**WordCount**

**TEST PLAN**

Version: 0.1

Created: 6/23/2016

Status: **DRAFT**

Revision and Signoff Sheet

Document History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Description of Change |
| 0.1 | 6/23/2016 | Steven Mayner & Bentley Kang | First Draft |
|  |  |  |  |
|  |  |  |  |

Approvers List

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Role | Approver / Reviewer | Approval / Review Date |
| Eduardo Hernandez |  |  |  |
| TJ |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Reference Documents

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Document Name** |
| 1.0.0 |  | WordCount SRSD |
|  |  |  |

Table of Contents

[1. INTRODUCTION 5](#_Toc454533236)

[1.1. Purpose 5](#_Toc454533237)

[1.2. Project Overview 5](#_Toc454533238)

[1.3. Audience 5](#_Toc454533239)

[2. TEST STRATEGY 5](#_Toc454533240)

[2.1. Test Objectives 5](#_Toc454533241)

[2.2. Test Assumptions 5](#_Toc454533242)

[2.3. Test Principles 6](#_Toc454533243)

[2.4. Data Approach 6](#_Toc454533244)

[2.5. Scope and Levels of Testing 6](#_Toc454533245)

[2.5.1. Exploratory 6](#_Toc454533246)

[2.5.2. Functional Test 7](#_Toc454533247)

[TEST ACCEPTANCE CRITERIA 7](#_Toc454533248)

[TEST DELIVERABLES 7](#_Toc454533249)

[MILESTONE LIST 7](#_Toc454533250)

[2.5.3. User Acceptance Test (UAT) 8](#_Toc454533251)

[TEST DELIVERABLES 8](#_Toc454533252)

[3. EXECUTION STRATEGY 8](#_Toc454533253)

[3.1. Entry and Exit Criteria 8](#_Toc454533254)

[3.2. Test Cycles 9](#_Toc454533255)

[4. TEST MANAGEMENT PROCESS 9](#_Toc454533256)

[4.1. Test Design Process 9](#_Toc454533257)

[4.2. Test Execution Process 10](#_Toc454533258)

[4.3. Test Risks and Mitigation Factors 11](#_Toc454533259)

[4.4. Communications Plan and Team Roster 12](#_Toc454533260)

[4.5. Role Expectations 12](#_Toc454533261)

[4.5.1. Project Management 13](#_Toc454533262)

[4.5.2. Test Planning (Test Lead) 13](#_Toc454533263)

[4.5.3. Test Team 13](#_Toc454533264)

[4.5.4. Test Lead 13](#_Toc454533265)

[4.5.5. Development Team 13](#_Toc454533266)

[5. TEST ENVIRONMENT 14](#_Toc454533267)

# INTRODUCTION

## Purpose

This test plan organizes and presents the testing methodology for evaluating WordCount’s ability to meet stakeholder expectations and requirements. It will describe who and how tests will be conducted, how the results of those tests will be evaluated and communicated to relevant members of the team, and when and how the project will proceed to the next stage.

It will also include proper practices for altering this document, especially including adding or removing test cases.

## Project Overview

The overall goal of this project is to deliver a compact, portable program that requires little maintenance and no technical skill to operate correctly. In doing so, WordCount will aid students in improving their writing for clarity and dynamism.

## Audience

* Project team members will both execute and manage the test document in all respects.
* The stakeholder(s)’ representatives and participants may provide input or view results of tests as soon as available if desired.

# TEST STRATEGY

## Test Objectives

The objective of testing is to verify that WordCount functions to specification, while leaving procedure open enough to adjust for exploratory testing.

The test team will execute and record the results of all test cases, and execute on relevant alterations to the code for repeat testing.

The final product of this test will be useful both in delivering a usable, stable product that is portable across many platforms and user skill levels.

## Test Assumptions

**Key Assumptions**

* Production-like data required and be available to the system prior to start of Functional Testing
* WordCount will be in a wholly functional form prior to testing beginning.

