**MERN Stack Authentication Project**

This project is a demonstration of a full-stack web application implementing user authentication using the MERN (MongoDB, Express.js, React.js, Node.js) stack. It provides a secure and robust authentication system allowing users to sign up, log in, and log out securely.

**Features**

* **User Authentication**: Users can sign up, log in, and log out securely.
* **Password Encryption**: Passwords are encrypted using bcrypt for enhanced security.
* **JSON Web Tokens (JWT)**: JWTs are used for session management and authentication.
* **Protected Routes**: Certain routes are protected and can only be accessed by authenticated users.
* **User Profile**: Authenticated users have access to their profile information.
* **Error Handling**: Comprehensive error handling to provide feedback to users.
* **Responsive Design**: The frontend is designed to be responsive and accessible on various devices.

**Technologies Used**

* **MongoDB**: NoSQL database for storing user data.
* **Express.js**: Web application framework for Node.js.
* **React.js**: JavaScript library for building user interfaces.
* **Node.js**: JavaScript runtime environment for server-side code.
* **bcrypt**: Library for hashing passwords.
* **JSON Web Tokens (JWT)**: Standard for securely transmitting information between parties.
* **Axios**: Promise-based HTTP client for making requests from the frontend.
* **Bootstrap**: Frontend component library for styling and layout.
* **JWT-decode**: Library for decoding JWTs on the client-side.
* **React Router**: Library for routing in React applications.