OCTOBER 7, 2014

ORANGE-HRM

ONLINE, OPEN SOURCE LIVE QA PRACTICE

RITA M. BARRIOS, PH.D.
APPINC. , LLC. – MAKING TECHNOLOGY REACHABLE

Open Source Online QA Practice

CONTENTS

404 E. Fourth St., Royal Oak, Mi, 48067 Email: info@appinc-4me.com

1 INTRODUCTION

The client: Orange

Application: OrangeHRM demo (http://opensource.demo.orangehrm.com/index.php/auth/login)

Service Provider: SoftwareTestingHelp.com

Project Description: Orange wants to create a commercial human resource management product that can be consumed and customized by medium sized business located in a single country and globally. It has 2 versions: Professional and Enterprise:

Feature Include:

- Personal Information Management
- Advanced Leave Management
- Time and Attendance Tracking
- Employee Performance Management
- Recruitment
- Country/Location Based Employee Management
- Localized Leave Rules
- Configurable Workflows
- Platinum Support
- Country/Location Based Reporting
- Custom Reporting

Note: For the sake of simplicity and to limit out of scope items, let us consider the employee module of this HRM portal where the user has an option to enter their personal information

2 BUSINESS PROBLEMS SOLVED BY SOFTWARE

When a customer or business owner has a need to venture into the online world or make updates on the already existing site or application, the need is a business problem and the software is a piece of code that is designed to solve this problem.

A customer then approaches a software service provider to make this software a reality for them. That is where the software project begins.

During the initiation phase, terms are agreed upon, business requirements are defined as well as the hardware and software specifications, the project timeline, budget and human capital needed to complete the project.

During the define phase the business requirements are transformed to functional requirements (what the software will do) and non-functional requirements (behind the scenes processes). During this phase the SRS is developed. It is also in this phase that the QA team gets involved to define how the software will be tested and when a measure of quality is reached to proceed to the production implementation.

The SRS for OrangeHRM is presented in Appendix A of this document.

3 How to review the SRS

In order to determine what needs to be tested, we have to first understand the requirements. This includes what steps are needed before, during and after testing as well as taking proactive steps for any challenges that may arise.

Another document we use alongside of the SRS is the Technical Design Document – TDD. This document includes the specifics of the functional and non-functional requirements. The QA team uses both of these documents to define and design the testing phase of the project which is the bases for the creation of the Test Scenarios.

In order to do a thorough review of the SRS, several pre-steps must occur:

1. The SRS must be the approved, current version of the document.
2. Guidelines need to be established on what the expectation of each team member are at the end of the review process. Outputs include identifying the test scenarios (what to test) for each approved functional requirement.
3. Decide what templates will be used to present the deliverables.
4. Decide how the review will be divided amongst team members. Although the 'divide and conquer' approach is often used during this phase, it is highly recommended that each team member read the entire documentation set to ensure everyone understands the goals and objectives.
5. Understand if there any specific prerequisites required for the testing of the software.
6. Define a list of questions where the functionality is difficult to understand, if more information is needed to ensure a complete understanding of the functional requirements or if there are errors in the SRS.

Inputs:

- Approved & Current version of the SRS
- Clear instructions on who is going to work on what and how much time they have
- A test scenario template
- Contact information in the event of a question

Template for QA Test Scenarios

Templates don't have to be complicated. They only need to be an efficient mechanism to create a useful testing artifact. Something similar to the following is sufficient:

Project Name					
Reference Document					
Created By					
Date of Creation					
Date of Review					
Test Scenario ID	Requirement Reference Doc Index	Test Scenario Description	Positive/Negative	Importance	No. of Test Cases

The header contains basic information about the project, current version of the SRS and the QA team

Attributes include:

Test Scenario ID: A unique id to identify each test scenario. The convention used in this project to assign unique ids are: TS_MI_subsection99

where:

- TS – prefix that stands for Test Scenario
- MI – is the module we are testing – My Information
- Subsection – Individual sections of the module. E.g. MIM = My Info Module or P = Photograph
- 99 – a 2-digit sequential number

Example: TS_MI_MIM_01

Requirement: This is the unique identifier of the functionality as noted in the SRS. We need to have traceability back to the SRS.

Test Scenario Description: A one line description of what to test. This is also known as a test objective

Importance: All testing must be prioritized. High priority tests are performed first, medium next with the testing phase ending with the low prioritized items. Values such as high, medium or low are ok. A point system is better, 1-5 for example, where 5 would be the highest priority and 1 the least. Once the format has been decided, use this schema throughout the entire testing phase.

No. of Test Cases: This is a rough estimate of how many individual test cases we might end up with for the associated scenario. For example: to test login, we include tests with the correct user name & the incorrect password as well as incorrect user name and correct password and so on.

3.1 Exercise 1 – Create the Test Scenarios: 1 Day

Tip: check out the table of contents in the SRS to get a good idea on how the document is going to flow and how much work it might involve.

- Divide up into teams of no more than 5 people – this will be your team for the remainder of this project.
- Identify the Team Lead – This person is responsible for the entire test case phase and must ensure that each member delivers the cases for the subsection for which they are responsible.
- The remaining members are test case designers. Any issues you run into, please see your team lead. If there is something your team lead cannot answer, please ask the instructor
- All members will be testers
- All disputes will be settled by the instructor
- Don't assume that the examples in this document are all that needs to be tested. You should examine the information in the Appendixes to build your cases.

Please create the test scenarios based on the information in the SRS. Don't forget about section 4 for the Aesthetics and HTML Requirements and Guidelines.

Example: The following is an example from section 3 login screen

B	C	D	E	F
Project Name		OrangeHRM Version 3.0 – My Info Module		
Reference Document		Project Functional Requirement Specification , Version 1		
Created by		www.SoftwareTestingHelp.com team		
Date of creation		04-Feb-14		
Date of review		10-Feb-14		
Test scenario ID	Requirement- reference document index	Test scenario description	Importance	No. of test cases
TS_MI_01	Section 3, Page 3	validate if the user is able to enter the Orange HRM system with a successful ESS-User account	High	3
TS_MI_MIM_01	3.1.1	validate if the user is able to see the "Personal Details" on logging in the first time	Medium	
		validate if the user is able to edit the fields other than the following and save changes Personal Details • Employee ID • SSN No • SIN No • Driver License No • Date of Birth	High	20
TS_MI_P_01	3.1.2	Validate if the user can upload a picture from the site of the format (jpg, png, gif)	Medium	3
TS_MI_P_02	3.1.2	Validate if the user can upload a picture of the size less than 1 MB	Medium	2
TS_MI_P_03	3.1.2	Validate if the user can replace a picture when a new picture is uploaded	Low	2

Figure 1 - Test Case Scenario Matrix

Noteworthy Information:

- No information is to be left uncovered
- Perform a feasibility analysis on whether a certain requirement is correct or not and also if it can be tested or not
- Unless a separate performance/security or any other form of test team exists, you have to ensure that all non-functional (behind the scenes, security, performance, look/feel) are tested
- Not all information is targeted at testing so it's important to understand what to note and what not
- The importance of number of test cases for a given scenario is not important and can be filled in with an approximation. It will become more solid as you move thru the test process.
- Test scenarios are not external deliverables but are important to reach the goal of 100% test coverage. They are consolidated into the overall test plan

4 WRITING A TEST PLAN DOCUMENT – THE MOST IMPORTANT PHASE

Review of the Software Testing Life Cycle (STLC)

3 parts of the STLC

1. Test Planning
2. Test Design – the most important step – what to test, testing details and how to test
3. Test Execution

Test Planning – Incorporated at each phase of the Software Development Life Cycle (SDLC) therefore you cannot create the test plan all at once – it evolves as the SDLC progresses. The Test Plan is a dynamic document meaning that it can change over time as we know more about the project. We can look at the test plan as a blueprint of how to test and its progression throughout the project.

The Test Plan should remain current at all times.

The **Test Plan Template** takes on the following form:

Scope – Test Scenarios/Test Objectives that will be validated

Out of Scope – Specifically identified objectives that will not be tested

Assumptions – All of the conditions that need to hold true in order to progress forward successfully

Schedules – Test scenario prep, test documentation (cases, data needed and environment setup), test execution, test cycles (how many), start/end date for the cycle

Roles/Responsibilities – Team members along with their responsibility as well as the module owners and contact information

Deliverables – What documents (testing artifacts) are going to be produced and in what time frames

Environment – What are the environment requirements, who is in charge, process to resolve problems

Tools – Any automated tools for testing, bug tracking, etc.

Defect Management – Who gets the defect report, how is it reported, and what information is included

Risk/Risk Management – Risks are identified, analyzed for impact and mitigation plans are created

Exit Criteria – Identify when testing stops

Noteworthy Items:

- The Test Plan is the point of reference for the entire QA process – if this document is incorrect, incorrect results will drive significant decisions that have real impact on time, money and resources.
- It is shared with the Business Analyst, Project Managers, Development Team as well as technology environment team (network engineers, DBAs, information security team, etc.)
- Typically takes 1/3 of the time needed for the entire QA engagement. The other 1/3 is for test design and the remainder for test execution.

The test plan for our project is located in **Appendix B**. Again, this is only for the My Info Module project. **Please take a look at it paying special attention to the comments in red to explain the sections**. This plan is for functional as well as the User Acceptance Testing (UAT) phases.

This test plan is very comprehensive and detailed. **Please read this very thoroughly**.

While the creation of the test plan occurred, the development of the TDD was being created in tandem. The next thing to happen in the SDLC is where coding the application begins and the test cases are created.

While the test scenarios are 'what to test' the test cases are the 'how to test'. This cycle of creating the test cases is the most predominate part of the test design phase of the STLC. The input for the test case is the test scenarios and the SRS.

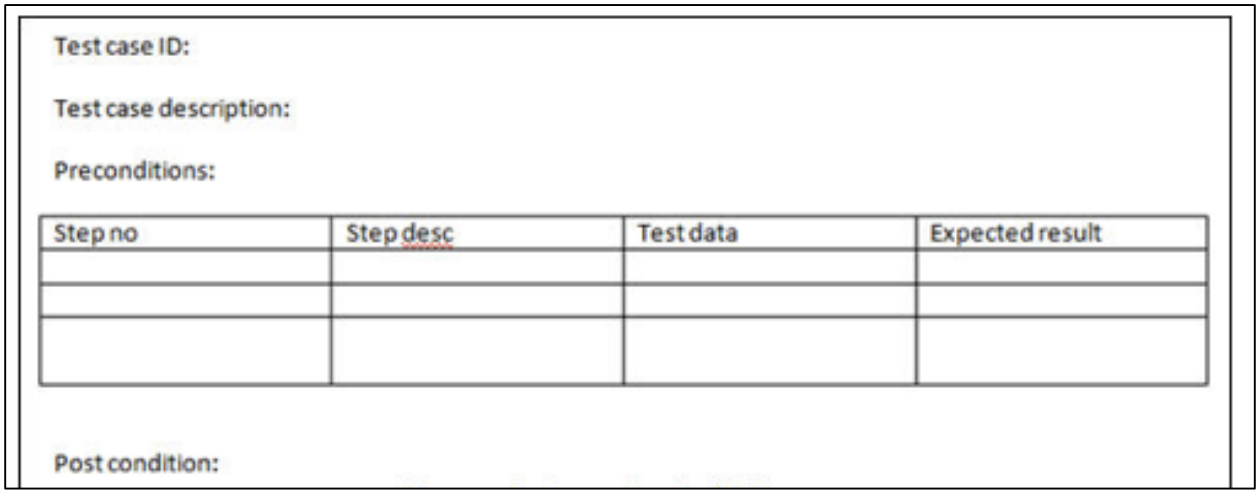
The Test Case is at the core of QA and most of our time is spent building them.

5 THE TEST CASE – USING THE SRS

Building the test cases occurs while coding is happening. The QA team works directly with the development team to ensure that the test case meets the objectives of the code. Actual testing begins when the coding phase ends.

