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| TEST PLAN  Project Name : Orange HRM(web application) |
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**OrangeHRM**

| **Prepared By : Thoorpati Swathi**  **Date : 19-03-2025** |
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| **Introduction** |
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The purpose of this test plan is to define the strategy, approach, resources, and schedule for testing the OrangeHRM login page. It ensures the application functions as expected, providing a smooth experience for users. The plan covers both manual and automated testing using Cypress to achieve comprehensive validation.

**URL** : <https://opensource-demo.orangehrmlive.com/web/index.php/auth/login>

| **Objective** |
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The objective of this test plan is to ensure the OrangeHRM login page functions correctly and efficiently. This includes both manual and automated testing using Cypress to cover positive, negative, UI, and navigation scenarios.

| **Scope** |
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This test plan outlines the testing boundaries to ensure focused, effective testing.

* Functional Testing (Login, Navigation, UI checks)
* Negative Testing (Invalid logins, empty fields)
* Automation Testing (Cypress)
* Cross-browser compatibility (Chrome, Firefox, Edge)

| **Test Features** |
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This section outlines the key features that will be tested to ensure the login page behaves as expected:

* User login functionality
* Error message display for invalid or empty credentials
* UI validation (presence of input fields, buttons, error messages)
* Navigation to the dashboard upon successful login
* Dashboard access restriction for unauthorized users

| **Test Approach** |
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The testing approach combines manual and automation testing to ensure thorough coverage:

**Manual Testing:**

* Identify test scenarios and write detailed test cases.
* Perform UI and functional validation.
* Document defects found and log in the bug report.

**Automation Testing (Cypress):**

* Set up Cypress and create a Page Object Model (POM) structure.
* Write scripts to automate positive, negative, UI, and navigation scenarios.
* Execute tests on multiple browsers.
* Generate test execution reports.

| **Test Environment set-up** |
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Proper environment setup ensures smooth test execution:

* **Manual Setup:** Browser (Chrome/Firefox/Edge), Test Case Document, Bug Report Template.
* **Automation Setup:**
  + Install Node.js and Cypress.
  + Initialize Cypress project.
  + Create Page Object Model (POM) structure.
  + Configure environment files.

| **Test Scenario Development** |
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**Scenarios ensure we cover real-world user behavior:**

**Positive Test Cases:**

1. Login with valid username and password.
2. Verify successful navigation to the dashboard.

**Negative Test Cases:**

1. Login with invalid username.
2. Login with invalid password.
3. Login with empty username.
4. Login with an empty password.
5. Login with both fields empty.

**UI Validation:**

1. Verify the presence of username, password fields, and login button.
2. Ensure error messages are displayed properly.
3. Check that the page layout remains consistent.

**Navigation Tests:**

1. Verify redirection to the dashboard on successful login.
2. Ensure unauthorized users cannot access the dashboard.

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| **Test Script Development (Cypress)** |
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Automation scripts will be written in Cypress using a clean, maintainable POM structure:

* Write Cypress scripts using POM.
* Include assertions for UI validation, error messages, and successful login.
* Implement custom commands for reusable code.

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| **Test Execution** |
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Test execution ensures validation of functionality and performance:

* **Manual Execution:** Execute test cases, document results, and log bugs.
* **Automation Execution:**
  + Run Cypress scripts.
  + Execute on different browsers.
  + Record test run videos/screenshots for analysis.

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| **Defect Management** |
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Defect tracking ensures issues are identified and resolved efficiently:

* Log defects with detailed steps to reproduce.
* Categorize defects (High, Medium, Low severity).
* Track defect status (Open, In Progress, Closed).

| **Test Schedule** |
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| **Activity** | **Start Date** | **End Date** |
| --- | --- | --- |
| Test Plan Creation | 19/03/2025 | 19/03/2025 |
| Test Scenario Creation | 19/03/2025 | 19/03/2025 |
| Script Development | 19/03/2025 | 20/03/2025 |
| Test Execution | 20/03/2025 | 21/03/2025 |
| Bug Reporting | 20/03/2025 | 21/03/2025 |
| Test Summary Report | 21/03/2025 | 21/03/2025 |

| **Test Deliverables** |
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* Test Plan
* Test Scenarios
* Test Cases
* Bug Report
* Test Summary Report
* Automation Scripts

| **Roles and Responsibilities** |
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| **Role** | **Responsibility** |
| --- | --- |
| Test Manager | Define strategy, ensure execution, monitor progress |
| Test Lead | Coordinate testing, manage resources, report status |
| Test Engineer | Write test cases, execute tests, report defects |
| Automation Engineer | Develop automation scripts, execute automation tests |

| **Entry and Exit Criteria** |
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**Entry Criteria:**

* Requirements are finalized and approved.
* Test environment is set up and ready.
* Test data is prepared.

**Exit Criteria:**

* All major defects are fixed and retested.
* Test coverage meets defined objectives.
* Test scripts run successfully without blockers.
* Test summary report is finalized.

| **Risks and Mitigation** |
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* **Risk:** Flaky Cypress tests due to timing issues.
  + **Mitigation:** Use Cypress retry logic and proper waits.
* **Risk:** Browser compatibility issues.
  + **Mitigation:** Test across multiple browsers.

| **Approval** |
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| **Role** | **Name** | **Date** |
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| Tested by | Thoorpati Swathi | 21/03/2025 |
| Approved by | Masai | 21/03/2025 |

| **Conclusion** |
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This test plan ensures thorough validation of the OrangeHRM login functionality through both manual and automated testing. The combination of detailed scenarios, Cypress scripts, and structured documentation guarantees high-quality, reliable test coverage.