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Test Plan

Testing Base Modules and front-end functionalities from Telerik Forum System

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# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Author** | **Description** |
| 24.11.2015 | 1.0 | L. Nikodimov | Test Plan First Draft |
| 25.11.2015 | 1.1 | L. Nikodimov | Introduction, Test Summary, Glossary, References |
| 26.11.2015 | 1.2 | L. Nikodimov | Updated Test Summary, Schedule, Staffing and Training Needs |
| 26.11.2015 | 1.3 | N. Bogomirov | Updated Software Risk Issues and Test Deliverables |
| 26.11.2015 | 1.4 | E. Georgieva | Responsibilities and Planning Risks and Contingencies |
| 26.11.2015 | 1.5 | P. Paunov | Approach, Item Pass/Fail Criteria |
| 27.11.2015 | 1.6 | N. Nenov | Environmental needs and Suspension Resumption Criteria |

# Introduction

## Purpose

The purpose of this document is to define:

* The test scope, focus areas and objectives
* The test responsibilities
* The test strategy for the levels and types of testing for this release
* The entry and exit criteria
* The basis of the test estimates
* Any risks, impediments, assumptions and test dependencies
* The test schedule and major milestones
* The test deliverables

## Scope

This document details the testing that will be performed by Team Griffin for the Teamwork Project “Design and implement test plan template for testing main functionalities of TALS (Telerik Academy Learning System)” as a part of the SQA (Software Quality Assurance) Track @ Telerik Academy. It defines the overall testing requirements and provides an integrated view of the project test activities. Its purpose is to document:

* What will be tested
* How testing will be performed
* When and what resources would be needed for the test plan implementation

# Testing summary

## Scope of testing

### In Scope

The document details what is in scope from a testing perspective for the project team:

* **Administration Functionalities**:
  + **Main Modules**
    - Dashboard
    - Settings
    - Files
    - Pages
    - Feedback Reports
    - Cleanup
    - Execute Code
    - Calendar
    - Training Rooms
    - Devices
    - Custom Events
    - Moved Lectures
    - Surveys
    - Search Terms
    - Error Logs
  + **Software Academy Modules**
    - Candidates
    - Additional Documents
    - Candidate Statistics
    - Candidate Form Q&A Statistics
    - Candidate Correlations
    - Candidate Entry Exams
    - Students
    - Seasons
* **Front-End Functionalities:**
  + User Settings
  + Calendar
  + Site Navigation
  + Panels for Last Forum Posts, Last Video Materials, Newest Blog Posts, Incoming Courses, Social Media Buttons
  + Search
  + Application for Software Academy
  + Entry Exam

### Out of scope

The document details what is out of scope from a testing perspective for the project team

* Third Party and Off-The-Shelf Components:
  + It is assumed that third party components were evaluated and the pros and cons properly weighed before choosing that component for integration with the TALS system. This includes any third party websites.
* Infrastructure Components:
  + The actual database software utilized is assumed to work as designed and will not be directly tested for functionality. Performance tests will be done during system test with respect to GUI response time that will involve the database.
  + The internet/Wi-Fi backbone will be utilized during testing; however, no tests will be written/executed to directly test the communications backbone.

# Software Risk Issues

Main risk issues associated with the test system are:

* Discrepancy between the expected and the actual system functionality caused by misunderstanding of the original requirements.
* Failures caused by new defect in previously problematic main modules (Dashboard and Execute code) after their modification.
* Safety and Security risks:
  + Associated with file uploading functionality (potentially dangerous files).
  + Associated with the confidentiality of the personal information of the users

# Approach

## Testing Levels

The testing of Base Modules From Telerik Forum System will consist of System, Integration

and Acceptance test levels. All testing will be done by the Test Manager and team of four high level testers all defects found will be given to development team.

### SYSTEM/INTEGRATION

Testing will be performed by the QA team with assistance from the individual developers as required. All needed tools for automatic testing will be describe in next version of the document. Modules will enter into System/Integration test after all critical defects have been corrected.