Basics of writing a test case

- Test cases are all about 'how are we going to test a requirement'
- Input to the test case is the Functional Requirements Document (FRD), the test scenarios and other reference documents as needed
- Test case deliverables are shared with the BA, the PM and other teams when done seeking feedback from each group
- Work on the test case is divided among team members and each member is going to be responsible for creating test cases for a certain module or part of a certain module
- A common template for the test case has to be agreed upon before you start defining and designing them. MS Word and Excel facilitate the creation of the deliverable
- A MS Word template looks like this:



Test case ID:

Test case description:

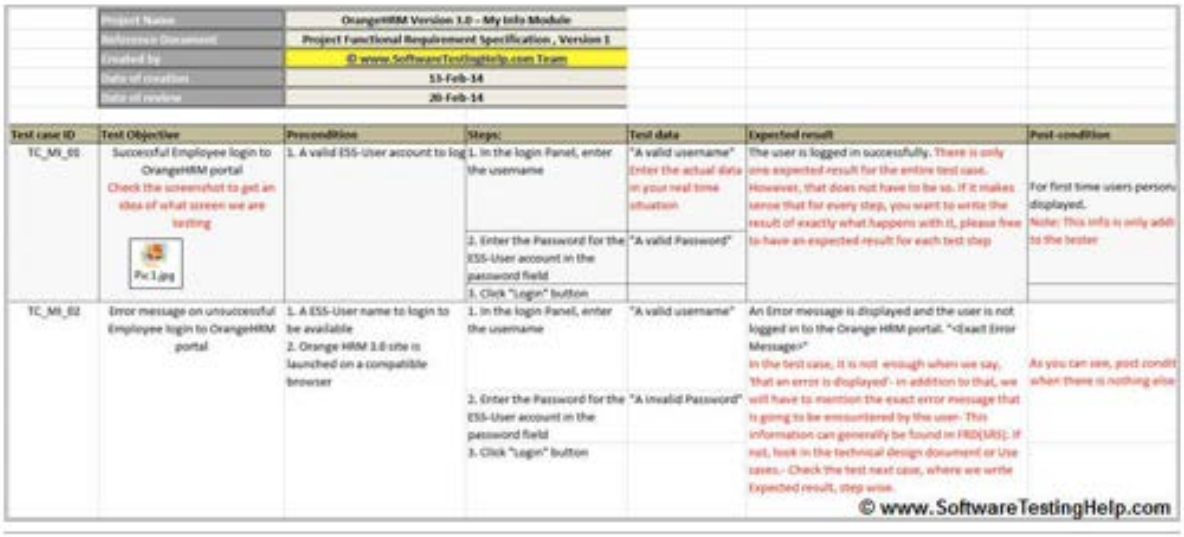
Preconditions:

Step no	Step desc	Test data	Expected result

Post condition:

Figure 2 - MS Word Test Case Template

MS Excel Template might look like this:



Project Name	OrangeHRM Version 1.0 – My Info Module
Reference Document	Project Functional Requirement Specification , Version 1
Created by	© www.SoftwareTestingHelp.com Team
Date of creation	13-Feb-14
Date of review	20-Feb-14

Test case ID	Test Objective	Precondition	Steps:	Test data	Expected result	Post-condition
TC_MI_01	Successful Employee login to OrangeHRM portal Check the screenshot to get an idea of what screen we are testing Pic 1.jpg	1. A valid ESS-User account to log	1. In the login Panel, enter the username	"A valid username" Enter the actual data in your real time situation	The user is logged in successfully. There is only one expected result for the entire test case. However, that does not have to be so. If it makes sense that for every step, you want to write the result of exactly what happens with it, please free to have an expected result for each test step	For first time users person displayed. Note: This info is only addi to the tester
			2. Enter the Password for the ESS-User account in the password field	"A valid Password"		
			3. Click "Login" button			
TC_MI_02	Error message on unsuccessful Employee login to OrangeHRM portal	1. A ESS-User name to login to be available 2. Orange HRM 1.0 site is launched on a compatible browser	1. In the login Panel, enter the username	"A valid username"	An Error message is displayed and the user is not logged in to the Orange HRM portal. "<Exact Error Message>" In the test case, it is not enough when we say, 'that an error is displayed'- in addition to that, we will have to mention the exact error message that is going to be encountered by the user. This information can generally be found in FRD(SRS). If not, look in the technical design document or Use cases.- Check the test next case, where we write Expected result, step wise.	As you can see, post condit when there is nothing else
			2. Enter the Password for the ESS-User account in the password field	"A invalid Password"		
			3. Click "Login" button			

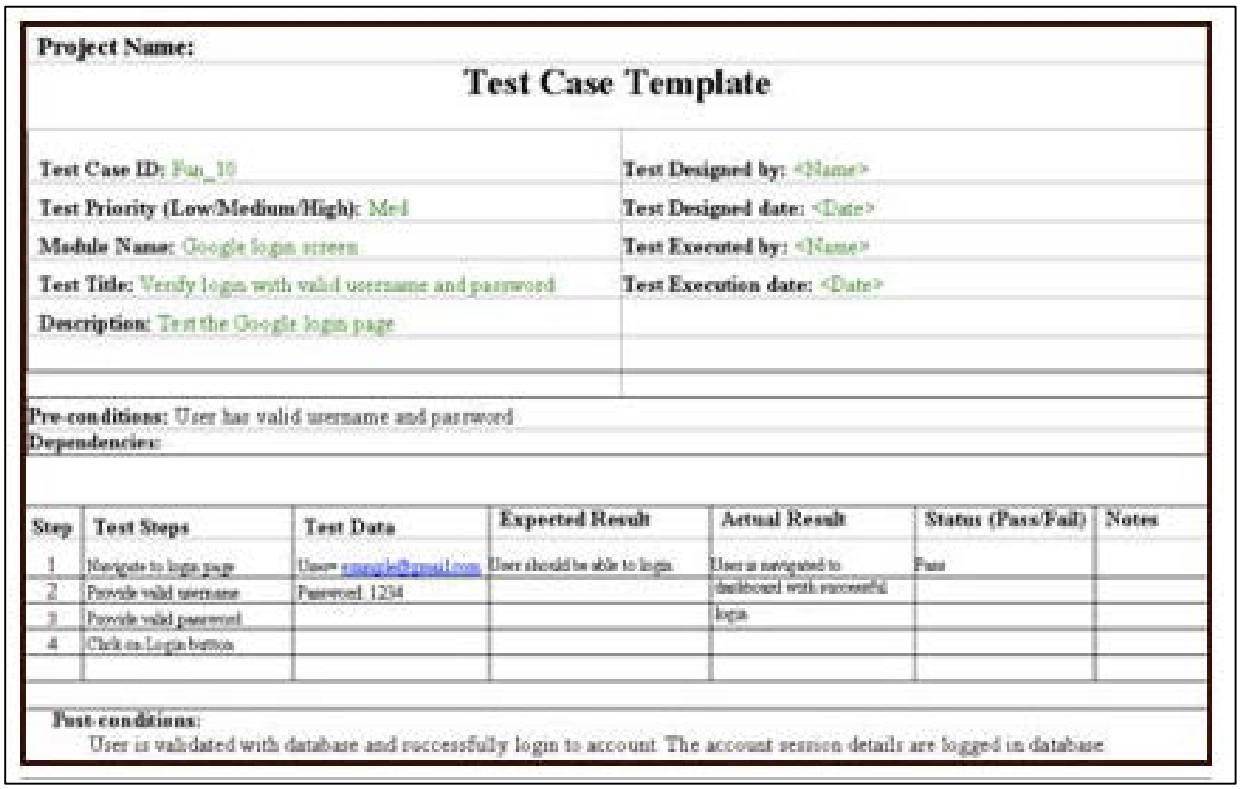
© www.SoftwareTestingHelp.com

Figure 3 - MS Excel Test Case Template

Using the two templates we can see that the fields (components) that make up a test case are the same, the only difference is the way in which the information is organized.

Information to Include:

- Test Case ID and Test Case Description – self explaining
- Precondition – state of the environment before the test begins (set up info)
- Input – data entry steps – you must note what kind of information is required – the test data
- Validation point/trigger/action – what is causing the validation to happen? (click of a button or toggle or the link access. Make sure that there is a least one validation point to a test case otherwise it is all going to be data entry with nothing to look for. Also ensure that we have enough modularity, try not to combine to many validation points into one test case – one per case is the most optimum level)
- Output – expected results
- Post Condition – this is information that is provided for the benefit of the tester, just to make the test more insightful and informative. This includes an explanation about what happens or what can be expected of the testing once all the test case steps are complete



Project Name:

Test Case Template

Test Case ID: Fun_10	**Test Designed by:** <Name>
Test Priority (Low/Medium/High): Med	**Test Designed date:** <Date>
Module Name: Google login screen	**Test Executed by:** <Name>
Test Title: Verify login with valid username and password	**Test Execution date:** <Date>
Description: Test the Google login page	

Pre-conditions: User has valid username and password
Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to login page	User: [illegible]	User should be able to login	User is navigated to	Pass	
2	Provide valid username	Password: 1234		dashboard with successful		
3	Provide valid password			login		
4	Click on Login button					

Post-conditions:
User is validated with database and successfully login to account. The account session details are logged in database

Figure 4 - Test Case Template with Data

Writing and Optimization Methods

- Ensure that you are using the optimization methods learned throughout this program to effectively test the software module in as few test cases as possible.
- To ensure that we've covered all of the requirements, use a traceability matrix to map the test case to the requirements.
- If we use an automated tool to build the test case, it is referred to as a test script
- Ensure that you perform a spell and grammar check on each and every document that is created.

Concluding the test case design and development phase – At the end of this phase and at the end of the coding phase marks the end of the test preparation phase and the beginning of the test execution phase.

5.1 Exercise 2 – Creating Test Cases for the Live Project – 2 days

Based on the process we've examined, the test cases in Appendix C will get you started in building the test cases for the OrangeHRM account Module.

Start with the test cases in **Appendix C** then add to them to make the test cases a complete set for the live application. Use either MS Word or MS Excel to build your cases.

6 TEST EXECUTION –THE DAY OF TESTING

This is the last stage of the STLC – test execution. This is the most important 'happening' phase in the STLC. The reason for this activity is that every team and team member's contribution and work is validated in this phase.

- Did the BA interpret the requirements correctly?
- Had the development team translated the SRS to functional and non-functional requirements and were they coded correctly?
- Has the data architect and DBAs (non-functional) designed the right backend systems?

This is where all of those questions and more are answered.

Not only is this phase part of the STLC but it is the Test phase of the SDLC. Once the iterative cycles of building the test cases are complete, execution begins once we have the 'go ahead' from all impacted teams.

Test Execution Guidelines

Key things to understand about this phase include:

- The build – the code that is written by the development team is packages into what as referred to as 'the build' – the current installable software version that is ready to be deployed to the QA environment. The build is move to the QA region by the build team. It is the precondition to testing.
- Test Execution happens with the QA build in the QA Region – a dedicated environment that is under complete control of only the build team (in terms of application code)
- Test Team is usually dedicated testers that are members of business team who will ultimately use the application. The lead is usually a QA team member. When in QA, the test team is at is maximum size.
- Execution happens in at a minimum of 2 cycles but most likely 3. In each cycle, all test cases are executed (the entire suite of test cases). The objective of the 1st cycle is to identify any blocking, critical defects and most of the high priority defects. The objective of the 2nd cycle is to identify the remaining high and medium defects, correct gaps in the scripts and to obtain results.
- This phase consists of executing the test scripts, updating them when needed to fill gaps and reporting defects, status, metrics and other pertinent information. Testing efforts should be estimated in terms of time needed to complete the entire cycle including maintenance of the scripts and reporting.
- After the scripts are built and the application has been deployed to the QA region but before test execution begins there is an intermediate step – Test Readiness Review (TRR) – this is a 'check list' to ensure that we are ready to begin testing. A check sample check list is below.

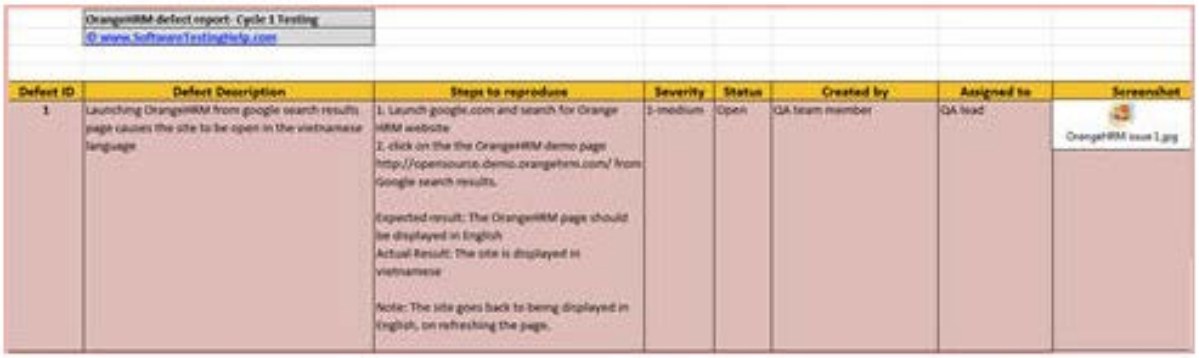
Test Readiness Review (TRR) Criteria	Status
All the requirements finalized and analyzed	Done
Test plan created and reviewed	Done
Test cases preparation done	
Test case review and sign off	
Test data availability	
Smoke testing	
Sanity testing done?	
Team aware of the roles and responsibilities	
Team aware of the deliverables expected of them	
Team aware of the communication protocol	
Team's access to the application, version controlling tools, test management	
Team's trained	
Technical aspects- server1 refreshed or not?	
Defect reporting standards are defined	

Figure 5 - Readiness Check List Sample

- Exploratory Testing is carried out once the build is ready for testing to make sure that any critical defects are removed before the next level of testing beings. It is sort of just use the application how you think it should be done without any scripts.
- The outcomes is in the form of reports – defect reports and test execution status report. The test case document is now expanded to include a status column and an actual result column.
    - Status Column – Pass, Fail, Blocked – Fail means that some aspect of the test didn't deliver the expected results, Pass means it did. Blocked means that the test case could not be executed for some reason. This can be used for cases that require multiple steps at the individual step level too.
    - Actual Result – record any deviations in the expected results.
- Log the Defects – Bug Report – this is mostly done in MS Excel Sheets or the usage of an automated testing tool. Bug Reports include the following information:
    - Defect ID – unique identifier
    - Defect Description – self explanatory
    - Module or Section of the software under test (SUT) where the problem was encountered
    - Steps to reproduce – what was the exact sequence used when the defect was encountered. Also not the input data that was used and Test Case ID
    - Severity – Intensity of the defect and the impact it may have on the SUT. The test plan document should outline how to assign the severity factor
    - Status – used to track and establish ownership as to the state of the bug within the fix process: valid status include
        - New
        - Assigned
        - Work in Progress (WiP)
        - Not reproducible
        - Resolved

- Closed
- Reopen
- Deferred
- Duplicate
- Working as Expected (WaE)

o Screen shot – if needed
o Optional – Tester who reported the issue



OrangeHRM defect report: Cycle 1 Testing
© www.SoftwareTestingHelp.com

Defect ID	Defect Description	Steps to reproduce	Severity	Status	Created by	Assigned to	Screenshot
1	Launching OrangeHRM from google search results page causes the site to be open in the vietnamese language	1. Launch google.com and search for Orange HRM website 2. click on the the OrangeHRM demo page http://opensource.demo.orangehrm.com/ from Google search results. Expected result: The OrangeHRM page should be displayed in English Actual Result: The site is displayed in vietnamese Note: The site goes back to being displayed in English, on refreshing the page.	2-medium	Open	QA team member	QA lead	OrangeHRM issue 1.jpg

Figure 6 - Sample Defect Report

Defects should be assigned to ensure that they are worked upon at the appropriate times during the testing cycle.

