**Assignment 2 Documentation**

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**Project Overview**

*This is a full-stack web application for user authentication and management,*

*The project includes a RESTful API backend with a React vite frontend and has been deployed on Vercel.*

* **Features**
* Authentication: Secure user login/signup using JSON Web Tokens (JWT).
* REST API: API endpoints for handling user data and authentication.
* Database Integration: data storage with MongoDB (remote).
* Middleware: CORS handling for and JWT authentication.
* Frontend: Dynamic UI built with React.
* **Project Structure**
  + **Backend**
    - Controllers: Handle login and signup logic for user (UserController.js).
    - Routes: Define user API endpoints (userRoutes.js).
    - Models: MongoDB schema for storing user data (UserSchema.js).
    - Middleware:
    - CORS: Manage cross-origin requests.
    - authenticateJWT: Validate tokens for secure access.
    - generateJWT: Create secure tokens for user sessions.
    - Server: Initializes Express, connects to MongoDB, and uses middleware and routes.
  + **Frontend (Not required in assignent)**
    - Pages: Contains one page i.e.Signin\_Signup .
    - App.jsx: Main application component containing routes.
    - main.jsx: Entry point for application frontend.