Telerik Academy Learning System

Release 5.7

Master Test Plan

Version 1.0

**Draft**

November 2015

Submitted by

Team Giant

***Revision History***

|  |  |  |  |
| --- | --- | --- | --- |
| Revision # | Revision Date | Description of Change | Author |
| 1.0 | 11/27/2015 | First Draft | Team Giant |
| 1.1 | 4/12/2015 | Fixed risks, metrics | Team Giant |
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***1***  ***TEST PLAN IDENTIFIER***

**TALS -MTP v5.7 (build 20151119.44a964b)**

Note, the structure of this document is primarily based on the IEEE 829-1998 Standard for Software Test Documentation. Additional reference standards include IEEE 1008 (Unit Testing), 1012 & 1059 (Validation & Verification) and 1074 (Software Life Cycle process).

***2*** ***REFERENCES***

Distribution of Teamwork.xlsx

<http://telerikacademy.com/Courses/Teamwork/List>

***3*** ***INTRODUCTION***

***3.1 Scope***

The purpose of this document is to describe the overall test plan and strategy for testing the Telerik Academy Learning System web API located at <http://stage.telerikacademy.com/>. The approach described in this document provides the framework for all testing related to this application. Individual test cases will be written for each version of the application that is released. This document will also be updated as required for each release.

***3.2*** ***Test Objectives***

The quality objectives of testing the Telerik Academy Learning System web API are to ensure complete validation of the business and software requirements:

* Verify software requirements are complete and accurate
* Perform detailed test planning
* Identify testing standards and procedures that will be used on the project
* Prepare and document test scenarios and test cases
* Regression testing to validate that unchanged functionality has not been affected by changes
* Manage defect tracking process
* Provide test metrics/testing summary reports

***3.3*** ***Testing Goals***

The goals in testing this application include validating the quality, usability, reliability and performance of the application. Another goal is to make the tests repeatable for use in regression testing during the project lifecycle, and for future application upgrades. Quality software is reasonably bug-free, meets requirements and/or expectations, and is maintainable.

***4 TEST ITEMS (FUNCTIONS)***

The scope of this Testing activity will include:

Telerik Academy Learning System - v5.7 (build 20151119.44a964b) Web API - Courses and Lectures

***4.1 Admin panel***

* Courses and Lectures
* Course Categories
* Category Hierarchy
* Students in Courses
* Groups
* Homework
* Courses, Instances and Lectures
* Single Courses (Kids Academy)
* Licenses
* Students Statistics
* Students Statistics (by age)
* Course's Surveys
* Statistics for course's surveys
* Course’s [unsubscribe](https://www.google.bg/search?safe=off&q=unsubscribe&spell=1&sa=X&ved=0ahUKEwi9ieLwz6vJAhWHWiwKHYUrCO8QvwUIGCgA)d students

***4.2*** ***Front End***

* Navigation between different courses
* My Courses
* Archive

***5*** ***SOFTWARE RISK ISSUES***

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Prob. | Impact | Mitigation plan |
| SCHEDULE Testing schedule is tight. Not enough time to complete all test cases. | High | High | The testing team can control the preparation tasks and the early communication with involved parties.  Some buffer has been added to the schedule for contingencies. |
| RESOURCES Web testing software is not available/does not work.  Web site becomes unavailable for a period of time. | Medium | High | Prepare spare web testing software and be sure that there is a way for easy migration between main and spare resources.  Build back up instance of web site if the main go down. |
| DEFECTS Defects are found at a late stage of the iteration.  Defects discovered are many more than expected. | Medium | High | Defect management plan is in place to ensure prompt communication and fixing of issues. |
| TEAM  Team has poor communication.  Team member need more and specific training.  Team member get sick and need time to recover. | Medium | High | At beginning be sure that the team communication is necessary level.  All team members are well prepared for tasks in the project. Do specific training to some of them if needed. |
| ENVIROMENT  Non-availability of Independent Test environment and accessibility. | Medium | High | Prepare all hardware and software need for environment at the beginning.  And be sure they are well maintained during project. |

***6*** ***FEATURES TO BE TESTED***

Testing will consist of several phase, each phase may or may not include testing of anyone or more of the following aspects of the Telerik Academy Learning System Web site (listed alphabetically):

* Accessibility
* Accuracy
* Availability
* Coding standards
* Compatibility
* Content
* Functional
* Legal
* Navigation
* Performance
* Reliability
* Scalability
* Security
* Suitability
* Usability

***7*** ***FEATURES NOT TO BE TESTED***

It is the intent that all of the individual test cases contained in each test plan will be performed. However, if time does not permit, some of the low priority test cases may be dropped.

