

Day 1: Cypress Advanced

1. Database Initialization & Seeding

- Setting up a test database
- Using fixtures & custom commands for seeding data
- Best practices for maintaining test data

2. Cypress in CI

- Configuring Cypress in Jenkins, GitHub Actions, GitLab CI
- Running tests in headless mode
- Reporting and test artifacts

3. Intercepting Network Requests (GraphQL & REST API Testing)

- Mocking GraphQL queries with `cy.intercept()`
- API testing with Cypress (`cy.request()`)
- Verifying request & response payloads

4. Retry-ability & Test Flakiness Prevention

- Handling dynamic elements & race conditions
- Implementing retries & timeouts
- Debugging flaky tests

5. Integration of Cucumber with Cypress

- Setting up Cypress-Cucumber preprocessor
- Writing BDD-style tests
- Running feature files with Cypress

6. Complex Chart Validation in Cypress

- Capturing and validating graphical elements
- Using Cypress commands to verify SVGs & canvas charts

Day 2: Cypress Cloud

1. Smart Orchestration

- **Parallelization:** Running tests in parallel with Cypress Cloud

- **Load Balancing:** Efficiently distributing test specs
- **Spec Prioritization:** Running the most critical tests first
- **Auto Cancellation:** Stopping redundant CI pipelines

2. Visual Reviews

- **Test Replay in CI:** Debugging failed tests visually
- **Failure Debugging with Error Groups:** Identifying patterns in failures
- **Flaky Test Detection & History:** Understanding flakiness trends

3. UI Coverage

- **Visual Coverage Monitoring:** Capturing screenshots & video recording
 - **Tracking UI Changes on Every Commit**
 - **Reducing Test Duplication:** Best practices
 - **UI Coverage Reporting & Metrics**
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Day 3: Advanced Cypress Cloud Features & Integration

1. Accessibility Testing

- Running accessibility audits with Cypress
- Automating WCAG compliance checks
- Debugging and fixing accessibility violations

2. Integrated Workflows

- **CI/CD Providers:** Configuring Cypress in CI/CD pipelines
- **JIRA Integration:** Logging test failures as JIRA issues
- **Failure Notifications:** Setting up alerts in Teams & Slack

3. Hands-on Projects & Review

- Implementing a real-world end-to-end Cypress testing scenario
- Debugging and improving test performance
- Final Q&A and discussion on best practices