SoftUni Blog Version 0.2

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**Test Plan**

Version 0.2

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**Revision and Signoff Sheet**

**Document History** - To maintain a list of changes being made

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

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# INTRODUCTION

## Purpose

This test plan describes the testing approach and overall framework that will drive the testing of the SoftUni Blog – [https://demoprojectblog.azurewebsites.net](https://demoprojectblog.azurewebsites.net/) 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)

## Project Overview

SoftUni Blog is article blog site with simple functionalities and basic structure

The users are two types: Registered and not registered user.

Registered user can access basic CRUD operations over his/her own articles.

Not registered user has read only access to already existing articles

## Audience

* Project team members perform tasks specified in this document, and provide input and recommendations on this document.

# TEST STRATEGY

## Test Objectives

The objective of the test is to verify that the functionality of SoftUni Blog 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.

## 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 2 is for regression testing on the Project. Expected during the first week of April 2019.

**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
* Test case design activities will be performed by QA Group
* 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
* The defects will be tracked. Any defect fixes planned will be shared with Test Team prior to applying the fixes on the Test environment
* The project will provide test planning, test design and test execution support
* Project team has the knowledge and experience necessary, or has received adequate training in the system, the project and the testing processes.
* 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 2 will be initiated when the new version of the Project is delivered.

**Functional Testing**

* During Functional testing, testing team will use his own created test data which is available on the system at the time of execution.
* The Test Team will be perform Functional testing only on SoftUni Blog

## Test Principles

* 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.

## Data Approach

* In functional testing, testing team will use his own created test data which is used for testing activities.

## Scope and Levels of Testing

### 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, user modules and article pages.

**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.

### 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 table details about the scope of Functional test.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User** | **Scenarios** | **Sub Levels** | **Complexity** | **No. of Test cases** | **Negative Test Cases** | **Expecting Additional Test Cases** |
| Unregistered User | Navigation Bar |  | Medium | 1 |  |  |
| Registered User | Navigation Bar |  | Medium | 1 |  |  |
| Unregistered User | Registration | User registration | Complex | 5 | 4 |  |
| Registered User | Log in | Log in | Medium | 2 | 1 |  |
|  |  | Log out | Medium | 1 |  |  |
| Registered User | Article | Create Article | Medium | 3 | 1 |  |
|  |  | Edit Article | Medium | 1 |  |  |
|  |  | Delete Article | Medium | 1 |  |  |
| Unregistered User | Article | Edit Article | Medium | 1 |  |  |
|  |  | Delete Article | Medium | 1 |  |  |
| Registered User | My Profile | Change Password | Complex | 4 | 3 |  |

**TESTERS**: Testing Team.

**METHOD**: The test will be performed according to Functional scripts.

**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. Test environment with application installed, configured and ready to use state

#### TEST DELIVERABLES

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | Test Plan | Test team | Project Manager/ Business Analyst’s |
| 2. | Functional Test Cases | Test Team | Business Analyst’s Sign off |
| 3. | Logging Defects in Azur DevOps | Test Team | Project Manager |
| 4. | Daily/weekly status report | Test Team | Project Manager |
| 5. | Test Closure report | Test Team | Project Manager |

#### MILESTONE LIST

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

1. Any issues in the System environment readiness
2. Any change in scope/addition in scope
3. Any other dependency that impacts efforts and timelines

### 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.

**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 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.

# EXECUTION STRATEGY

## 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 Azure DevOps |  |  |  |
| All defects logged in Azure DevOps |  |  |  |
| Test Closure Memo completed and signed off |  |  |  |
| Test environment cleanup completed and a new back up of the environment |  |  |  |



## 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.

## Validation and Defect Management

* It is expected that the testers execute all the scripts in each of the cycles described above.
* The defects will be tracked through Azure DevOps only.
* 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.
* Defects found during the Testing will be categorized:

|  |  |
| --- | --- |
| **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. |

## 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 final report on 7-th or 21-st of April 2019 | Project driven reporting | Once |

# TEST MANAGEMENT PROCESS

## Test Management Tool

## 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.
* During the preparation phase, tester will use the prototype, use case and functional specification to write step by step test cases.
* Sign-off for the test cases would be done by the QA team
* Any subsequent changes to the test case if any will be directly updated.

## 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.
* Testers to ensure necessary access to the testing environment.
* If any showstopper during exploratory testing will be escalated to the respective roles.
* Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step.
* Tester will prepare a Run chart with day-wise execution details
* If any failures, defect will be raised as per severity guidelines detailing steps to simulate along with screenshots if appropriate.
* Daily Test execution status as well as Defect status will be reported.
* 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 during the cycle.

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

## 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. |
| **RESOURCES**  Not enough resources, resources on boarding too late (process takes around 40 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. |
| Missing QA team members | Medium | High | In case of missing QA team members (testers) the workload will be spread to the rest of the team. |
| **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 few different geographic areas. In a catastrophic event in one of the areas, there will resources in the other areas needed to continue (although at a slower pace) the testing activities. |

## Communications Plan and Team Roster

## 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.

| SN0. | Roles | Name | Contact Info |
| --- | --- | --- | --- |
| 1. | Project Manager |  |  |
| 2. | Test Lead |  |  |
| 3. | Business Analyst |  |  |
| 4. | Development Lead |  |  |
| 5. | Testing Team | Kamen Yosifov  Lili Nikolova  Valentin Ivanov |  |

### Project Management

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

### 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.
* 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 functional (Business Analysts) and technical team to test team personnel (if needed).

### 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.

### 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.

# TEST ENVIRONMENT

Microsoft Azure services - Azure DevOps

A windows environment with Internet Explorer 8, 9 and 10, and Google Chrome 72.0 and later should be available to each tester.

# APPROVALS

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

|  |  |
| --- | --- |
| **Signature:** |  |
| **Name:** |  |
| **Role:** |  |
| **Date:** |  |

|  |  |
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| **Signature:** |  |
| **Name:** |  |
| **Role:** |  |
| **Date:** |  |