TEST PLAN

<<OrangeHRM>>

Abstract

This document provides an overview of the project and the product test strategy, a list of testing deliverables and plan for development

Revision History

Date	Description	Author	Comments
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INTRODUCTION

The Test Plan is designed to prescribe the scope, approach, resources, and schedule of all testing activities of the OrangeHRM application in the **'Job' module.**

The plan identifies the items to be tested, the features to be tested, the types of testing to be performed, the personnel responsible for testing, the resources and schedule required to complete testing, and the risks associated with the plan.

1 TEST STRATEGY

1.1 Scope of Testing

1.1.1 Features to be tested

All the features of OrangeHRM application which were defined in software requirements are need to bested:

Admin Module

The Admin Module provides you with full control of all settings that affect the action of your OrangeHRM implementation. Through the Admin Module, you can:

- Define the company hierarchy, pay grades, work shifts, projects, memberships, qualifications etc.
- Add other administrators, and set access levels for each user
- Handle security issues
- Configure email notifications
- Configure language localization and date format that will be reflected throughout the whole system.
- Enable/Disable Module display

The Admin Module is the central control of the system and setting it up accurately is important for smooth operation.

The Admin Module consists of:

User Management: Add multiple HR Admins who will control the system, create logins for general users through ESS Users.

Job: Allows the HR admin to define job titles, specifications, pay grades, employment status, job categories and work shifts.

Organization: Allows the HR admin to enter/store general company info, structure of the organization and locations of sites.

Qualifications: Define various skills set, education background, license types, languages and memberships.

Nationalities: Define different nationalities

Configuration: Configure all email notifications, language localization and enable/disable module display.

JOB

All job related information can be defined in this feature. The sub menu consists of the following items:

- Job Titles
- Pay Grades
- Employment Status
- Job Categories
- Work Shifts

1.2 Test objective

The test objectives are to **verify** the functionalities of the 'Job' module in the Admin account on OrangeHRM application, to **guarantee** all the requirements specifications were verified and the application can work **normally** in real business environment

1.1.1 How to test test design

The project should use **outsource** members as the tester to save the project cost

1.1.2 When will test occur? Test execution

The tester will start the test execution when all the following inputs are ready

- Software is available for testing
- Test Specification is created
- Test Environment is built
- Enough human resource for testing

2 TEST PROCESS

A primary objective of testing is to assure that the system meets the full requirements, including quality requirements, and fit metrics for each quality requirement and satisfies the use of test case scenarios and maintain the quality of the product. At the end of the project development cycle, the client should find that the project has met all of their expectations as detailed in the requirements.

Any changes, additions or deletions to the requirements document will be documented and tested.

Another objective of testing will be: identify an expose all issues and associated risks, communicate all known issues to the project team and ensure that all issues are addressed in an appropriate matter before release.

2.1 Test planning

Roles and responsibilities

Role	Responsibilities
Project manager	• Acts as a primary contact for development and QA team. • Responsible for the project schedule and the overall success of the project
QA Lead	• Participation in the project plan creation. • Planning and organization of test process. • Coordinate with QA analysts on any issues encountered during testing. • Report progress on work assignements to the PM
QA	• Understanding requirements • Writing and executing test cases • Reviewing test cases, reports to do • Defects reporting • Confirmation and regression testing • Bug report • Preparation of test data • Coordinate with QA Lead for any issues or problems encountered during test preparation or test execution

Entry criteria:

- roles needed for the project are allocated.
- Initial project risks were detected and mitigated.
- functional specifications are defined.
- verify if the test environment is available and ready for use.
- verify if test tools installed in the environment are ready for use.

Exit criteria:

- A certain level of requirements coverage has been achieved.
- No high priority or severe bugs are left outstanding.
- All high-risk areas have been fully tested, with only minor residual risks left outstanding.
- The schedule has been achieved.

Risk and Issues

Risk	Mitigation
Team member lack the required skills for website testing.	Plan **training course** to skill up your members
The project schedule is too tight; it's hard tocomplete this project on time	Set **Test Priority** for each of the test activity.
Test Manager has poor management skill	Plan leadership training for manager
A lack of cooperation negatively affects your employees' productivity	Encourage each team member in his task, and inspire them to greater efforts.
Wrong budget estimate and cost overruns	Establish the scope before beginning work, pay a lot of attention to project planning and constantly track and measure the progress

2.2 Test monitoring and control

The actual progress will be periodic compared with the testing plan, and therefore, periodic reports will be made.

If there are any signs of not fulfilling the objective of the test plan, control measures will be executed.

Control measures are methods or actions that aim to eliminate, prevent, reduce, or mitigate the risks or hazards that exist in different contexts. Control measures may vary depending on the type and source of the risk or hazard, and may include techniques, practices, procedures, systems, devices, or other means of control. Control measures should be consistent with label requirements, health and safety responsibilities, and the hierarchy of controls

2.3 Test analysis: what to test?

The testing process will be executed, based on the requirements sent by the client, for the Job module in the Admin account, in order to create test objectives, so that test conditions could be established. The team must fully understand the requirements. If appropriate, possible suggestions for the client can be made.