Points to remember:

- Discuss the issue encountered with a peer to ensure that we are clear on whether something is truly a defect.
- Provide all of the needed information on the bug tracking report
- Check to see if a similar issue has already been reported
- Note whether or not the defect can be reproduced – if so, log precisely the steps that were used to trigger the defect
- Consolidate testing outcomes at the end of each day into a master log
- At the end of a cycle, several days are required to correct the bugs noted then the next cycle begins

Exit Criteria – When Do We Stop?

Predefined in the test plan to identify when testing is complete. For our live project it should look like this:

Exit Criteria	Test Team	Notes
100% Test Scripts executed	Yes	
95% pass rate of Test Scripts	Yes	
No open Critical and High severity defects	Yes	
95% of Medium severity defects have been closed	Yes	Out of the 100 defects reports only 3 medium defects are open
All remaining defects are either cancelled or documented as Change Requests for a future release	Yes	The 3 open defects are going to be part of the next release
All expected and actual results are captured and documented with the test script	Yes	
All test metrics collected	Yes	
All defects logged	Yes	
Test Closure Memo completed and signed off	Yes	
Test environment cleanup completed and a new back up of the environment	NA	

Figure 7 - Exit Criteria Check List

Test Metrics

Metrics play a vital role in understanding where we are in the testing cycle as well as when to stop testing. The most commonly collected metrics during the execution cycle are:

- Pass Percentage of Test Cases
- Defect Density
- Critical defects percentage
- Defect, severity wise number

Once testing stops at the agreed upon time, sign off is required of all involved teams.

6.1 Exercise 3 – Test Execution Results for OrangeHRM Live Project:

Perform the Test Execution using the Scenarios and Cases you've developed in Exercise 1 and 2 on the live site http://opensource.demo.orangehrm.com/index.php/auth/login to build the defect reports and test execution status report

Team members are not allowed to execute their own cases so be sure to divide them appropriately.

- Points to note:
- Use the extended test case template as noted above
- Do exploratory testing as needed (without scripts)
- Log your defects in the Bug Tracking Report. Please see Appendix D for the Live Project defect report – You should build and add to this in exercise 3.

ORANGE-HRM

Online, Open Source Live QA Practice

Prepared by: http://www.SoftwareTestingHelp.com

1. Purpose of the document:

This is **not** a project plan. It is a guide for system architecture and development, not for phasing, timelines or deliverables.

This document is divided into three sections:
• Project Overview
• Information Architecture
• Site Design

2. Project Overview:

2.1 Audience:

This document is intended as a complete guide for ESS-User in using OrangeHRM 3.0. This document is specially designed for non-specialists; specialists may find the document a useful point of reference. By reading this guide, you will learn how to use OrangeHRM through the elements of the graphical user interface and what's behind some of the advanced features that are not always obvious at first sight. It will hopefully guide you around some common problems that frequently appear for users of OrangeHRM.

2.2 Hardware and Hosting:

OrangeHRM's servers will be hosted at X company's site. OrangeHRM will be hosted on two servers: One to host the actual website and (language)code, and the other to host the (database name)database.

3. Information Architecture

Log in to the OrangeHRM System using your ESS-User account that has been created by the HR Admin as shown in Figure 1.0.

3.1 My info Module

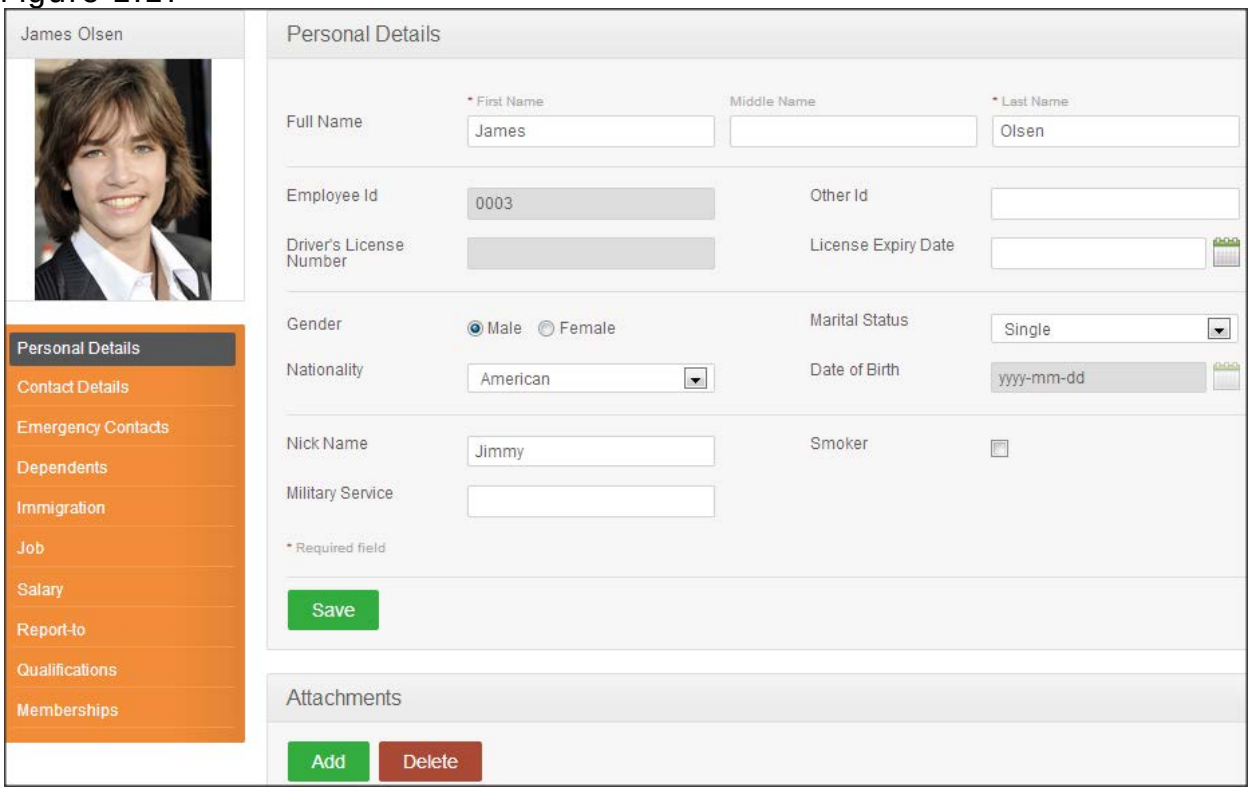
My Info Module is a powerful tool providing employees of the company with the ability to view relevant information such as personal information and updating personal information with an internet enabled PC without having to involve the HR department.

The functionality of this module spans through the entire system, making information available anywhere, anytime. All information is subject to company's defined security policy, where he/she can only view the information he/she is authorized to. An ESS-User can only edit certain fields in the ESS Module, maintaining the security and confidentiality of employee information

3.1.1 My Info Module

When an ESS-User logs into the system for the first time, the first thing they will see is the "Personal Details" screen as shown in Figure 1.1. They are able to edit and enter certain fields.

Figure 1.1:



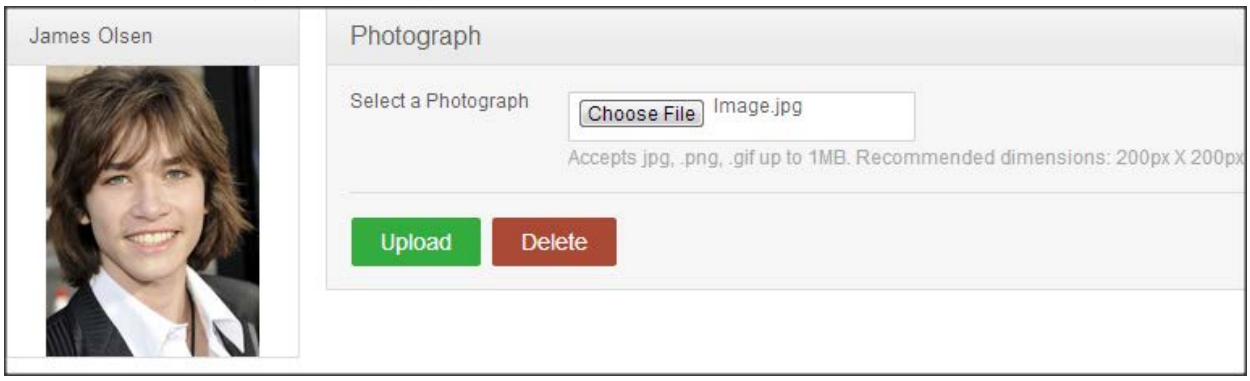
The following are restricted fields where an ESS-User cannot make changes to the following details and need to be populated by the HR Admin and the respective ESS-Supervisor.

Personal Details

- Employee ID
- SSN No
- SIN No
- Driver License No
- Date of Birth

3.1.2 Photograph

The ESS-User can add a photograph of himself/herself by clicking on the photograph at corner of the screen and the screen as shown in Figure 1.2 will appear.

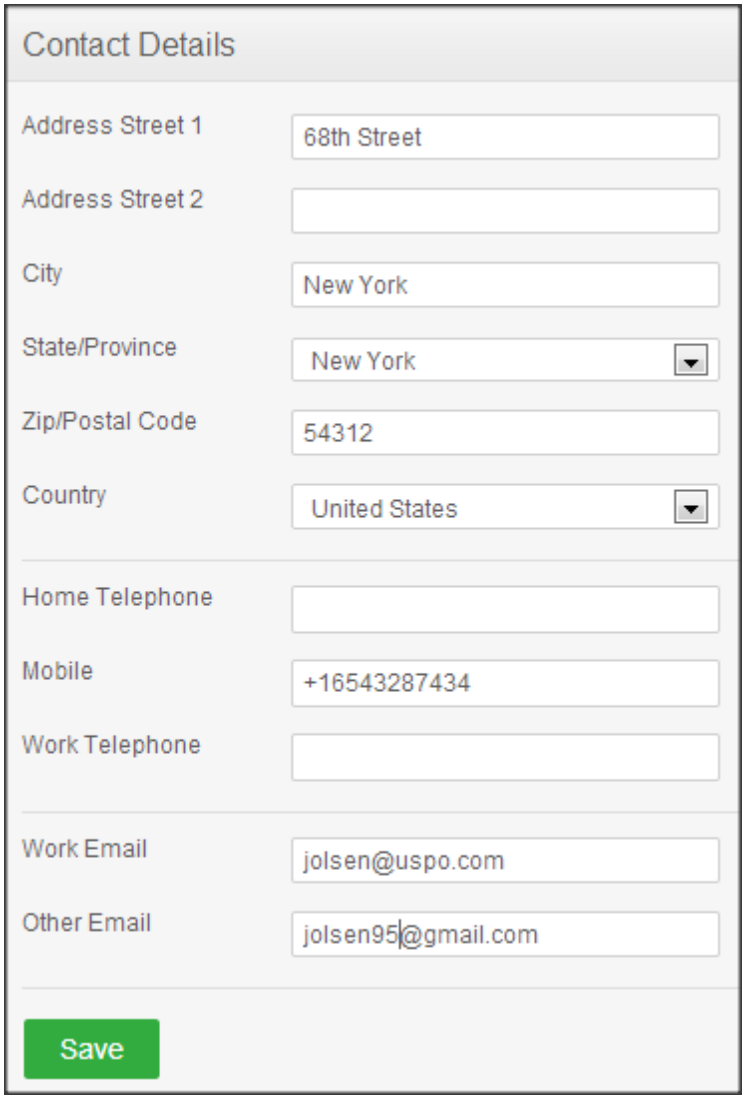


Click “Browse” and then select a photograph from the relevant path. Click “Upload” once you have selected the picture .The picture selected will be populated on the photograph section.

*Note: You may only upload a maximum size of 1 Megabyte in jpg, png, gif format.

3.1.3 Contact Details

Contact information can be entered from here. Click on “Contact Details” under the Employee Details column and the screen as shown in Figure 1.3 will appear.



Click “Edit” to enter the information.

You can edit the following:

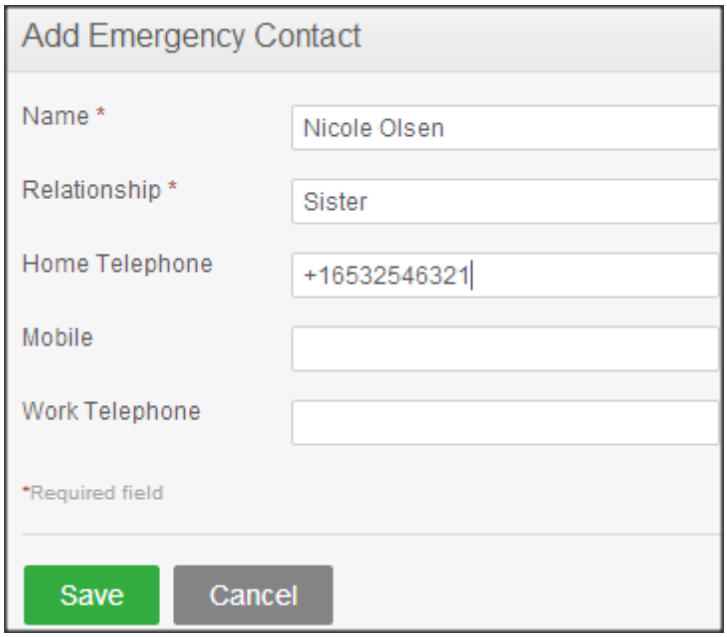
- Country – Select the country from the drop down
- Street 1
- Street 2
- City/Town
- State/Province – If the country is United Sates you can select from the drop down or you need to enter it manually
- ZIP Code
- Home Telephone
- Mobile

- Work Telephone
- Work Email
- Other Email

Once you have completed this form click “Save”.

3.1.4 Emergency Contact

Contact details which will be needed during an emergency can be entered here. Select “Emergency Contacts” on the “Personal” column and the screen as shown in Figure 1.4 will appear.



