Test Plan / Strategy: Notes React App

# 1. What Is Being Tested

This document outlines the test plan for the Notes React App, a modern web application that allows users to register, authenticate, and perform CRUD (Create, Read, Update, Delete) operations on notes. The goal of testing is to ensure that all critical functionalities work correctly, both on the front-end and in end-to-end flows.

# 2. Test Coverage Areas

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| Area | Description |
| Authentication | Login and Logout functionality with valid/invalid credentials |
| Note Management | Adding, editing, viewing, and deleting notes |
| UI Rendering | Proper rendering of components on desktop |
| Error Handling | Validations, empty field alerts, and negative test flows |
| Persistence | Ensure notes are saved correctly |
| Delete Confirmation | Confirm/cancel delete dialog behavior and corresponding results |

# 3. Tools Used

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| Tool | Purpose |
| Cypress | For writing and running end-to-end tests |
| Mochawesome Reporter | For generating single-file HTML & JSON reports |
| GitHub Actions | For CI/CD automation on pull requests and merges |

Why These Tools?

- Cypress offers fast, reliable, and developer-friendly browser automation for UI flows.  
- Mochawesome provides a detailed visual test report, ideal for QA and team reviews.  
- GitHub Actions seamlessly integrates testing into the development workflow without extra setup.

# 4. How to Run the Tests

Prerequisites  
Clone the repo and install dependencies:

git clone https://github.com/aanchal-av/Notes-React.git  
cd notes-react  
npm install

Run Cypress with Mochawesome:(Headless)

npx cypress run

Run Cypress with Mochawesome:(Open/Headed)

npx cypress open  
  
Reports are automatically generated at: cypress/reports/indexhtml

# 5. Test Organization

- All tests are under: cypress/e2e/  
- Authentication tests: login.cy.js  
- Note creation/edit/delete tests: createNewNotes.cy.js/ editExisitingNotes.cy.js/ deleteNotes.cy.js  
- Reports: cypress/reports/  
- Fixtures (test data): cypress/fixtures/users.json

# 6. Assumptions & Limitations

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| Item | Details |
| Auth Data | Test credentials exist in users.json fixture |
| Data Cleanup | Deletion of test notes is handled in after() hooks; concurrent test users may interfere with each other |
| Browser  Mobile Tetsing | Cypress runs tests in Chromium-based browsers; full cross-browser testing is out of scope for this cycle  Mobile Testing is out of scope for now |
| Test Isolation | Tests are isolated and do not overlap with each other |

# 7. CI/CD Workflow

- Defined in .github/workflows/cypress-tests.yml  
- Generates and uploads the Mochawesome HTML report as a build artifact