***8*** ***APPROACH***

***8.1. Testing Strategy***

The testing philosophy is risk-based testing, i.e. each test case will be prioritized as High, Medium, or Low priority and then scheduled accordingly (Highest first). Exceptions to this general rule might include instances where:

* A large number of low priority test cases can be executed using a small amount of resources.
* A lower priority test is a pre-requisite of another higher priority test - e.g. an expensive and high priority usability test might necessitate many of the inexpensive low priority navigational tests to have passed.
* Due to the lack of comprehensive requirements, navigational and functional tests may be scheduled first, so as to allow the testers the opportunity to gain familiarity with the Web site (thereby also allowing them to developing pseudo requirements).
* Web site’s source code will be frozen while being tested. If critical fixes that are blocking the testing efforts arise, changes will not be applied while a unit of code is being tested.
* Regression testing will be done during any level of testing (Unit, Integration, System, or Acceptance). The regression testing will be based on severity of defects detected. If critical fix is done all tests until the fix obtain priority High and regression testing starts.
  1. ***Testing Types***
     1. **Function Testing**

Testing of the application should focus on any target requirements that can be traced directly to use cases (or business functions), and business logic. The goals of these tests are to verify proper data acceptance, processing, and retrieval, and the appropriate implementation of the business logic. This type of testing is based upon black box techniques, that is, verifying the application (and its internal processes) by interacting with the application via the GUI and analyzing the output (results). Identified below is an outline of the testing recommended for each application:

**Test Objective**:

* Ensure proper application navigation, data entry, processing, and retrieval.

**Technique:**

* Execute each use case, use case flow, or function, using valid and invalid data, to verify the following:
* The expected results occur when valid data is used.
* The appropriate error / warning messages are displayed when invalid data is used.

**Completion Criteria**:

* All planned tests have been executed.
* All identified defects have been addressed.
* There are very few known medium or low-priority defects that don't affect the usage of the product.
  + 1. **User Interface Testing**

User Interface testing verifies a user’s interaction with the software. The goal of UI Testing is to ensure that the User Interface provides the user with the appropriate access and navigation through the Courses. In addition, UI Testing ensures that the objects within the UI function as expected and conform to corporate or industry standards.

**Test Objective:** Verify the following:

* Navigation through the application properly reflects business functions and requirements, including window to window, field to field, and use of access methods (tab keys, mouse movements, accelerator keys)
* Window objects and characteristics, such as menus, size, position, state, and focus conform to standards.

**Technique:**

* Create / modify tests for each window to verify proper navigation and object states for each application window and objects.

**Completion Criteria:**

* Each window successfully verified to remain consistent within acceptable standard

***8.3 Measurements and Metrics***

Basic metrics will be kept for test effort (i.e. hours), test cases executed, and incidents.

Reports with measurements will be done:

|  |  |  |
| --- | --- | --- |
| Report | Description | Frequency |
| Test preparation and execution Status | To report on % Complete, % Pass, % Fail tests  Defects severity status – Critical, High, Medium, Low | Weekly/Daily (optional) |
| Daily execution status | To report on Pass, Fail, Total defects, highlight Show stopper/ Critical defects | Daily |
| Project Weekly Status report | Project driven reporting /As requested by PM | Weekly / On demand |

Metrics to evaluate:

* Number of bugs found
* Number of test cases produced given by priority.
* Number of automated test produced.
* Percentage of total application covered in functional testing.