Enter the “Name” of the person you wish the company to contact in case of emergency, your “Relationship” with the contact person provided and a “Home Telephone” or “Mobile Number” the company can reach him/her.

Click “Save” once the fields are added, the emergency contact will be listed as shown in Figure 1.5.

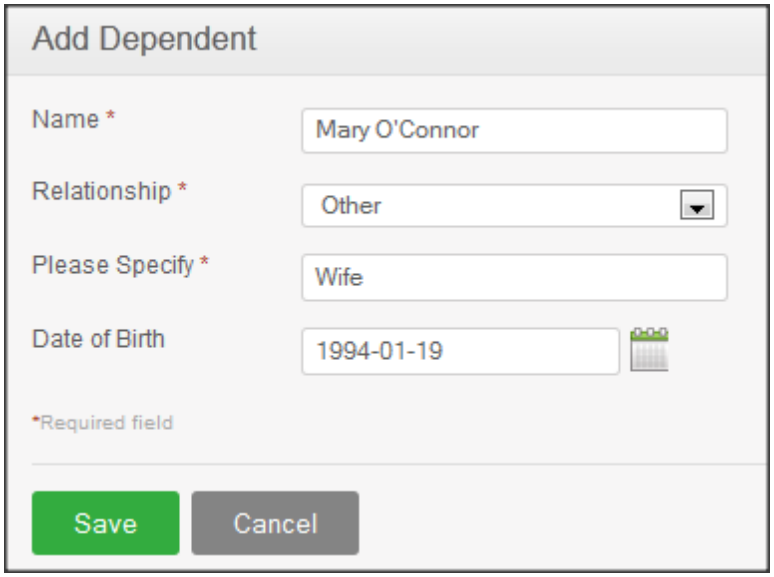
You may add multiple entries of emergency contacts.

To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

You may also upload any attachment that would support the details you have entered on the form by clicking “Add” under the “Attachment” and selecting a file from a relevant path and upload the following file by clicking “Upload”.

3.1.5 Dependents

If you have any dependents you can enter them here. To add a dependent, click on “Dependents” under the “Personal” column and the screen as shown in Figure 1.6 will appear.



Enter the “Name” of your dependent, the “Relationship” of the dependent to you and his/her “Date of Birth”.

Click “Save” once you have entered the following fields and your dependent will be listed as shown in Figure 1.7.

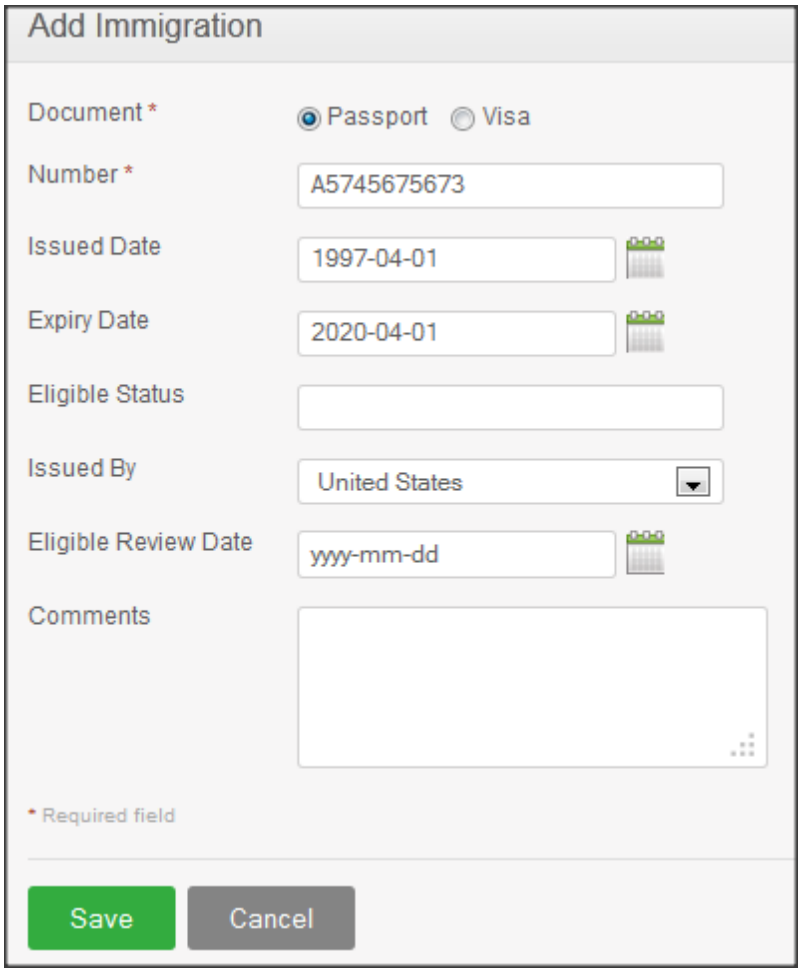
You may add multiple entries of dependents.

To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

You may also upload any attachment that would support the details you have entered on the form by clicking “Add” under the “Attachment” and selecting a file from a relevant path and uploading the following file by clicking “Upload”.

3.1.6 Immigration

Your immigration information can be entered here. To add your immigration information, select “Immigration” under the “Personal “column and the screen as shown in Figure 1.8 will appear.



Select the document type (Passport or Visa) you wish to add details of, the “Number” whether it is a passport number or a visa number, the “ Issued Date” , “Expiry Date”, the “Eligible Status” of your Passport/Visa and the “Eligible Review Date” as to when the eligibility status was reviewed. You may write a comment if necessary.

Click “Save” once the fields are added and the following immigration documents will be listed as shown in Figure 1.9.

You may add multiple entries of immigration documents.

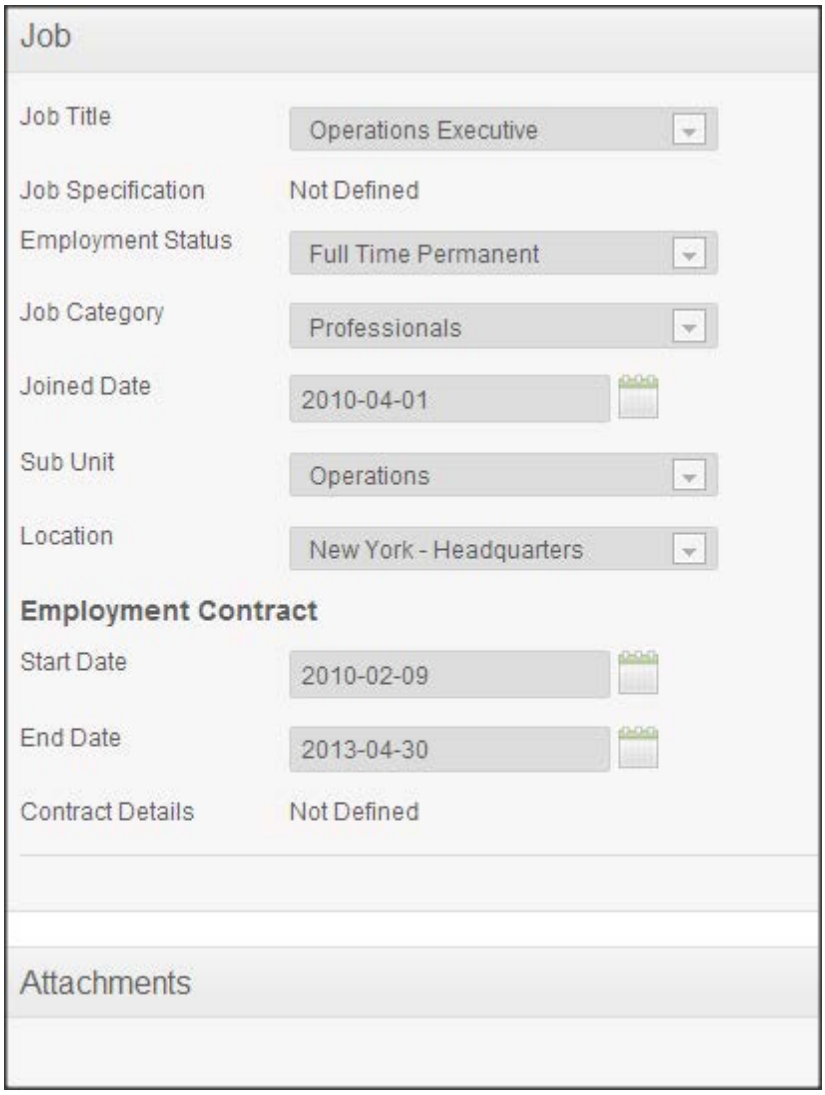
To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

You may also upload any attachment that would support the details you have entered on the form by clicking “Add” under the “Attachment” and selecting a file from a relevant path and uploading the following file by clicking “Upload”.

3.1.7 Job

The ESS-User cannot make changes in the job details. You are only able to view your job details that have been pre-defined by the administrator as shown in Figure 2.0. You are restricted from editing the following fields:

- Job Title
- Jobs Specification
- Employment Status
- Job Category
- Joined Date
- Sub Unit
- Location
- Employment Contract Start Date
- Employment Contract End Date
- Attachments



3.1.8 Salary

The salary information field is completely hidden from the ESS-User as shown in Figure 2.1. Only the HR Admin has access to this information and has to be manually communicated to the ESS-User. You are restricted from editing the following fields:

Salary

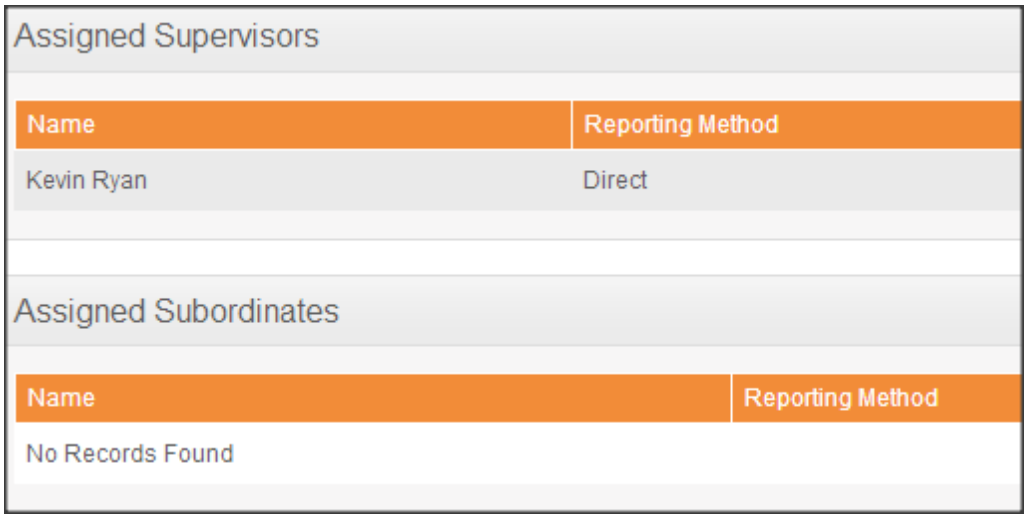
- Salary Component
- Pay Frequency
- Currency
- Amount
- Comments
- Direct Deposit Details
- Attachments

3.1.9 Report To

As an ESS-User, you are only able to view the list of supervisors that you report to and if you are an ESS-Supervisor as well, you will see the list of your subordinates as shown in Figure 2.2.

You are restricted from editing the following fields:

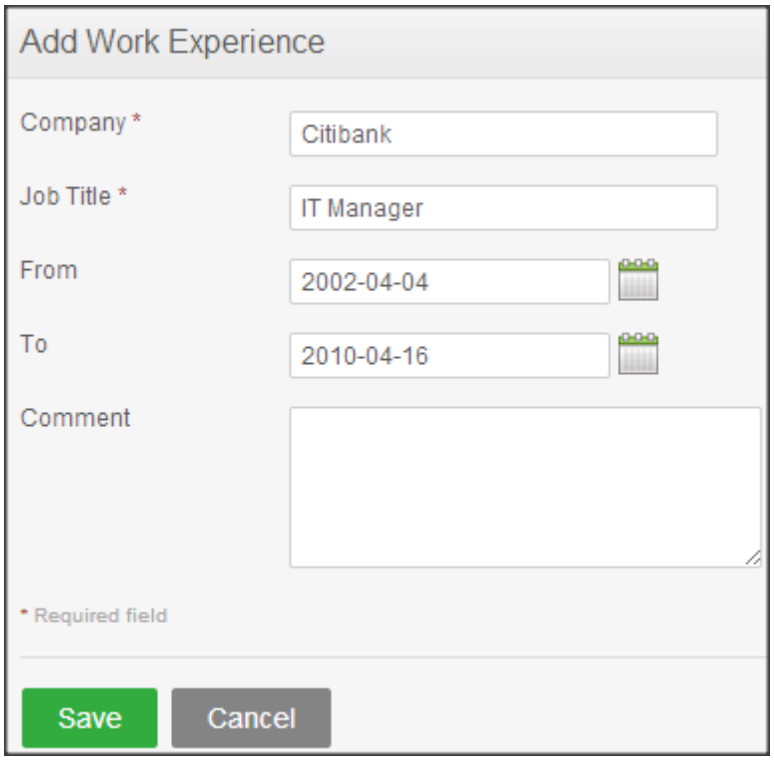
- Assigned Supervisors
- Assigned Subordinates
- Attachments



3.1.10 Qualifications

- Work Experience

Your previous work experiences can be entered here. To enter previous work experiences, click “Add” under “Work Experience” and the screen as shown in Figure 2.3 will appear.



