**Test Plan for OrangeHRM**

**1. Test Plan ID**

OrangeHRM-TestPlan-001

**2. Introduction**

The purpose of this test plan is to outline the scope, approach, resources, and schedule for testing the OrangeHRM application. This document will define the objectives, features to be tested, testing tasks, and responsibilities to ensure the quality and functionality of the application.

**3. Objectives**

* Ensure the core functionalities of OrangeHRM (e.g., Login, PIM, Leave) work as expected.
* Conduct **manual smoke tests** to validate the stability and usability of key application workflows for immediate feedback.
* Perform **automated smoke tests** to ensure quick and consistent verification of build stability during CI/CD pipeline execution.
* Detect and fix critical bugs early in the development cycle to prevent further propagation.
* Ensure with business requirements and user expectations through efficient and reliable smoke testing.

**4. Scope of Testing**

**Modules to be Tested**

1. **Login Module**
   * User authentication
   * Forgot password functionality
2. **PIM Module**
   * Employee list
   * Add, edit, delete employee details
   * Search and filter employees
3. **Leave Module**
   * Apply for leave
   * Approve/reject leave requests
   * Leave reports
4. **Reports Module**
   * Generate reports
   * Export functionality

**Features Not in Scope**

* Integration with external systems not yet implemented.
* Testing features that are not part of the current release.

**5. Test Approach**

* **Manual Testing**:
  + Perform smoke testing to validate the basic functionality and usability of critical workflows.
  + Focus on UI validation, navigation, and ensuring that the application is stable for further testing.
  + Identify and report any critical issues that might block subsequent testing phases.
* **Automation Testing**:
  + Automate smoke test cases for critical functionalities using **Selenium**.
  + Integrate automated smoke tests into the CI/CD pipeline to validate the stability of every build.
  + Execute automated tests across multiple browsers to ensure compatibility and reliability.
  + Generate detailed reports for stakeholders with pass/fail statuses of key smoke test cases.

**6. Test Types**

1. **Smoke Testing**: Ensure critical features work after each build.
2. **Functional Testing**: Validate individual features of OrangeHRM.
3. **Integration Testing**: Validate interactions between different modules (e.g., PIM and Reports).

**7. Test Environment**

**Test Environment Requirements**

* **Operating Systems**: Windows
* **Browsers**: Chrome, Firefox, Edge.
* **Devices**: Desktop.
* **Test Data Requirements**
* Valid and invalid user credentials
* Sample employee data
* Leave requests for different employees

**8. Test Deliverables**

**Before Testing**

* Test plan
* Test cases
* Test data

**During Testing**

* Test execution report
* Defect log

**After Testing**

* Final test summary report
* Defect closure report

**9. Roles and Responsibilities**

| **Role** | **Responsibility** |
| --- | --- |
| Test Engineer | Write and execute test cases, report defects. |
| Automation Engineer | Automate test cases and maintain scripts. |

**10. Entry and Exit Criteria**

**Entry Criteria**

* Requirements are finalized and signed off.
* Test environment is set up and stable.
* Test data is ready.

**Exit Criteria**

* All test cases are executed.
* Critical and major defects are resolved.
* Test summary report is prepared.

**11. Risks and Mitigation**

| **Risk** | **Mitigation Plan** |
| --- | --- |
| Unclear requirements | Conduct requirement clarification meetings. |
| Insufficient test data | Prepare comprehensive test data upfront. |
| Environment issues | Coordinate with the DevOps team for a stable setup. |

**12. Schedule**

| **Phase** | **Timeline** |
| --- | --- |
| Test Planning | 18/12/2024 - 19/13/2024 |
| Test Case Design | 19/12/2024 - 20/12/2024 |
| Test Execution | 21/12/2024 -30/12/2024 |
| Test Reporting | 31/12/2024 - 02/01/2025 |

**13. Tools**

* **Bug Tracking**: JIRA
* **Test Management**: Zephyr
* **Automation**: Selenium
* **Performance**: JMeter, BlazeMeter

**14. Test Case Traceability**

All test cases are mapped to the corresponding requirements to ensure full coverage.