## User Interface Testing

#### 1.1. Calendar

|  |  |
| --- | --- |
| Test Objectives | Verify the following:   * Calendar displays events correctly depending on selected view * Date picker pop-up appears * There is a button to switch to the current date/ week/ month * There is a button to increment the date / week / month * There is a button to decrement the date / week / month * There is a button to view the events for 1 day * There is a button to view events for 1 week * There is a button to view events for 1 month |
| Test technique | * Create tests to verify that the events are displayed within the main calendar * Create tests to verify that the events are displayed in the correct column (week view) * Create tests to verify that the events are displayed in the correct cell (month view) * Create tests to verify that the date picker appears when the current date/week/month element is selected |
| Acceptance criteria | * Events are displayed within the main calendar element and within the correct column / cell in each view * Date picker appears in each view |

#### 1.2. Auditoriums

|  |  |
| --- | --- |
| Test Objectives | Verify the following:   * There is a button to add a new hall * There is a button to export the list of halls to Excel file * There is a button to export the list of halls to PDF file * There is a button to return to main administration page * There is a table that contains all available halls * Table has to have 5 columns for Nr, Name, Address, Capacity and Equipment |
| Test Technique | * Create tests to verify the presence of button to add new hall * Create tests to verify the presence of button to export table to excel * Create tests to verify the presence of button to export to PDF * Create tests to verify the presence of button to go back to main administration * Create tests to verify the presence of table with 5 columns |
| Acceptance Criteria | * All navigation buttons are present * Table to contain halls data is present |

## Function / System Testing

#### 2.1. Calendar

|  |  |
| --- | --- |
| Test Objectives | * Verify the following: * Changing the view updates the calendar * Changing to “Week” view displays 7 columns for each day * Changing to “Month” view displays cell for each day of the month * Changing to “Agenda” view displays list of events for the current week * Clicking “Today” button changes the date/ week /month to the current one depending on the view * Clicking the right arrow button changes date/week/month to the next depending on selected view * Clicking the left arrow button changes date/week/month to the previous depending on selected view * Selecting date from date picker changes the date/ week /month to the selected one depending on the view |
| Test technique | * Create tests for switching between views and verifying the correct one is displayed * Create tests for changing date/week/month through the arrow buttons * Create tests for changing date/week/month through the date picker |
| Acceptance criteria | * The user should be able to switch between views * The user should be able to change the date through the date picker * The user should be able to iterate through the dates/weeks/months using the arrow keys |

#### 2.2. Auditoriums

|  |  |
| --- | --- |
| Test Objectives | Verify the following:   * Clicking the “Add” button opens a new window * Clicking the “Add” button and filling in details adds a new hall with the filled in details * Clicking “Export to Excel” creates a new Excel file with the contents of the table * Clicking “Export to PDF” creates a new PDF file with the contents of the table * Clicking the “To Administration” button navigates to Administration home page |
| Test Technique: | * Create tests to verify new hall can be created with valid input * Create tests to verify that appropriate errors are displayed when incorrect input is entered * Create tests to verify that hall with same input as entered by user is added to the list of halls * Create tests to verify that the file exported through “Export to Excel” is an excel sheet that contains data matching the table contents * Create tests to verify that the file exported through “Export to PDF” is a pdf file that contains data matching the table contents * Create tests to verify that pressing the “To Administration” button navigates to the main administration page |
| Acceptance Criteria: | * User is able to add new hall * User is able to export list of halls to Excel * User is able to export list of halls to PDF * User is able to navigate back to main administration page |

### ACCEPTANCE

Testing will be performed by the QA Team, Stake Holders, Product Owner.

Modules will enter into Acceptance test after all critical and major defects have been corrected. Modules with high priority may have no major defect. Modules with middle priority may have one major defect as long as it does not impede testing of the system (I.E. there is a work around for the error). Prior to final completion of acceptance testing all open critical and major defects MUST be corrected and verified by the Customer test representative.