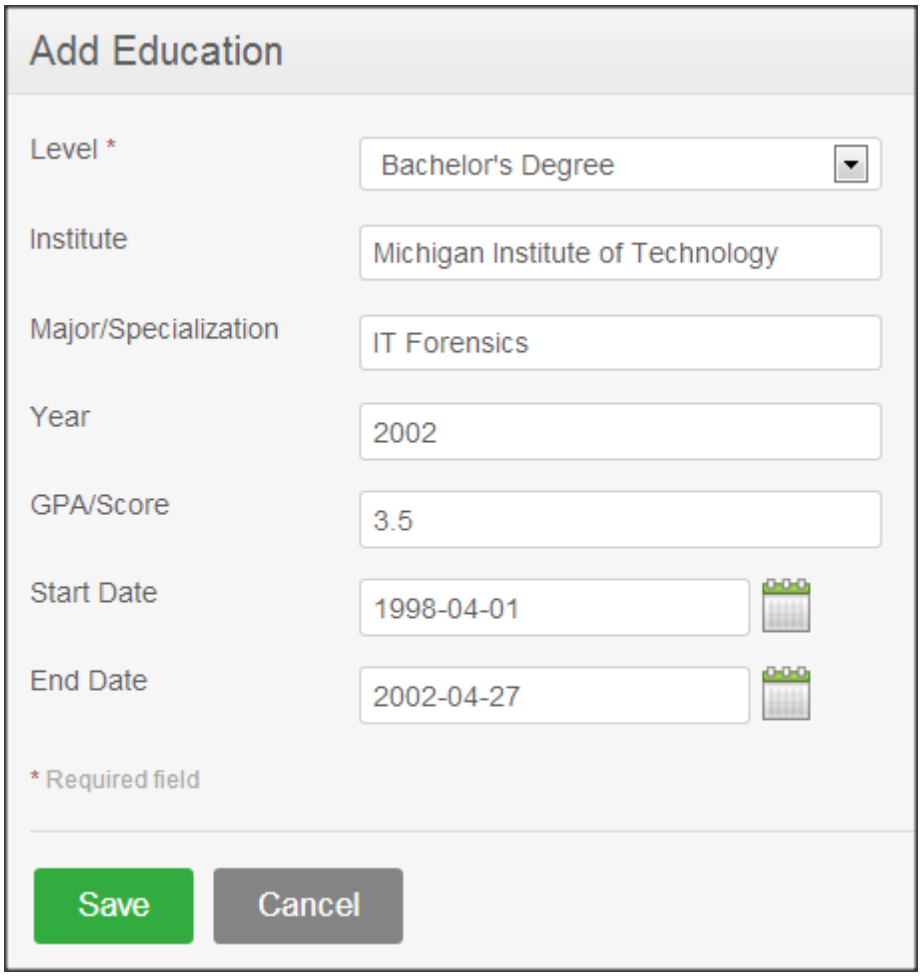
Click “Save” once all the fields are entered and the particular work experience will be listed as shown in Figure 2.4.

You may enter multiple entries of work experience.

To delete an entry, click on the check box next to a particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

● Education

You are able to enter details of your education here. To enter education details, click “Add” under “Education” and the screen as shown in Figure 2.5 will appear.



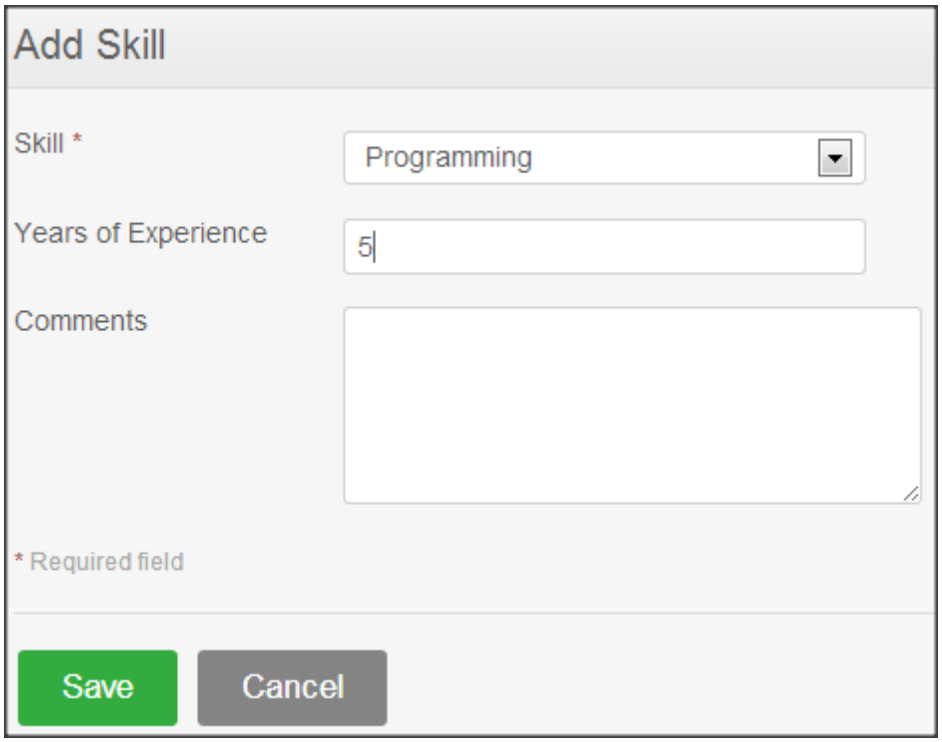
Click “Save” once all the fields are entered and the particular education details will be listed as shown in Figure 2.6.

You may enter multiple entries of education.

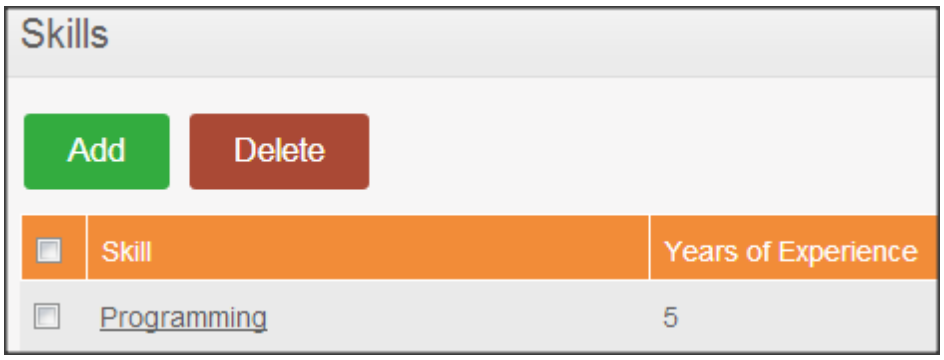
To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

● Skills

If you have any special talents or skills they can be entered here. To enter skills, click “Add” under “Skills” and the screen as shown in Figure 2.7 will appear.



Click “Save” once all the fields are entered and the particular skill will be listed as shown in Figure 2.8.

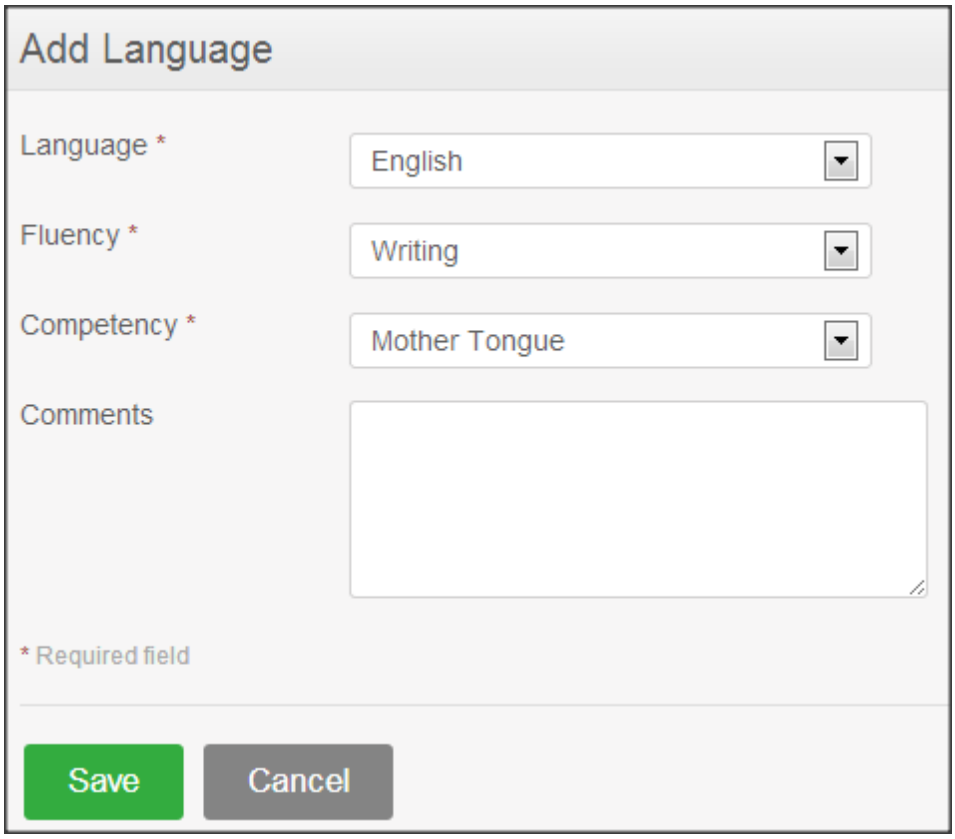


You may enter multiple entries of skills.

To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

● Languages

You can enter the various languages that you are competent in, with the level of competency. To enter your language of competency, click “Add” under “Language” and the screen as shown in Figure 2.9 will appear.



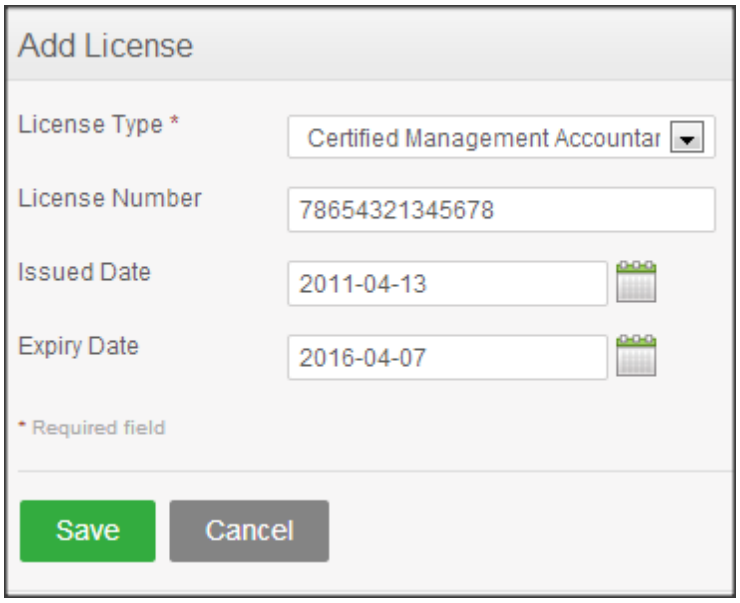
Click “Save” once all the fields are entered and the particular language of competency will be listed as shown in Figure 3.0.

You may enter multiple entries of languages.

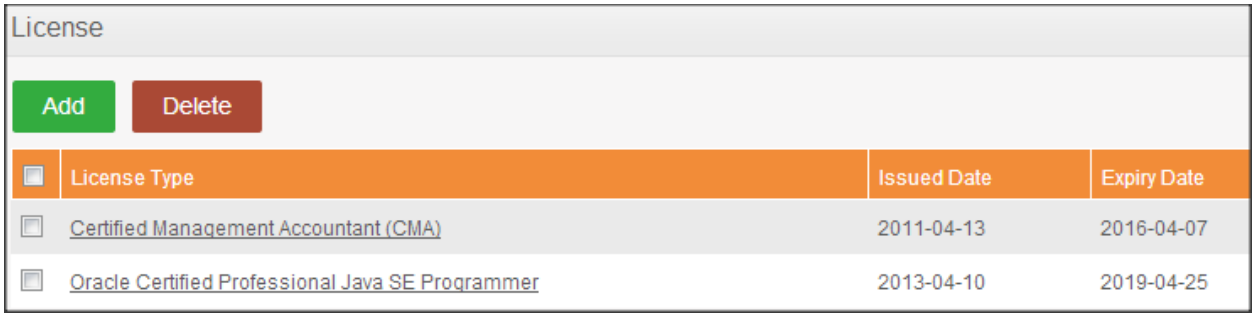
To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

● License

Here you can enter the licenses that you may have. To enter licenses, click “Add” under “License” and the screen as shown in Figure 3.1 will appear.



Click “Save” once all the fields are entered and the particular license will be listed as shown in Figure 3.2



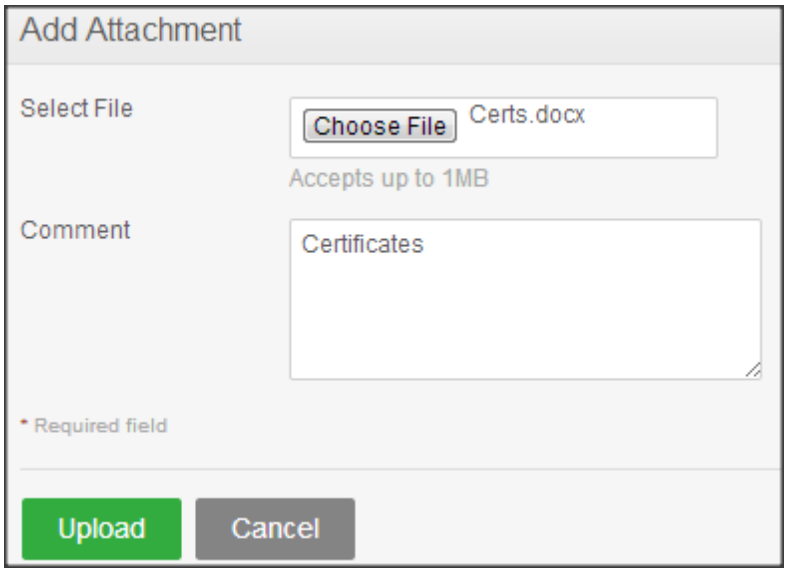
You may enter multiple entries of licenses.

