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TEST PLAN

Project: Liferay Forms

SOFTWARE ENGINEER

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SUMMARY

1. PURPOSE

This work plan aims to cover all the stages related to test object “Liferay forms” that involve the following activities: test planning, test design, test execution, preparation of the technical report and writing of the final considerations. Specifically, the following items will be addressed: definition of resources, the survey / specification of test scenarios, choice of test types and techniques. The plan will result in the detection of failures and non-conformities in the system, also identifying items for usability improvements.

The ISTQB describes a series of techniques and good practices for test modeling. For better performance in the execution of the tests, the quality engineers chose to use in this project several types and techniques of tests, such as: functional tests, accessibility test and exploratory tests. In addition, user stories will also be used.

2. PLAN STRUCTURE

2.1. **TEST OBJECT**

✔ Liferay Forms

- Plataform: WEB
- Access link: https://forms.liferay.com/web/forms/shared/-/form/122548
- Initial version: Not defined

2.2. **INFRASTRUCTURE**

✔ Hardware:

The test object accessed externally (private network independently) of the following station.

- 01 (one) Lenovo Laptop

  Processor: Intel Core i5-7200U CPU@ 2.50GHz 2.71GHz

  Ram: 8 GB

  SSD: 500GB

  OS: Windows 10

✔ Software:

- Google Chrome – latest version.

2.3. **TOOLS**

✔ **MICROSOFT EXCEL:** [1] Tool to design and execution of test cases; [2] Failures report; [3] Support in report, control and statistics of test Project.

✔ **MICROSOF WORD**: Tool to development of test plan.

✔ **ADOBE ACROBAT READER**: Tool to convert to final extension (.pdf) of documentation produced.

3. ACTIVITIES TO BE DEVELOPED

The table below presents the activities and stages referring to “Liferay - Forms” Test Project. Besides that, a detailing is shown for each activity/stage of Project.

ACTIVITY	STAGE	DETAILING
Test Planning	Planning	Define date, resources and strategies for each task below.
Techniques Specification: [1] Use Cases [2] Test Cases [3] Charters	Design	[1] Create possible use cases. [2] Create test cases to cover the main features of the form. [3] Elaboration of Charters to carry out exploratory tests.
Test Execution (Functional and exploratory)	Execution	Perform functional and exploratory tests to validate the functionalities and any side effects in the form.
Test execution (Non functional Tests)	Execution	Perform basic non-functional tests of security and performance. As well as the field test and receive results of usability tests from the Design team.
Issues report	Report	Register all defects in the Excel tool. The defects must have the following information: summary, description steps to reproduce, the result found and the expected result.
Technical Report	Report	Report test metrics, percentage of test cases (passed and failed), test results, priority / severity and defect status, etc.

4. SCHEDULE

The test activities for the “Liferay - Forms” object will be divided as presented on the macro schedule below.

ACTIVITIES	PERIOD (DAYS)				
	1º	2º	3º	4º	5º
Test Planning	x				
Test Design		x	x		
Test Execution				x	
Failures Report				x	
Technical Report				x	x

5. PROJECT SCOPE

The QA team, responsible for testing on Liferay forms, defined the scope of activities according to the subsections below. The design of the test project was performed in view of use cases to develop functional tests and exploratory tests.

5.1 TEST DESIGN

The scope developed for the test object was based on “black box” tests. Black box is a technique for deriving and selecting test cases considering the functional specifications of the system, without referencing its internal structure. In this way, the following subsections will present the scope produced by each type of test that will be performed to “Liferay forms”. Furthermore, some techniques and test types will be used as boundary values, usability, functional and non functional tests.

5.1.1 USE CASES

In software tests, the use cases approach can be used to facilitate the understanding about the system/application and when it is necessary to perform an efficient modeling of tests of the project. In addition, the use cases can be used as a foundation to develop test scenarios, test cases and charters related to test projects. Therefore, in relation to the test object “Liferay forms“, the QA team decided to use the technique of Use Cases and the list will be shown below.

ID	SUMMARY	DESCRIPTION
LF-UC-01 - Submit form (pt-BR)	On "liferay forms" (version PT), the user needs to register your information (name, data of birth and answer to question).	1. User enters on Liferay forms URL on browser 2. The forms is loaded properly on browser 3. User sets the language option as PT 4. User registers your information 5. User submits the form.
LF-UC-02 - Submit form (en-US)	On "liferay forms" (version ENG), the user needs to register your information (name, data of birth and answer to question).	1. User enters on Liferay forms URL on browser 2. The forms is loaded properly on browser 3. User sets the language option as ENG 4. User registers your information 5. User submits the form.

5.1.1 TEST SCENARIOS

From the use cases identified, the test scenarios were developed in order to provide a better analysis of test scope and made it possible the creation of test cases (Functional Tests) and charters (Exploratory tests). The scenarios related to Test object “Liferay Forms” will be listed below. Each scenario contains a description and a relation with the use case.

TEST SCENARIOS – LIFERAY FORMS		
USE CASE ID	TEST SCENARIO ID	SCENARIO DESCRIPTION
LF-UC-01 LF-UC-02	LF-TS-01	Verify the form submission.
LF-UC-01 LF-UC-02	LF-TS-02	Verify the insertion of information in textual fields.
LF-UC-01 LF-UC-02	LF-TS-03	Verify the insertion of date in the calendar field.
LF-UC-01 LF-UC-02	LF-TS-04	Verify the form changes applied according to the language selected.
LF-XP-02	LF-TS-05	Verify the form responsivity.

5.1.2 FUNCTIONAL TESTS (TEST CASES)

This section will present the test cases designed for “Liferay forms” test project. These test cases will be executed posteriorly on this test project.

