Test Plan

# 1. What is Being Tested

This project involves testing both UI and API layers of a MERN stack (MongoDB, Express, React, Node.js) application. The main features under test include:  
- User Login  
- Task Management (Create, Edit, Delete)  
- API-level validation using Postman & Newman  
- MongoDB as backend data source

# 2. Test Coverage Areas

## UI Testing with Cypress

- Login with valid and invalid credentials  
- Create a new task   
- Edit an existing task  
- Delete a task

## API Testing with Postman/Newman

- POST /login → Valid & invalid credentials (negative case returns {})  
- GET /tasks → Fetch all tasks  
- POST /tasks → Add a new task  
- PUT /tasks/:id → Update a task  
- DELETE /tasks/:id → Delete a task  
- Response code and body validations for all APIs

# 3. Tools Used and Why

|  |  |
| --- | --- |
| Tool | Purpose |
| Cypress | Frontend UI automation and validation |
| Postman | API manual test case development |
| Newman | Command-line execution of Postman tests |
| MongoDB | Database backend for verifying data persistence |

# 4. How to Run the Tests

* Cypress UI Tests:

npm install  
npx cypress open  
npx cypress run

* Newman API Tests with Custom Report:

npm install -g newman newman-reporter-htmlextra  
newman run Automate.postman\_collection.json -r cli,htmlextra --reporter-htmlextra-export report.html