To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

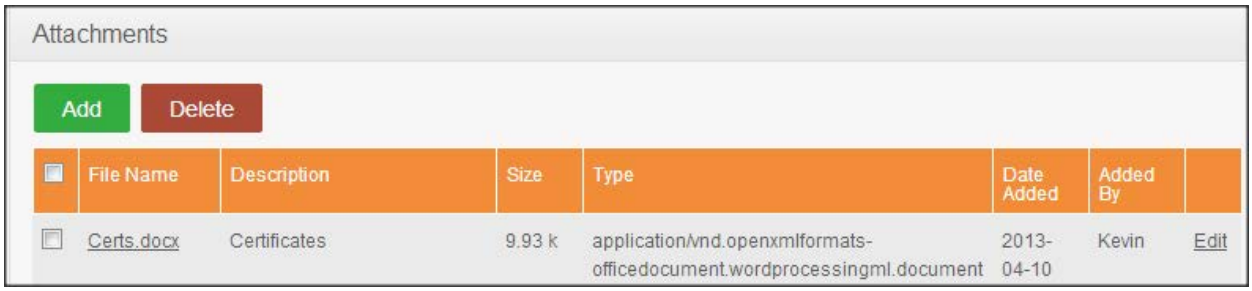
● Attachments

Any supporting documents regarding your qualification that you think is needed by the management can be attached here. Please note that each document cannot exceed 1 megabyte, but you can attach more than one document. To add an attachment, click “Add” under attachment and the screen as shown in Figure 3.3 will appear.

Click “Browse” and select the file from the relevant path and click “Upload” to upload it.



Once you have uploaded the file, the file will be listed as shown in Figure 3.4

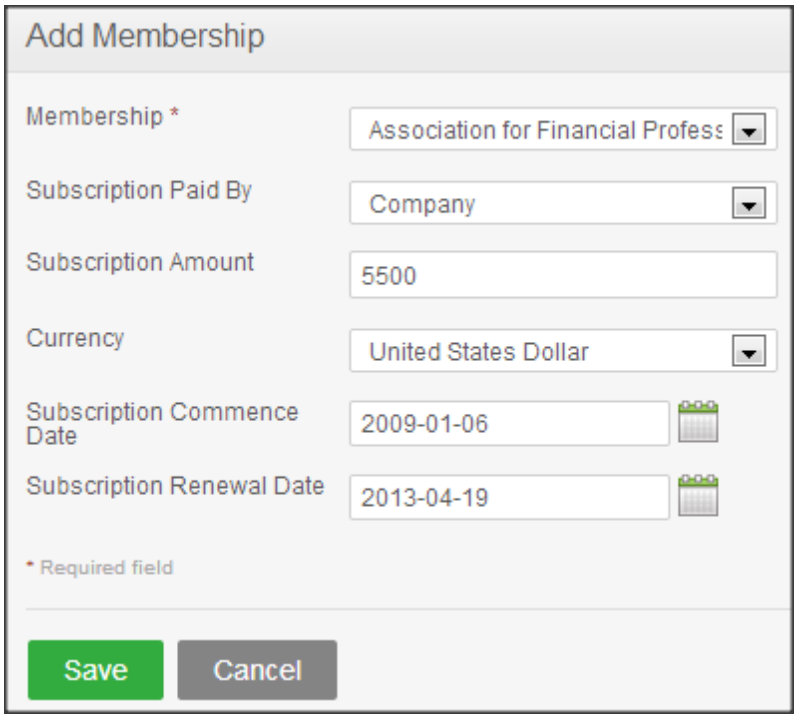


You may upload multiple attachments.

To delete an entry click on the check box next to the particular entry and click “Delete”. Multiple selections can be deleted simultaneously.

3.1.11 Membership

If you are a members of any committee, institute etc. those details can be entered here. To enter membership details, go to My Info>>Personal>>Membership and click “Add” and the screen as shown in Figure 3.5 will appear.



Click “Save” once all the fields are entered and the particular membership detail will be listed as shown in Figure 3.6.

You may enter multiple entries of memberships.

To delete an entry, click on the check box next to particular entry. It is also possible to delete multiple entries at the same time by clicking the check box entries you wish to delete and simply clicking “Delete”.

You may also upload any attachment that would support the details you have entered on the form by clicking “Add” under the “Attachment” and selecting a file from a relevant path and upload the following file by clicking “Upload”.

2. Site Design

2.1 Aesthetic/HTML Requirements and Guidelines

OrageHRM must deliver a compelling visitor experience. However, it cannot sacrifice usability and accessibility.

The web site 'look' must conform to the following requirements:

- The site should be HTML 4.0 compliant.
- All pages must download in less than 10 seconds over a 56k modem connection.- Performance req
- All pages must fit in a web browser displayed on a computer set to 640 x 480 pixels.
- All pages must use a web safe color palette.
- The site must be compatible with Internet Explorer 4, 5 and 5.5, and with Firefox 4-6, as well as Google Chrome 4.0 and later.
- The site must conform to the WAI Accessibility Guidelines outlined at http://www.w3.org/TR/WAI-WEBCONTENT/ , wherever possible.
- All site pages should be available for search engine robots.
- All pages that use static images should be displayed correctly.

3. Sign-Off Document

The following parties have read and agree with this Requirements Definition document for the OrangeHRM application account module functionality.

After approval of this Requirements Definition phase, any significant changes in the scope of this project will require validation of existing project costs and schedules.

_____ _____

Name Date

Business Lead

_____ _____

Name Date

Project Manager

ORANGE-HRM

Online, Open Source Live QA Practice

10/7/2014
APPinc. , LLC. – Making Technology Reachable
Rita M. Barrios, Ph.D.

Version: 1.0
Created: 02/05/2014
Last Updated: 02/05/2014
Status: DRAFT (The status would change to finalized post the BA, PM and dev team review and sign off)

Revision and Signoff Sheet

Document History - To maintain a list of changes being made

Version	Date	Author	Description of Change
1	02/14/2014	Swati Seela	Draft
2	02/14/2014	Vijay Shinde	Draft - Reviewed

Approvers List - To track who has reviewed and signoff on the Test plan

Name	Role	Approver / Reviewer	Approval / Review Date

Reference Documents - Clearly mark the document used as an input to create the test plan

Version	Date	Document Name
1.0		ORANGEHRM VERSION 3.0 – MY INFO MODULE -FSD

1. INTRODUCTION

1.1 Purpose

This test plan describes the testing approach and overall framework that will drive the testing of the OrangeHRM Version 3.0 – My Info Module.com site. The document introduces:

- Test Strategy: rules the test will be based on, including the givens of the project (e.g.: start / end dates, objectives, assumptions); description of the process to set up a valid test (e.g.: entry / exit criteria, creation of test cases, specific tasks to perform, scheduling, data strategy).
- Execution Strategy: describes how the test will be performed and process to identify and report defects, and to fix and implement fixes.
- Test Management: process to handle the logistics of the test and all the events that come up during execution (e.g.: communications, escalation procedures, risk and mitigation, team roster)

1. 2 Project Overview

My Info Module is a powerful tool providing employees of the company with the ability to view relevant information such as personal information and updating personal information with an internet enabled PC without having to involve the HR department.

The functionality of this module spans through the entire system, making information available anywhere, anytime. All information is subject to company's defined security policy, where he/she can only view the information he/she is authorized to. An ESS-User can only edit certain fields in the ESS Module, maintaining the security and confidentiality of employee information

1.3 Audience

- Project team members perform tasks specified in this document, and provide input and recommendations on this document.
- Project Manager Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task herein specified, approves the document and is accountable for the results.
- The stakeholders' representatives and participants (individuals as identified by the PMO Leads) may take part in the UAT test to ensure the business is aligned with the results of the test.
- Technical Team ensures that the test plan and deliverables are in line with the design, provides the environment for testing and follows the procedures related to the fixes of defects.
- Business analysts will provide their inputs on functional changes.

2. TEST STRATEGY

2.1 Test Objectives

The objective of the test is to verify that the functionality of ORANGEHRM VERSION 3.0 – MY INFO MODULE works according to the specifications.

The test will execute and verify the test scripts, identify, fix and retest all high and medium severity defects per the entrance criteria, prioritize lower severity defects for future fixing via CR.

The final product of the test is twofold:

- A production-ready software;

- A set of stable test scripts that can be reused for Functional and UAT test execution.

2.2 Test Assumptions

Key Assumptions

- Production like data required and be available in the system prior to start of Functional Testing
- In each testing phase, Cycle 3 will be initiated if the defect rate is high in Cycle 2.

General

- Exploratory Testing would be carried out once the build is ready for testing
- Performance testing is not considered for this estimation.
- All the defects would come along with a snapshot JPEG format
- The Test Team will be provided with access to Test environment via VPN connectivity
- The Test Team assumes all necessary inputs required during Test design and execution will be supported by Development/BUSINESS ANALYSTs appropriately.
- Test case design activities will be performed by QA Group
- Test environment and preparation activities will be owned by Dev Team
- Dev team will provide Defect fix plans based on the Defect meetings during each cycle to plan. The same will be informed to Test team prior to start of Defect fix cycles
- BUSINESS ANALYST will review and sign-off all Test cases prepared by Test Team prior to start of Test execution
- The defects will be tracked through HP ALM only. Any defect fixes planned will be shared with Test Team prior to applying the fixes on the Test environment
- Project Manager/BUSINESS ANALYST will review and sign-off all test deliverables
- The project will provide test planning, test design and test execution support
- Test team will manage the testing effort with close coordination with Project PM/BUSINESS ANALYST
- Project team has the knowledge and experience necessary, or has received adequate training in the system, the project and the testing processes.
- There is no environment downtime during test due to outages or defect fixes.
- The system will be treated as a black box; if the information shows correctly online and in the reports, it will be assumed that the database is working properly.
- Cycle 3 will be initiated if there are more defects in Cycle 2.

Functional Testing

- During Functional testing, testing team will use preloaded data which is available on the system at the time of execution
- The Test Team will be perform Functional testing only on ORANGEHRM VERSION 3.0 – MY INFO MODULE

UAT

- UAT test execution will be performed by end users (L1, L2 and L3) and QA Group will provide their support on creating UAT script.

2.3 Test Principles

- Testing will be focused on meeting the business objectives, cost efficiency, and quality.
- There will be common, consistent procedures for all teams supporting testing activities.
- Testing processes will be well defined, yet flexible, with the ability to change as needed.
- Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
- Testing environment and data will emulate a production environment as much as possible.
- Testing will be a repeatable, quantifiable, and measurable activity.
- Testing will be divided into distinct phases, each with clearly defined objectives and goals.
- There will be entrance and exit criteria.

2.4 Data Approach

- In functional testing, ORANGEHRM VERSION 3.0 – MY INFO MODULE will contain pre-loaded test data and which is used for testing activities.

2.5 Scope and Levels of Testing

2.5.1 Exploratory

PURPOSE: the purpose of this test is to make sure critical defects are removed before the next levels of testing can start.

SCOPE: First level navigation, dealer and admin modules

TESTERS: Testing team.

METHOD: this exploratory testing is carried out in the application without any test scripts and documentation

TIMING: at the beginning of each cycle.

2.5.2 Functional Test

PURPOSE: Functional testing will be performed to check the functions of application. The functional testing is carried out by feeding the input and validates the output from the application.

Scope: The below excel sheet details about the scope of Functional test. Note: The scope is high level due to changes in the requirement.

To keep the document easily fragmented and categorized, the scope has been embedded as an image. If you prefer you can insert a table here itself. The scope is created based on the Test scenarios that were identified in the previous article.

User	Scenarios	Sub Levels	Complexity	No. of Test cases	Negative Test Cases	Expecting Additional Test Cases
Employee	Login Page	Login	Medium	1	1	
Employee	My information	Add info	Complex	10	1	1
		Delete info	Complex	10	1	
		Verify the info display	Medium	5		
Employee	Photograph	Add photograph	Complex	5	1	1
		Replace	Complex	5	1	
		Verify photograph	Medium	3		
Employee	Aesthetics	HTML requirements	Medium	1		
		Performance	Complex	3		
		Accessibility	Complex	10		
		Image display	Medium	10		

TESTERS: Testing Team.

METHOD: The test will be performed according to Functional scripts, which are stored in HP ALM.

TIMING: after Exploratory test is completed.

TEST ACCEPTANCE CRITERIA

1. Approved Functional Specification document, Use case documents must be available prior to start of Test design phase.
2. Test cases approved and signed-off prior to start of Test execution
3. Development completed, unit tested with pass status and results shared to Testing team to avoid duplicate defects
4. Test environment with application installed, configured and ready to use state

Sign-off	Readiness
•Approved Functional Specification Document •Approved Use cases •Approved Test cases	•Development completed & unit tested •Application deployed and system ready for testing on Test environment •Production like data is available to test all functionalities. •Defect fixes planned based on Defect triage (Unit Testing) and evaluation criteria

TEST DELIVERABLES

S.No.	Deliverable Name	Author	Reviewer
1.	Test Plan	Test Lead	Project Manager/ Business Analyst's
2.	Functional Test Cases	Test Team	Business Analyst's Sign off
3.	Logging Defects in HP ALM	Test Team	Test Lead/ Programming Lead(Vijay)
(4.	Daily/weekly status report	Test Team/ Test Lead	Test Lead/ Project Manager
5.	Test Closure report	Test Lead	Project Manager

MILESTONE LIST

The milestone list is tentative and may change due to below reasons

a) Any issues in the System environment readiness
b) Any change in scope/addition in scope
c) Any other dependency that impacts efforts and timelines

Testing generally is not carried out in one cycle. Based on the testing scope, we can estimate how much time it takes and establish the time lines as you can see in the below image.

