar of our project which includes logo and night mode toggle.

``src/main.js``: Initializes the React application and renders the ``App`` component into the root ``<div>`` in ``index.html``.

``.gitignore``: Lists files and folders that should not be tracked by version control (e.g., `node_modules`, build artifacts).

``package.json``: Manages project dependencies, scripts for running and building the app, and other metadata.

``postcss.config.js``: Configuration for PostCSS, which processes CSS and is used by Tailwind CSS for applying utility classes.

``tailwind.config.js``: Configures Tailwind CSS, allowing for customization of themes and plugin settings.

``vite.config.js``: Configures Vite for bundling and optimizing the application, including setting up plugins like the React plugin.

### 3. Development and Build

**Development:** Use ``npm run dev`` to start the Vite development server. This provides a livereloading development environment where you can see changes in realtime.

**Build:** Use ``npm run build`` to create an optimized production build of the application, which can be deployed to a server.