

Technical Highlights:

- **React.js:** Utilizes React.js for building a dynamic and interactive user interface, with component-based architecture for maintainability.
- **React Router:** Implements React Router for efficient client-side routing, providing a seamless user experience.
- **Node.js & Express.js:** Backend development with Express.js, offering a scalable and robust server environment.
- **MongoDB & Mongoose:** Integration of MongoDB for flexible and efficient data storage, managed with Mongoose for schema validation and querying. Uses MongoDB, a NoSQL database, to efficiently store and manage user and note data. This allows for scalable, high-performance data storage with flexible schema design.
- **Context API:** State management across the application using Context API, ensuring smooth data flow and interaction between components.
- **Bootstrap:** Ensures a responsive and visually appealing user interface with Bootstrap styling.

User Authentication:

- **Sign-Up and Login with Email:** Secure account creation and authentication using email and password, with passwords hashed for enhanced security.
- **JWT-Based Authentication:** Utilizes JSON Web Tokens (JWT) to secure user sessions and protect user-specific data.

Note Management:

- **Create, Edit, Delete, and View Notes:** Comprehensive functionality for managing personal notes, ensuring users can easily organize and maintain their information.
- **Real-Time Alerts:** Instant notifications for user actions such as adding, editing, or deleting notes, enhancing user experience.

Key Features:

- **User Authentication:**
 - **Secure Sign-Up and Login:** New users can create accounts, and existing users can log in securely. Passwords are hashed for security.
 - **JWT-Based Authentication:** Ensures secure access to user-specific data with JSON Web Tokens (JWT).
- **Note Management:**
 - **Create Notes:** Users can create new notes with a title and description.
 - **Edit Notes:** Easily update existing notes to keep information current.
 - **Delete Notes:** Remove notes that are no longer needed.
 - **View Notes:** A user-friendly interface to view all personal notes in an organized manner.
- **Alert System:**
 - **Real-Time Alerts:** Users receive real-time alerts and notifications for actions like adding, editing, or deleting notes.
- **User Profile:**
 - **Profile Display:** View user profile information, including name and email, fetched securely from the backend.
- **Responsive and Interactive UI:**
 - **Intuitive Design:** A clean, user-friendly interface designed with React.js and Bootstrap for a responsive experience across devices.
 - **Modal for Editing:** Use of modals to provide a seamless and non-intrusive way to edit notes.
- **Backend Features:**
 - **RESTful API:** A robust backend API built with Node.js and Express.js for handling all note and user-related operations.
 - **Database Integration:** MongoDB for storing user and note data, managed efficiently with Mongoose.
- **Middleware:**
 - **Authorization Middleware:** Custom middleware to verify user authentication status, ensuring that only authorized users can access their data.