A	B	C	D
Functional	**Start Date**	**End Date**	**Available time**
Test Execution	**Monday, March 10, 2014**	**Tuesday, March 25, 2014**	
First navigation, Employee module(Cycle 1)	Monday, March 10, 2014	Friday, March 14, 2014	
Development team 1 Day	Monday, March 17, 2014	Monday, March 17, 2014	(12 working days)
Retest	Tuesday, March 18, 2014	Tuesday, March 18, 2014	
First navigation, Employee (Cycle 2)	Wednesday, March 19, 2014	Friday, March 21, 2014	
Development team 1 Day	Monday, March 24, 2014	Monday, March 24, 2014	
Retest	Tuesday, March 25, 2014	Tuesday, March 25, 2014	

2.5.3 User Acceptance Test (UAT)

PURPOSE: this test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

TESTERS: the UAT is performed by the end users (L1, L2 and L3).

METHOD: Since the business users are the most indicated to provide input around business needs and how the system adapts to them, it may happen that the users do some validation not contained in the scripts. Test team write the UAT test cases based on the inputs from End user (L1,L2 and L3 users) and Business Analyst's.

TIMING: After all other levels of testing (Exploratory and Functional) are done. Only after this test is completed the product can be released to production.

TEST DELIVERABLES

S.No.	Deliverable Name	Author	Reviewer
1.	UAT Test Cases	Test Team	Business Analyst's Sign off

2.6 Test Effort Estimate

This document lists out all the activities that have to be performed by the QA team and estimates how many man-hours each activity is going to take.

QA Group Estimate :			
	QA Activities	Effort (Man hours)	Comments/Remarks
	Test case design Phase		
	Existing application familiarization /Oritentation/KT for the team	10	
	Requirement Analysis	5	
	Test Plan / Test Strategy	5	
	Test Environment setup	10	
	Ad hoc testing	10	
Functional	Test case development including Peer review and updates	30	
	Test lead/Coordination/status reporting efforts	7	Industry standard 10%
	Total Design Efforts	**77**	
	Execution		
	Test execution (Cycle 1)	40	
	Defect logging (Cycle 1)	1	
	Test execution (Cycle 2)	40	
	Defect logging (Cycle 2)	8	
	Final defect round to meet exit criteria	81	Assumed 3 days approx for defect testing by 3 resources. Any pending open defects based on exit critieria and stability of the product
	Sub total Execution effort	**170**	
	Test lead/coordination effort	**17**	Industry standard 10%
	Total Execution Efforts	**187**	
	UAT	**40**	
	UAT Support	**10**	Interacting with End Users and supporting.
	Contingency factor 25%	**66**	since its highlevel and not full scope known on scenarios etc, Hence considered 25% as per TCOE process
	Post Production support	**100**	
	Training to support team	**30**	**Exporting test cases from HP ALM to excel and preparing document on HP ALM.**
	Total Efforts (hours)	**510**	
	Total Efforts in Man days		Assumed 9 hours/ day but actual productivity on testing excluding status calls, meetings,

Other parameters considered
Show stopper defects with temporary fix using which continuation of test execution and the same need to be re tested when it arrives in the build.
Any Showstopper bugs need to be addressed immediately to the development team by simulating in front of the development team
Performing a smoke test for that feature once the next QC build arrives to ensure no critical bugs because of code change
At times, development team may need QC team to simulate the bug as it may not arise in development environment which needs additional effort

3. EXECUTION STRATEGY

3.1 Entry and Exit Criteria

- The entry criteria refer to the desirable conditions in order to start test execution; only the migration of the code and fixes need to be assessed at the end of each cycle.
- The exit criteria are the desirable conditions that need to be met in order proceed with the implementation.
- Entry and exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation. All this is input to the project manager for a final “go-no go” decision.
- Entry criteria to start the execution phase of the test: the activities listed in the Test Planning section of the schedule are 100% completed.
- Entry criteria to start each cycle: the activities listed in the Test Execution section of the schedule are 100% completed at each cycle.

Exit Criteria	Test Team	Technical Team	Notes
100% Test Scripts executed			
95% pass rate of Test Scripts			
No open Critical and High severity defects			
95% of Medium severity defects have been closed			
All remaining defects are either cancelled or documented as Change Requests for a future release			
All expected and actual results are captured and documented with the test script			
All test metrics collected based on reports from HP ALM			
All defects logged in HP ALM			
Test Closure Memo completed and signed off			
Test environment cleanup completed and a new back up of the environment			

3.2 Test Cycles

- There will be two cycles for functional testing. Each cycle will execute all the scripts .
- The objective of the first cycle is to identify any blocking, critical defects, and most of the high defects. It is expected to use some work-around in order to get to all the scripts.
- The objective of the second cycle is to identify remaining high and medium defects, remove the work-around from the first cycle, correct gaps in the scripts and obtain performance results.

- UAT test will consist of one cycle.

3.3 Validation and Defect Management

- It is expected that the testers execute all the scripts in each of the cycles described above. However it is recognized that the testers could also do additional testing if they identify a possible gap in the scripts. This is especially relevant in the second cycle, when the Business analyst's join the TCOE in the execution of the test, since the BUSINESS ANALYSTs have a deeper knowledge of the business processes. If a gap is identified, the scripts and traceability matrix will be updated and then a defect logged against the scripts.
- The defects will be tracked through HP ALM only. The technical team will gather information on a daily basis from HP ALM, and request additional details from the Defect Coordinator. The technical team will work on fixes.
- It is the responsibility of the tester to open the defects, link them to the corresponding script, assign an initial severity and status, retest and close the defect; it is the responsibility of the Defect Manager to review the severity of the defects and facilitate with the technical team the fix and its implementation, communicate with testers when the test can continue or should be halt, request the tester to retest, and modify status as the defect progresses through the cycle; it is the responsibility of the technical team to review HP ALM on a

daily basis, ask for details if necessary, fix the defect, communicate to the Defect Manager the fix is done, implement the solution per the Defect Manager request.

Defects found during the Testing will be categorized according to the bug-reporting tool "Mercury HP ALM" and the categories are:

Severity	Impact
1 (Critical)	▪ This bug is critical enough to crash the system, cause file corruption, or cause potential data loss ▪ It causes an abnormal return to the operating system (crash or a system failure message appears). ▪ It causes the application to hang and requires re-booting the system.
2 (High)	▪ It causes a lack of vital program functionality with workaround.
3 (Medium)	▪ This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen. ▪ This bug prevents other areas of the product from being tested. However other areas can be independently tested.
4 (Low)	▪ There is an insufficient or unclear error message, which has minimum impact on product use.
5(Cosmetic)	▪ There is an insufficient or unclear error message that has no impact on product use.

3.4 Test Metrics

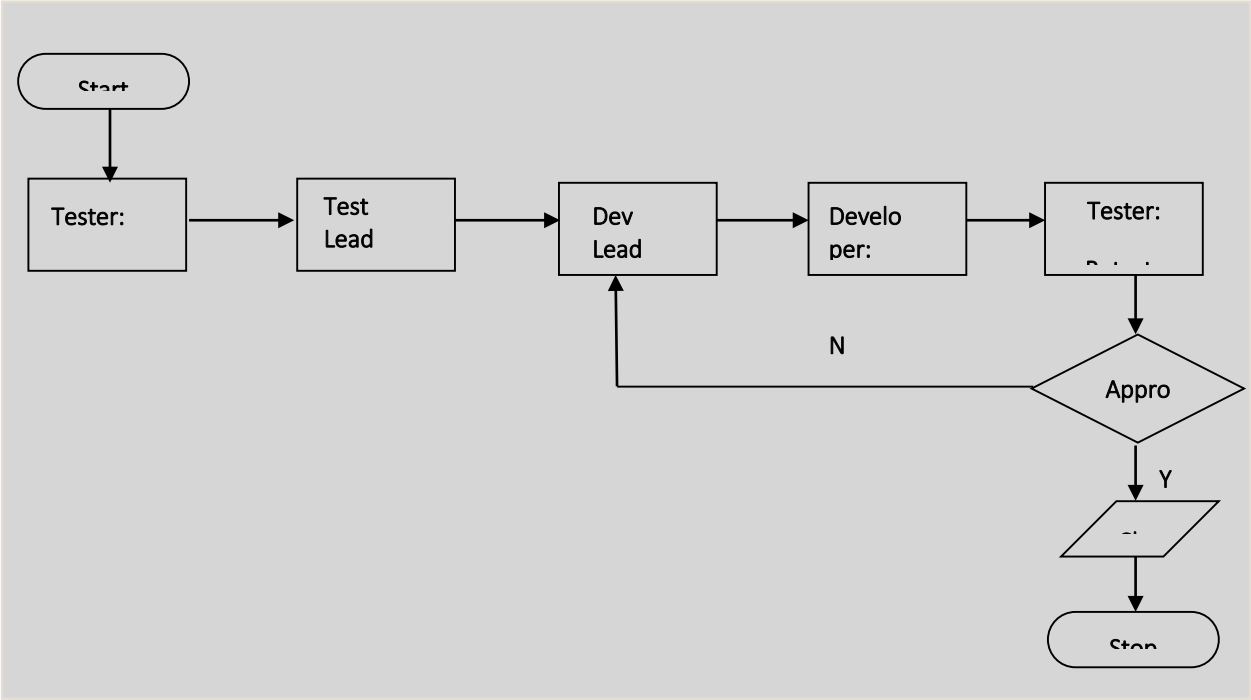
Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics

Report	Description	Frequency
Test preparation & Execution Status	To report on % complete, %WIP, % Pass, % Fail Defects severity wise Status – Open, closed, any other Status	Weekly / Daily (optional)
Daily execution status	To report on Pass, Fail, Total defects, highlight Showstopper/ Critical defects	Daily
Project Weekly Status report	Project driven reporting (As requested by PM)	Weekly – If project team needs weekly update apart from daily and there is template available

		with project team to use.

3.5 Defect tracking & Reporting

Following flowchart depicts Defect Tracking Process:



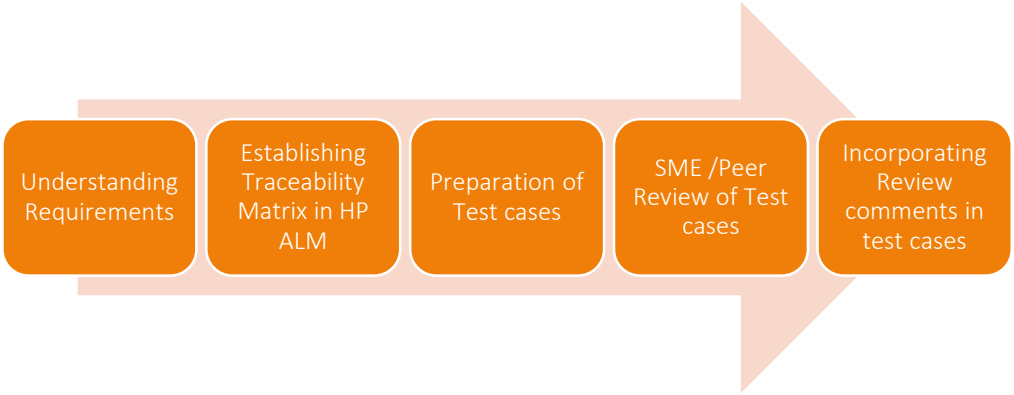
4. TEST MANAGEMENT PROCESS

4.1 Test Management Tool

HP Application Lifecycle Management is the tool used for Test Management. All testing artifacts such as Test cases, test results are updated in the HP Application Lifecycle Management (ALM) tool.

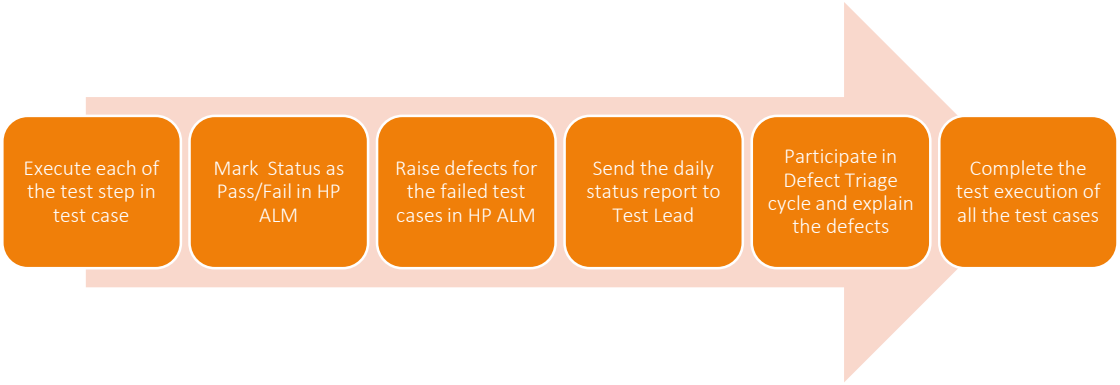
- Project specific folder structure will be created in HP ALM to manage the status of this DFRT project.
- Each resource in the Testing team will be provided with Read/Write access to add/modify Test cases in HP ALM.
- During the Test Design phase, all test cases are written directly into HP ALM. Any change to the test case will be directly updated in the HP ALM.
- Each Tester will directly access their respective assigned test cases and update the status of each executed step in HP ALM directly.
- Any defect encountered will be raised in HP ALM linking to the particular Test case/test step.
- During Defect fix testing, defects are re-assigned back to the tester to verify the defect fix. The tester verifies the defect fix and updates the status directly in HP ALM.
- Various reports can be generated from HP ALM to provide status of Test execution. For example, Status report of Test cases executed, Passed, Failed, No. of open defects, Severity wise defects etc.

4.2 Test Design Process



- The tester will understand each requirement and prepare corresponding test case to ensure all requirements are covered.
- Each Test case will be mapped to Use cases to Requirements as part of Traceability matrix.
- Each of the Test cases will undergo review by the BUSINESS ANALYST and the review defects are captured and shared to the Test team. The testers will rework on the review defects and finally obtain approval and sign-off.
- During the preparation phase, tester will use the prototype, use case and functional specification to write step by step test cases.
- Testers will maintain a clarification Tracker sheet and same will be shared periodically with the Requirements team and accordingly the test case will be updated. The clarifications may sometimes lead to Change Requests or not in scope or detailing implicit requirements.
- Sign-off for the test cases would be communicates through mail by Business Analyst's.
- Any subsequent changes to the test case if any will be directly updated in HP ALM.