***8.4. Testing tools***

The testing will use a combination of manual and automated testing. Automated tools:

* Selenium
* Selenium Web Driver
* Telerik Test Studio
* Other tools (if required and if the training is applied in short period of time without breaking the time schedule plan)

1. ***ITEM PASS/FAIL CRITERIA***
   1. ***Entry Criteria***

* The testing environment should function properly
* All of the testing tools, which are going to be used, should be available
* Clearly defined requirements should be available
* All of the team members should be familiar with all of the testing tools used. If necessary additional trainings should be organized
* The system should be fully functional
  1. ***Exit criteria***
* 100% of all critical priority features should be tested
* 90% of all high priority features should be tested
* 70% of all medium priority features should be tested
* 50% of all low priority features should be tested

***10*** ***TEST DELIVERABLES***

The following documents will be generated as a result of these testing activities:

* Master test plan (MTP - this document)
* Individual test plans for each phase of the testing cycle (as an Appendix to the MTP)
* Combination incident/test summary reports for each phase
* Test log for each phase
* Automated test scripts and supporting test data

With the exception of the automated test scripts, all documents will be delivered as Microsoft Office documents.

***11*** ***REMAINING TEST TASKS***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TASK | | Assigned To | | Status |
| Create Acceptance Test Plan | | TM, PM, Client |  | |
| Create System/Integration Test Plan | | TM, PM, Dev. |  | |
| Define Unit Test rules and Procedures | | Dev. |  | |
| Define Turnover procedures for each level | | TM, Dev |  | |

***12*** ***ENVIRONMENTAL NEEDS***

There are essentially two parts to the Telerik Academy Learning System WebApi in production:

***12.1*** ***Available Client-side Environments***

* ***OS***: Windows 7, 8.1, 10
* ***Browser***: Internet Explorer 8, 9, 10, Apple Safari 5.1, Mozilla Firefox 27.0, Google Chrome 32.0, Opera 27 and later should be available to the tester.

***12.2*** ***Available Server-side Environments***

* ***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

***16*** ***RESPONSIBILITIES***

Biser Hristov

Blagoy Shokov

Ventsislav Ivanov

Dushka Dragoeva

Plamen Kostadinov

***17*** ***SCHEDULE***

***17.1 Table for Schedule***

|  |  |  |  |
| --- | --- | --- | --- |
| Sprint | Features to be done | Roles and Responsibility | |
| TL and SM | Product Owner |
| Week 47 | Organize a Party | Dushka Dragoeva | Ventsislav Ivanov |
| Week 48 | Prepare a Test plan for Telerik Academy Learninig System | Biser Hristov | Asia Georgieva |
| Week 49 | Prepare Test Cases, Update the Test Plan | Blagoy Shokov | Asia Georgieva |
| Week 50 |  | Ventsislav Ivanov | Asia Georgieva |
| Week 51 |  | Dushka Dragoeva | Asia Georgieva |
| Week 52 | ChristmasHoliday |  | Asia Georgieva |
| Week 1 | ChristmasHoliday |  | Asia Georgieva |
| Week 2 |  | Biser Hristov | Asia Georgieva |
| Week 3 |  | Blagoy Shokov | Asia Georgieva |
| Week 4 |  | Ventsislav Ivanov | Asia Georgieva |
| Week 5 |  | Dushka Dragoeva | Asia Georgieva |
| Week 6 | Final Release | Plamen Kostadinov | Asia Georgieva |
|  |  |  |  |
|  |  |  |  |

***17.2 Meetings***

* Scrum Planning Meeting – Every Friday -20.30 o’clock, live
* Daily Scrum Meetings – every Evening at 20.00 o’clock
* Monday, Wednesday – live at Telerik
* Tuesday, Thursday, Saturday and Sunday – 20.00 o’clock on-line, via Skype
* Scrum Sprint Review Meeting – Friday 15.00 o’clock
* Scrum Retrospective Meeting - Every Friday -20.00 o’clock, live
* Brainstorming – any time it necessary via Skype

***18*** ***APPROVALS***

Telerik QA trainers

Product Owner must approve this plan

***19*** ***GLOSSARY***

TALS – Telerik Academy Learning System