**Test Plan for OrangeHRM Web Application**

**1. Introduction**

This test plan is developed to ensure the comprehensive testing of the OrangeHRM web application. The purpose of this document is to define the testing strategy, scope, objectives, resources, and schedule for validating the functionality, usability, performance, and security aspects of the application.

**2. Objectives**

The main objectives of this test plan are as follows:

* Verify the functionality of all key features of the OrangeHRM web application.
* Ensure that the application meets the specified requirements and user expectations.
* Identify and report any defects or issues in the application.
* Validate the usability, accessibility, performance, and security aspects of the application.

**3. Scope**

The scope of this test plan includes testing the following aspects of the OrangeHRM web application:

* User authentication and authorization
* Employee management
* Leave management
* Time tracking
* Reporting
* Accessibility
* Compatibility across different web browsers and devices

**4. Test Scenarios**

* **Login Functionality**
  + Verify that users can log in using valid credentials.
  + Verify that users cannot log in with invalid credentials.
  + Verify the "Remember Me" functionality.
* **Employee Management**
  + Verify that employees can be added, edited, and deleted from the system.
  + Verify that employee details are displayed accurately.
  + Verify that searching and filtering functionality works as expected.
* **Leave Management**
  + Verify that users can apply for different types of leaves.
  + Verify that leave requests are correctly processed and approved/rejected by managers.
  + Verify that leave balances are updated accurately.
* **Attendance Tracking**
  + Verify that employees can clock in/out.
  + Verify that attendance records are correctly saved and displayed.
  + Verify that reports generated from attendance data are accurate.
* **User Permissions**
  + Verify that user roles and permissions are correctly enforced.
  + Verify that access to certain features is restricted based on user roles.
* **UI/UX Testing**
  + Verify that the interface is intuitive and user-friendly.
  + Verify that all elements are responsive across different screen sizes.
  + Verify that error messages are clear and descriptive.

**5. Test Strategy**

The testing strategy for the OrangeHRM web application will include the following:

* Functional Testing: Validating each feature against its functional requirements.
* Regression Testing: Ensuring that new changes do not introduce defects in existing functionality.
* Compatibility Testing: Testing the application across multiple browsers (Chrome, Firefox, Safari, Edge) and devices (desktop, tablet, mobile).
* Usability Testing: Evaluating the user interface for ease of use, clarity, and intuitiveness.
* Performance Testing: Assessing the responsiveness and speed of the application under normal and peak loads.
* Security Testing: Checking for vulnerabilities such as SQL injection, cross-site scripting (XSS), etc.

**6. Test Environment**

The test environment for the OrangeHRM web application will consist of the following:

* Operating Systems: Windows, macOS, Linux
* Browsers: Chrome, Firefox, Safari, Edge
* Devices: Desktop, Tablet, Mobile
* Selenium WebDriver Java for automated testing
* Postman for API testing
* Test Management Tool: TestLink/TestCase Studio
* Bug Tracking Tool: Jira

**7. Test Cases**

A comprehensive set of test cases will be developed to cover the functional and non-functional requirements of the OrangeHRM web application. Test cases will be categorized based on the modules and features of the application. Each test case will include:

* Test case ID
* Description
* Test Steps
* Expected result
* Actual result
* Pass/Fail status

**8. Test Execution**

Test execution will be carried out according to the test cases defined in the test plan. Testers will execute the test cases and record the results in the test management tool (TestLink). Defects found during testing will be logged in the bug tracking tool (Jira).

**9. Schedule**

The testing activities will be conducted according to the following schedule:

* Test Planning: Week 1
* Test Case Development: Week 2-3
* Test Execution: Week 4-5
* Bug Fixing and Retesting: Week 6

**10. Risks and Contingencies**

Potential risks to the testing process include:

* Unavailability of test environments
* Delays in development
* Lack of clarity in requirements

Contingency plans will be put in place to address these risks, including alternative test environments and frequent communication with the development team.

**11. Conclusion**

This test plan outlines the strategy, scope, resources, and schedule for testing the OrangeHRM web application. By following this plan, we aim to ensure the quality, reliability, and usability of the application, meeting the needs and expectations of its users.