2.4 Test design: how to test?

The tests conditions, that were established in the test analysis phase, will be elaborated into test cases

and that will serve as a base for evaluating the behaviour of the OrangeHRN Application in the Job module, when the Admin account is beeing used and if it is useful properly, in terms of the business requirements sent by the client.

2.5 Test implementation:

The following elements are needed to be ready before the test execution phase begins:

- Testing environment is up and ready to be running.
- QA testers have completely understood the requirements.
- Create and prioritize test cases.
- Access to the testing environment is given.
- Cycle summary was created.
- Test cases were added to the cycle summary.
- Preparing test data and ensuring it is properly loaded in the test environment.

2.6 Test execution

In this phase, the execution of all test cases must be done, and also report the results in the used tools(Passes/Failed/Blocked).

Report Bugs must be done based on the failed tests.

Full regression testing is needed after the bugs are fixed.

Test status report

A test status report provides information about the status of the test effort, including overall software quality and test execution progress against the planned progress.

There are some steps that a status report should contain, such as:

- A test status report is used for tracking how much work is complete, how much work is left to be done.
- Using these status reports, we can even track the team performance. Using a test status report, we can prepare future actionable items according to the priorities and make a list of the next week's priorities.
- It is also used to report issues that management should be aware of, in order to help solving them.
- Another purpose of the test status report is to track the total number of Test Cases that had been written, Test Cases passed, Test Cases failed, Test Cases to be executed.

In other words, a test status report is a report which is made weekly, for tracking the actual progress, in order to permit solving any issues and/or defects and to establish tasks and priorities for the next week.

2.7 Test closure

At this stage, the analysis of the exit criteria defined in the test planning must be evaluated, in order to be as expected. Also, creating a test summary report to be communicated to the stakeholders is a major activity.

Another important activity in this stage is: the product risk identification and analysis.

The following **product risks** were identified:

- data privacy risks;
- compliance risks.

3 TEST DELIVERABLES

Test Deliverables are the test artifacts which are given to the stakeholders of a software project during the Software Development Life Cycle. In this process, there will be some deliverables in every phase. Some of the deliverables are provided before the testing phase begins and some are provided during the testing phase and rest after the testing phase is completed.

The deliverables will be described as follows:

3.1 Test conditions:

Test conditions represent an item or event of a component or system that could be verified by one or more test cases. These are the titles established for test cases to be executed.

3.2 Test cases

A test case is a set of actions performed to determine if the system satisfies software requirements and functions correctly. The purpose of a test case is to determine if different features within the system are performing as expected and to confirm that the system satisfies all related standards, guidelines and customer requirements.

3.3 Traceability matrtix

A traceability matrix is a document used to trace requirements. It is also known as Requirement Traceability Matrix (RTM) or Cross Reference Matrix (CRM). The matrix maps the relationship between two baseline documents, one with the requirement specifications and another with the test cases. It helps to ensure transparency and completeness of the software testing products.

The matrix is a visual representation of the relationships and linkages between key areas of the design process. It helps to ensure that everything is accounted for and nothing is missed during the Design Control process.

The matrix is used to track the requirements and to check if the current project requirements are met.

3.4 Test case results

The typical test case format should detail the expected outcome and actual outcome, which the test itself validates. Most test case results fall into these categories: pass, fail, not executed, blocked.

Passing and failing tests indicate that the system either accomplishes what it is supposed to or fails in that attempt.

Test results that get marked as not executed are as the name suggests: tests that have not yet run, or will not run as part of this round of testing.

Blocked tests result from an external circumstance or precondition inhibiting the test from running. For example, a system failure that prevents functionality from being available will cause a blocked test, as will an improperly configured test environment.

When a failure is met, a bug report is necessary to make.

3.5 Bug report

A good bug report covers all the crucial information about the bug, which can be used in the debugging process:

- It helps with a detailed bug analysis.

- Gives better visibility about the bug and helps find the right direction and approach towards debugging.
- Saves cost and time by helping debug at an earlier stage.
- Prevents bugs from going into production and disrupting end-user experience.
- Acts as a guide to help avoid the same bug in future releases.
- Keeps all the stakeholders informed about the bug, helping them take corrective measures.

An effective bug report should contain the following:

- Title/Bug ID
- Environment
- Steps to reproduce a Bug
- Expected Result
- Actual Result
- Visual Proof (screenshots, videos, text) of Bug
- Severity/Priority

3.6 Test completion report

One of the critical outcomes of the Test Completion phase is the test completion report. This report is the summary of all the testing efforts which execute during the testing process. The completion report is a crucial input to the stakeholders to determine the amount of testing accomplished. In addition to that, it also analyzes the unattended risks and issues. It helps them to make informed decisions about the software.

4 SCHEDULE & ESTIMATION

4.1 All project task and estimation

Task	Members	Estimate effort
Create the test specification	Test Designer	170 man-hour
Perform Test Execution	Tester, Test Administrator	80 man-hour
Test Report	Tester	10 man-hour
Test Delivery		20 man-hour
Total		**280 man-hour**