4.3 Test Execution Process



- Once all Test cases are approved and the test environment is ready for testing, tester will start a exploratory test of the application to ensure the application is stable for testing.
- Each Tester is assigned Test cases directly in HP ALM.
- Testers to ensure necessary access to the testing environment, HP ALM for updating test status and raise defects. If any issues, will be escalated to the Test Lead and in turn to the Project Manager as escalation.
- If any showstopper during exploratory testing will be escalated to the respective development SPOCs for fixes.

- Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step directly in HP ALM.
- Tester will prepare a Run chart with day-wise execution details
- If any failures, defect will be raised as per severity guidelines in HP ALM tool detailing steps to simulate along with screenshots if appropriate.
- Daily Test execution status as well as Defect status will be reported to all stakeholders.
- Testing team will participate in defect triage meetings in order to ensure all test cases are executed with either pass/fail category.
- If there are any defects that are not part of steps but could be outside the test steps, such defects need to be captured in HP ALM and map it against the test case level or at the specific step that issue was encountered after confirming with Test Lead.
- This process is repeated until all test cases are executed fully with Pass/Fail status.
- During the subsequent cycle, any defects fixed applied will be tested and results will be updated in HP ALM during the cycle.

As per Process, final sign-off or project completion process will be followed

4.4 Test Risks and Mitigation Factors

Risk	Prob.	Impact	Mitigation Plan
SCHEDULE Testing schedule is tight. If the start of the testing is delayed due to design tasks, the test cannot be extended beyond the UAT scheduled start date.	High	High	• The testing team can control the preparation tasks (in advance) and the early communication with involved parties. • Some buffer has been added to the schedule for contingencies, although not as much as best practices advise.
RESOURCES Not enough resources, resources on boarding too late (process takes around 15 days.	Medium	High	Holidays and vacation have been estimated and built into the schedule; deviations from the estimation could derive in delays in the testing.
DEFECTS Defects are found at a late stage of the cycle or at a late cycle; defects discovered late are most likely be due to unclear specifications and are time consuming to resolve.	Medium	High	Defect management plan is in place to ensure prompt communication and fixing of issues.
SCOPE Scope completely defined	Medium	Medium	Scope is well defined but the changes are in the functionality are not yet finalized or keep on changing.
Natural disasters	Low	Medium	Teams and responsibilities have been spread to two different geographic areas. In a catastrophic event in one

Risk	Prob.	Impact	Mitigation Plan
			of the areas, there will resources in the other areas needed to continue (although at a slower pace) the testing activities.
Non-availability of Independent Test environment and accessibility	Medium	High	Due to non availability of the environment, the schedule gets impacted and will lead to delayed start of Test execution.
Delayed Testing Due To new Issues	Medium	High	During testing, there is a good chance that some "new" defects may be identified and may become an issue that will take time to resolve. There are defects that can be raised during testing because of unclear document specification. These defects can yield to an issue that will need time to be resolved. If these issues become showstoppers, it will greatly impact on the overall project schedule. If new defects are discovered, the defect management and issue management procedures are in place to immediately provide a resolution.

4.5 Communications Plan and Team Roster

4.5.1 Role Expectations

The following list defines in general terms the expectations related to the roles directly involved in the management, planning or execution of the test for the project.

	Roles	Name	Contact Info
1.	Project Manager		
2.	Test Lead		
3.	Business Analyst		
4.	Development Lead		
5.	Testing Team		
6.	Development Team		
7.	Technical Lead		

4.5.1.1 Project Management

- Project Manager: reviews the content of the Test Plan, Test Strategy and Test Estimates signs off on it.

4.5.1.2 Test Planning (Test Lead)

- Ensure entrance criteria are used as input before start the execution.
- Develop test plan and the guidelines to create test conditions, test cases, expected results and execution scripts.
- Provide guidelines on how to manage defects.
- Attend status meetings in person or via the conference call line.
- Communicate to the test team any changes that need to be made to the test deliverables or application and when they will be completed.
- Provide on premise or telecommute support.
- Provide functional (Business Analysts) and technical team to test team personnel (if needed).

4.5.1.3 Test Team

- Develop test conditions, test cases, expected results, and execution scripts.
- Perform execution and validation.
- Identify, document and prioritize defects according to the guidance provided by the Test lead.
- Re-test after software modifications have been made according to the schedule.
- Prepare testing metrics and provide regular status.

4.5.1.4 Test Lead

- Acknowledge the completion of a section within a cycle.
- Give the OK to start next level of testing.
- Facilitate defect communications between testing team and technical / development team.

4.5.1.5 Development Team

- Review testing deliverables (test plan, cases, scripts, expected results, etc.) and provide timely feedback.
- Assist in the validation of results (if requested).
- Support the development and testing processes being used to support the project.
- Certify correct components have been delivered to the test environment at the points specified in the testing schedule.
- Keep project team and leadership informed of potential software delivery date slips based on the current schedule.
- Define processes/tools to facilitate the initial and ongoing migration of components.
- Conduct first line investigation into execution discrepancies and assist test executors in creation of accurate defects.
- Implement fixes to defects according to schedule.

4.6 TEST ENVIRONMENT

ORANGEHRM VERSION 3.0 – MY INFO MODULE's servers will be hosted at X company's site.

RANGEHRM VERSION 3.0 – MY INFO MODULE will be hosted on two servers: One to host the actual website and (language) code, and the other to host the (database name) database.

A windows environment with Internet Explorer 8, 9 and 10, and with Firefox 27.0, as well as Google Chrome 32.0 and later should be available to each tester.

4.6.1 APPROVALS

The Names and Titles of all persons who must approve this plan.

Signature:	
Name:	
Role:	
Date:	

Signature:	
Name:	
Role:	
Date:	

Project Name	OrangeHRM Version 3.0 – My Info Module
Reference Document	roject Functional Requirement Specification , Version
Created by	© www.SoftwareTestingHelp.com Team
Date of creation	13-Feb-14
Date of review	20-Feb-14

Test case ID	Test Objective	Precondition	Steps:	Test data	Expected result	Post-condition
TC_MI_01	Successful Employee login to OrangeHRM portal Check the screenshot to get an idea of what screen we are testing 	1. A valid ESS-User account to log	1. In the login Panel, enter the username	"A valid username" Enter the actual data in your real time situation	The user is logged in successfully. There is only one expected result for the entire test case. However, that does not have to be so. If it makes sense that for every step, you want to write the result of exactly what happens with it, please free to have an expected result for each test step	For first time users personal information is displayed. Note: This info is only additional. Just as a pointer to the tester
			2. Enter the Password for the ESS-User account in the password field	"A valid Password"		
			3. Click "Login" button			
TC_MI_02	Error message on unsuccessful Employee login to OrangeHRM portal	1. A ESS-User name to login to be available 2. Orange HRM 3.0 site is launched on a compatible browser	1. In the login Panel, enter the username	"A valid username"	An Error message is displayed and the user is not logged in to the Orange HRM portal. "<Exact Error Message>" In the test case, it is not enough when we say, 'that an error is displayed'- in addition to that, we will have to mention the exact error message that is going to be encountered by the user- This information can generally be found in FRD(SRS). If not, look in the technical design document or Use cases.- Check the test next case, where we write Expected result, step wise.	As you can see, post condition can be left empty when there is nothing else to add
			2. Enter the Password for the ESS-User account in the password field	"A invalid Password"		
			3. Click "Login" button			

TC_MI_02	Error message on unsuccessful Employee login to OrangeHRM portal	1. A ESS-User name to login to be available 2. Orange HRM 3.0 site is launched on a compatible browser	1. In the login Panel, enter the username	"A valid username"	An Error message is displayed and the user is not logged in to the Orange HRM portal. "<Exact Error Message>" In the test case, it is not enough when we say, 'that an error is displayed'- in addition to that, we will have to mention the exact error message that is going to be encountered by the user- This information can generally be found in FRD(SRS). If not, look in the technical design document or Use cases.- Check the test next case, where we write Expected result, step wise.	As you can see, post condition can be left empty when there is nothing else to add
			2. Enter the Password for the ESS-User account in the password field	"A invalid Password"		
			3. Click "Login" button			
TC_MI_MIM_01	First time user login-information displ[illegible]heck 	rst time user of the site.2. Orange	1. In the login Panel, enter the username	"A valid username"		
			2. Enter the Password for the ESS-User account in the password field	"A valid Password"		
			3. Click "Login" button		The user is logged in successfully and the personal information page is displayed	
			4. Check the fields on the "Personal information Page"		Check if the following fields are disabled for entry in Personal Details: • Employee ID • SSN No • SIN No • Driver License No • Date of Birth	These fields are grayed out and cannot be modified

TC_MI_MIM_02	Personal details- modification with valid values- "First Name"	1. Orange HRM 3.0 site is launched	1. Check the fields on the "Personal information Page"		The users information is displayed		
			2. Change the field, "First Name" with enter a valid new name in this field	"A valid new value for the first name field"			
			3. Click on "Save"		The first name field needs to now show the new value entered		
* This is how all the other field's modification can be tested. Be sure to include negative test cases, where an invalid data can be entered as the new value and an error message is observed							
TC_MI_P_01	Check the upload of a JPG format image 	1. Orange HRM 3.0 site is launched on a compatible browser and a ESS User account holder is logged in to the site 2. A valid image to upload that is JPG in format and less than 1 MB in size is available on the local machine a location	Click on the photograph displayed at the top left corner of the page		The "Photograph screen" will be displayed	This page will contain options to select and upload pictures.	
			Click on "Choose a file" button		You will be able to browse your local machine for images		
			Choose a image file of type "JPG" that is less than 1 MB	Name of the image Location-path on the machine	The file name is selected in the "Choose a file" box		
			Click on upload		The file gets uploaded and the older image is replaced	It takes 2-5 depending on the size of the image for this change to complete and the page to refresh with the new image.	

TC_MI_P_02	Check the upload of a PNG format image	1. Orange HRM 3.0 site is launched on a compatible browser and a ESS User account holder is logged in to the site 2. A valid image to upload that is PNG in format and less than 1 MB in size is available on the local machine a location	Click on the photograph displayed at the top left corner of the page		The "Photograph screen" will be displayed	This page will contain options to select and upload pictures.
			Click on "Choose a file" button		You will be able to browse your local machine for images	
			Choose a image file of type PNG that is less than 1 MB	Name of the image Location-path on the machine	The file name is selected in the "Choose a file" box	
			Click on upload		The file gets uploaded and the older image is replaced	It takes 2-5 depending on the size of the image for this change to complete and the page to refresh with the new image.
*include another similar test cases for all the valid formats						
TC_MI_P_03	Check the upload of a invalid format of the picture (may be a .doc file) that is less than 1 MB	1. Orange HRM 3.0 site is launched on a compatible browser and a ESS User account holder is logged in to the site 2. A doc file is available that is less than 1 MB	Click on the photograph displayed at the top left corner of the page		The "Photograph screen" will be displayed	This page will contain options to select and upload pictures.
			Click on "Choose a file" button		You will be able to browse your local machine for images	
			Choose the doc file that is less than 1 MB	Name of the image Location-path on the machine	The file name is selected in the "Choose a file" box	
			Click on upload		An error message is displayed that the format is not supported- <The exact error message>	
TC_MI_P_04	Check the upload of a valid format by over the size of 1 MB	1. Orange HRM 3.0 site is launched on a compatible browser and a ESS User account holder is logged in to the site 2. A JPG file is available that is more than 1 MB	Click on the photograph displayed at the top left corner of the page		The "Photograph screen" will be displayed	This page will contain options to select and upload pictures.
			Click on "Choose a file" button		You will be able to browse your local machine for images	
			Choose the JPG file that is more than 1 MB	Name of the image Location-path on the machine	The file name is selected in the "Choose a file" box	
			Click on upload		An error message is displayed that the size is over the limit - <The exact error message>	
* Similarly, try writing test cases for multiple valid and invalid formats and sizes						
	© www.SoftwareTestingHelp.com Team					

APPENDIX D – ORANGEHRM SAMPLE DEFECT REPORT

Defect ID	Defect Description	Steps to reproduce	Severity	Status	Created by	Assigned to	Screenshot
1	Launching OrangeHRM from google search results page causes the site to be open in the vietnamese language	1. Launch google.com and search for Orange HRM website 2. click on the the OrangeHRM demo page http://opensource.demo.orangehrm.com/ from Google search results. Expected result: The OrangeHRM page should be displayed in English Actual Result: The site is displayed in vietnamese Note: The site goes back to being displayed in English, on refreshing the page.	1-medium	Open	QA team member	QA lead	OrangeHRM issue 1.jpg
2	The invalid file format error message for invalid photographs is appearing after the upload is complete	1. launch OrangeHRM and login as a employee 2. Click on the photograph displayed at the top left corner of the personal details page 3. Click on "Choose a file" button and choose a ".exe" file that is less than 1 MB 4. Click Upload Expected result: An error should be displayed that it is an invalid file format. Actual Result: The message of 'Invalid file type' should appear (as only JPG, GIF and PNG files supported) after the Upload button. But it uploads the complete exe file and then gives a message that the file type is invalid.	1- Medium	Open	QA team member	QA team lead	OrangeHRM issue 2.jpg

REFERENCES

We build our knowledge on the shoulders of others. Some things are so perfect, that there are no improvements needed. With this in mind, APPinc., LLC. would like to recognize the following authors and their works in the contribution of our curriculum. Some of the projects in this document have been used as is while others have been modified to fit the goals and objectives of this course work as presented.

OrangeHRM Live Test Suite. (2014). www.softwaretestinghelp.com

404 E. Fourth St., Royal Oak, Mi, 48067 Email: info@appinc-4me.com