

# P4 Manual\_Log

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## Features Implemented:

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- Frontend:
  - Fully functional Login page to allow users to log in with credentials.
  - Fully functional Register page to allow users to create accounts.
  - Comprehensive Dashboard page that displays user's name and all shared articles. The Dashboard allows the creation of new article posts, deletion of article posts, and logout functionality.
  - Authorization functionality using React Context (AuthContext.js) to handle auth state across the app.
  - JWT token storage in localStorage for persistent sessions.
  - Protected routes that redirect unauthenticated users to the login page if JWT token is not verified.
  - Automatic token verification on app load to restore user sessions.
- Backend:
  - Express.js server that utilizes REST for API calls to the frontend.
  - SQLite database for user credential and article post storage.
  - User authentication API endpoints for login, register, and me (get user info).
  - Article API endpoints: GET articles, POST articles, and DELETE articles (if user is owner of post or admin).
  - JWT authentication with token utilization (24hr expiration).
  - Bcrypt password hashing with 12 salt rounds.
  - Middleware for token verification and admin auth
  - Validation for username length, password length, and proper URL formatting.
- Security (OWASP Top 10):
  - A01:2025 - Broken Access Control
    - JWT, Auth, Protected Routes
  - A02:2025 - Security Misconfiguration
    - Helmet.js
  - A04:2025 - Cryptographic Failures
    - Bcrypt hashing with 12 salt rounds
  - A05:2025 - Injection
    - Use indirect SQL commands with ? as placeholders

- A07:2025 - Authentication Failures
  - Rate limiting, hashing, error messages
- A10:2025 - Mishandling of Exceptional Conditions
  - Try/catch blocks on all route handlers

## Features Not Implemented:

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- Security (OWASP Top 10):
  - A03:2025 - Software Supply Chain Failures
  - A06:2025 - Insecure Design
  - A08:2025 - Software or Data Integrity Failures
  - A09:2025 - Logging & Alerting Failures