## Test Tools

* Still don’t have a list of test tools.
* Only free tools will be used.
* The list will be available at some of the next releases.

## Meetings

The test team will meet every day to evaluate progress to date and to identify error trends and problems as early as possible. The meetings can be from distance using Skype, if it is necessary. The test team leader will meet with product owner once every two weeks.

## Measures and Metrics

The following information will be collected by the test team during all testing phases. This

information will be provided on a biweekly basis to the test manager and to the product owner.

* Defects by module and severity.
* Defect Origin (Requirement, Design, Code)
* Time spent on defect investigation by defect, for Critical & Major only. All Minor efects can be totaled together.
* Number of times a program submitted to test team as ready for test.
* Defects located at higher levels that should have been caught at lower levels of testing.

# Item Pass/Fail Criteria

## Integration Test

### Integration Test Entry Criteria

**Fulfilled**.

### Integration Test Plan Exit Criteria

* All critical and major defects have been corrected.
* Modules with high priority may have no major defect.
* Modules with middle priority may have one major defect but there is a work around and the module can be tested.

## User Acceptance Test

### User Acceptance Test Entry Criteria

* Completed User Acceptance Test Scripts
* Correct version of software is moved into the user acceptance testing environment
* Database modifications are complete and tables are populated with initial data

### User Acceptance Test Plan Exit Criteria

* Successful execution of User Acceptance Test Scripts.
* No open critical, major or average severity issues unless the issue is determined to be low impact, low risk. To be reviewed with Product Owner, Test Manager and Stack Holders for acceptable resolution.

# Suspension Criteria and Resumption Requirements

### Suspension Criteria

* Critical failure that prevents the application from functioning and no acceptable workarounds were found
* The number of open incidents produces a situation, where further testing has no value
* System or environment downtime

### Resumption Requirements

* The testing will resume when adequate fix for the issue (set of issues) has been provided and deployed in the test environment
* In case of system or environment downtime smoke testing has to be performed and confirmed by the testing team before resuming the testing

# Test Deliverables

During the entire project the following test deliverables will be provided:

## Before testing phase

* Test plans document
* Test cases documents
* Test design specifications

## During testing Phase

* Test tools
* Test data
* Error logs

## After testing Phase

* Test results/reports
* Defect report
* Release notes

# Remaining Test Tasks

# Environmental Needs

## Central Test environment

***OS***: Windows Server 2012 R2

***Web Server***: MS IIS 8.5

***SQL Server***: MS SQL Server 2012

***CPU:*** Intel Xeon CPU @ 3.10 GHz (Quad Core)

***RAM***: 8GB

***Storage***: 100GB

## Client Test environments

* Windows environment with latest stable versions of following browsers
* Google Chrome
* Opera
* Mozilla Firefox
* Safari
* Microsoft Internet Explorer (9, 10, 11)
* Microsoft Edge

# Staffing and Training Needs

This section describes any specific training and staffing needs that are required to deliver the test acceptance plan. The Responsibilities section and Approach section of this document will affect the staffing and training needs.

The main benefit of this section is that it communicates the resource requirements and seeks the approval for these resources to support delivery of the test plan.

## Training needs

The following points need to be considered:

* Test management system training of test team members that aims building efficient and effective working habits
* Training in test design techniques for generating complex user stories
* Training in different test automation tools, needed for execution of generated test cases
* Additional training for eventual custom frameworks

It is important to remember to include the training that will be delivered by the test team to third parties, to facilitate use of shared test tools, for instance.

## Staffing needs

It is also important to identify and communicate the team size and resource required to deliver the test plan, this includes organizing of eventual meetings with the stakeholders.

A description and distribution of tasks should be provided in high level terms, summarizing information on the numbers of individuals required for each role and stating if multiple roles will be combined for individuals. There should also be an indication when and for how long each resource will be required.