LF-TC-01 - Submit form (pt-BR)	
VERSION	1.0
PRIORITY	High
USE CASE	LF-UC-01 - Submit form (pt-BR)
TEST SCENARIO	LF-TS-01 - Verify the form submission.
OBJECTIVE	Verify if it is possible to submit the form when portuguese language is set.
PRECONDITION	The liferay form must be set to pt-BR option
STEPS	
1	**STEP** In "Qual é o seu nome?" field, insert user name.
	EXPECTED RESULT The name must be inserted successfully.
2	**STEP** In "Porque você ingressou na área de testes? " field, insert sentence.
	EXPECTED RESULT The sentence must be inserted successfully.
3	**STEP** In "Qual é a data do seu nascimento? " field, insert a data.
	EXPECTED RESULT A data must be inserted successfully.
4	**STEP** Click on "Submeter" option
	The form must be submitted successfully.
Estimated	**2 minutes**

LF-TC-02 - Submit form (en-US)	
VERSION	1.0
PRIORITY	High
USE CASE	LF-UC-02 - Submit form (en-US)
TEST SCENARIO	LF-TS-01 - Verify the form submission.
OBJECTIVE	Verify if it is possible to submit the form when english language is set.
PRECONDITION	The liferay form must be set to en-US option
STEPS	
1	**STEP** In "What is your name?" field, insert user name.
	EXPECTED RESULT The name must be inserted successfully.
2	**STEP** In "Why did you join the testing area?" field, insert a sentence.
	EXPECTED RESULT The sentence must be inserted successfully.
3	**STEP** In "What is the date of your birth?" field, insert a data.
	EXPECTED RESULT A data must be inserted successfully.
4	**STEP** Click on "Submit" option
	The form must be submitted successfully.
Estimated	**2 minutes**

LF-TC-03 - Page option (EN/PT)	
VERSION	1.0
PRIORITY	High
USE CASE	none
TEST SCENARIO	LF-TS-04 - Verify the form changes applied according to the language selected.
OBJECTIVE	Verify if the form options are changed after language is selected.
PRECONDITION	none
STEPS	
1	**STEP** Click on the "en-US" button on the first page.
	EXPECTED RESULT The form words and options must be changed to english language.
2	**STEP** Click on the "pt-BR" button on the first page.
	EXPECTED RESULT The form words and options must be changed to portuguese language.
Estimated	**1 minute**

5.1.3 EXPLORATORY TESTS

The exploratory tests are suggested when analyst's skills are facing behaviors and fault identification related to test categories, considering the inexistence of tests procedures designed. For this scope, the objective and description are presented following the system functionalities and some artifacts

(charters, spreadsheets, cards) can be used to assist the analyst execution. Therefore, for the "Liferay Form" project, the charters produced are listed below.

LF-XP-01 - Explore Entry fields	
FEATURE	Search option
OBJECTIVE	Verify the form behavior with different entries.
PRECONDITION	None
NOTES	- Invalid entries. - Null. - Special characters. - Too many characters.
RELATED TECHNIQUES	Boundary values
MINIMAL	05 minutes
MAXIMUM	20 minutes

LF-XP-02 - Explore Responsivity	
FEATURE	First Page
OBJECTIVE	Verify form responsivity.
PRECONDITION	None
NOTES	- Different web browsers. - Mobile version. - Different screen sizes.
TEST TYPE	Usability
MINIMAL	05 minutes
MAXIMUM	20 minutes

LF-XP-03 - Explore buttons	
FEATURE	First Page
OBJECTIVE	Verify buttons of Liferay form
PRECONDITION	None
NOTES	- Different web browsers. - Mobile version. - Different screen sizes.
TEST TYPE	Functional test
MINIMAL	05 minutes
MAXIMUM	20 minutes

LF-XP-04 - Explore Form language	
AREA	First Page
OBJECTIVE	Verify if portuguese or english language was applied in Liferay form.
PRECONDITION	None
NOTES	- first page
TEST TYPE	Non functional
MINIMAL	05 minutes
MAXIMUM	20 minutes

6. TEST EXECUTION (Strategy)

To test execution of the “Liferay form” test will be used the Excel tool in order to organize the test cases and charters produced for this project. This way, the QA team will perform the tests (tests scripts) and exploratory tests (charters). Finally, the analyst will report the results of execution on test spreadsheet and Test report documentation.

7. FAILURE REPORTS (Strategy)

The failures detected on “Liferay forms” will be registered on Excel tool and the QA team will use this report as strategy for: [1] To suggest tine investigation on the functions of form; [2] To anticipate system failures before of users detection; [3] To provide information to development team about the failures on form (good description, steps, actual and expected results); [4] To provide evidences (images or video recording) about issues detected; [5] To insert/analyze information about bug reproduction as priority/severity level on report. Finally, the analyst of QA Team will be responsible for monitoring and Control of Issues (analysis and fixed) about “liferay form” form.

8. MONITORING AND CONTROL

For execution of monitoring and control of this test project, the QA team will need to analyze documentation/artifacts periodically for the purpose improvements, to organize phases of the project and to update the deliverables (use cases, test cases, charters, spreadsheets of execution and issues reports). Finally, a report of test execution will be created for future analysis and a new cycle of tests (if necessary).

9. QA TEAM

- ✔ Test Analyst – Lidia Fransuelly Nunes de Melo Roque (full time).

10. DELIVERABLES

In this test plan result, QA Team will provide:

- ✔ Purpose and Plan Structure
- ✔ Test Design
    - 02 Use cases
    - 05 scenarios of tests
    - 03 Test cases created
    - 04 charters created
- ✔ Test Execution (Strategy)
- ✔ Failure Reports (Strategy)