# Responsibilities

This section describes team members’ responsibilities regarding functionalities described in this document. This issue includes all areas of the plan.

* **Nikola Nenov – Team Leader**
  + **Main Modules – Administration Functionalities**
    - Calendar
    - Training Rooms
    - Devices
    - Custom Events
    - Moved Lectures
  + **Front-End Functionalities**
    - Calendar
* **Nikola Bogomirov – Team Member**
  + **Main Modules – Administration Functionalities**
    - Cleanup
    - Execute Code
    - Surveys
    - Search Terms
    - Error Logs
  + **Front-End Functionalities**
    - Search
* **Lyudmil Nikodimov – Team Member**
  + **Main Modules – Administration Functionalities**
    - Dashboard
    - Settings
    - Files
    - Pages
    - Feedback Reports
  + **Front-End Functionalities**
    - User Settings
* **Plamen Paunov – Team Member**
  + **Main Modules – Administration Functionalities**
    - Candidate Statistics
    - Candidate Form Q&A Statistics
    - Students
    - Seasons
  + **Front-End Functionalities**
    - Site Navigation
    - Panels for Last Forum Posts, Last Video Materials, Newest Blog Posts, Incoming Courses, Social Media Buttons
* **Emiliya Georgieva – Team Member**
  + **Main Modules – Administration Functionalities**
    - Candidates
    - Additional Documents
    - Candidate Correlations
    - Candidate Entry Exams
  + **Front-End Functionalities**
    - Application for Software Academy
    - Entry Exam

# Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task Name** | **Start** | **Finish** | **Estimation** | **Comments** |
| Test plan preparation | 25.11.2015 | 27.11.2015 | 3d |  |
| Test plan presentation to stakeholders | 27.11.2015 | 27.11.2015 | 0,3h |  |
| Fulfill training and environmental needs | 30.11.2015 | 02.12.2015 | 3d |  |
| Smoke testing |  |  |  |  |
| Initial defects logging |  |  |  |  |
| Test cases preparation |  |  |  |  |
| Test scripts preparation |  |  |  |  |
| Functional testing |  |  |  |  |
| System testing |  |  |  |  |
| Regression testing |  |  |  |  |
| Resolution of gathered defects |  |  |  |  |
| Load testing |  |  |  |  |
| Performance testing |  |  |  |  |
| Security testing |  |  |  |  |
| Preparation to final teamwork defense |  |  |  |  |
| Resolution of final defects |  |  |  |  |
| Final teamwork defense | 05.02.2016 | 05.02.2016 | 1h |  |

# Planning Risks and Contingencies

What are the overall risks to the project with an emphasis on the testing process?

* Lack of personnel resources when testing is to begin.
* Lack of availability of required hardware, software, data or tools.
* Delays in training on the application and/or tools.
* Changes to the original requirements or designs.
* Complexities involved in testing the applications – for example not working module of the TALS system.

Possible solutions of expected problems:

* If personnel resources are missing for any team member, other team members should prepare meeting and decide how to be useful.
* If any required hardware, software, data or tools are missing, the member may use another member resources until the team think up some new solutions.
* If there is delay in training, the team members may find on their own resources and documentation and explore the tool or application on a meeting.
* If the original requirements change - the test schedule and development schedule will move out an appropriate number of days (this is not recommended since the team have fixed delivery date).
* If any module is unavailable or not working, on the automated tests can be set priority and run manually.

# Approvals

# Glossary

The following acronyms and terms have been used throughout this document:

|  |  |
| --- | --- |
| **Term/Acronym** | **Definition** |
| TALS | Telerik Academy Learning System 5.7 (build 20151119.44a964b) |
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# References

The following documents have been used to assist in creation of this document:

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| --- | --- | --- | --- |
| **#** | **Document name** | **Version** | **Comments** |
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