**General**

* WordCount will be used by user with little or no technical experience.
* The stakeholder will only be given final product for review, but will have access to tests if desired.
* Final product will be handed to stakeholder via USB and e-mail delivery.

**Functional Testing**

* The testing team will use preloaded data to run test cases.
* The test team will test using a Python IDE of their choice and Bugzilla.

**UAT**

* UAT will be done by end users varying in technical experience.

## Test Principles

* Testing will be focused on the product’s functionality and ease of use.
* 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 environment and data will emulate the multiple production environments as much as possible.
* Testing will be a repeatable, quantifiable, and measurable activity.
* There will be entrance and exit criteria.

## Data Approach

* In functional testing, production-like data will be provided to testers.

## 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**: Production-like usage.

**TESTERS**: Testing team.

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

**TIMING**: At the beginning of testing.

### 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 validating the output from the application.

**SCOPE:** The scope of functional testing will be comprehensive; all requirements will be tested and all test cases will be executed on.

**TESTERS**: Testing team.

**METHOD**: The test will be performed on multiple available platforms and data will be recorded in a separate document. Bugs will be logged via Bugzilla.

**TIMING**: After Exploratory test is completed, and again after each change to the test document or business requirements.

#### TEST ACCEPTANCE CRITERIA

1. SRSD must be complete and available prior to start of test execution.
2. Test cases approved and signed-off prior to start of test execution.
3. Initial round of development of application completed prior to start of execution.
4. Test environment with application installed, configured and ready to use state.

#### TEST DELIVERABLES

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | Test Plan | Test Team | Stakeholder |
| 2. | Functional Test Cases | Test Team | Stakeholder |
| 3. | Logged Defects in Bugzilla | Test Team | Stakeholder |
| 4. | Final Test Report | Test Team | Stakeholder |

#### MILESTONE LIST

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

1. Any readiness issues.
2. Any changes to requirements or test plan.
3. Any other dependency that impacts efforts and timelines.

MILESTONES:

1. Setup test environment by 6/30/2016
2. Complete exploratory testing by 7/1/2016
3. Complete functional testing by 7/15/2016
4. Complete post-testing development by 7/17/2016
5. Complet UAT by 7/20/2016

### User Acceptance Test (UAT)

**PURPOSE**: This test focuses on ensuring the product is usable in its intended environment and user base.

**TESTERS**: The UAT is performed by end users of randomly-selected technical skill.

**METHOD**: Because the user base is very large and unpredictable, a random sampling based on the friends and acquaintances of the test team will be used to conduct the test.

**TIMING**: After all other levels of testing and post-testing development are done. 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 | Stakeholder |

# EXECUTION STRATEGY

## Entry and Exit Criteria

* The entry criteria refer to the desirable conditions in order to start test execution.
* 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 test lead 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.

|  |  |  |
| --- | --- | --- |
| **Exit Criteria** | **Test 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 reported in the WordCount Test Case document |  |  |
| All defects logged in Bugzilla |  |  |



## Test Cycles

* Exploratory testing will have only one cycle.
* Functional and user-acceptance testing will have multiple cycles, until exit criteria are met.

# TEST MANAGEMENT PROCESS

## Test Design Process

* The tester will select and understand each requirement in turn.
* At least one test case will be written per requirement, testing each facet of the requirement in turn.
* Each test case will be reviewed by other members of the test team. The full test case document will receive approval from business analyst.
* Test cases will be step-by-step and must conform to standard test case templating.
* Sign-off for the test case document will be collected electronically.
* Any subsequent changes to the test case if any will be directly applied to the test case document.

## Test Execution Process

* Once all test cases are approved and the test environment is noted, the tester will begin with an exploratory test.
* Each tester will be assigned test cases from the test case document.
* If there are any issues or inconsistencies with the test environments, testers are responsible for correcting the issue.
* Critical (S1) bugs discovered in exploratory testing will be handled immediately. Fixed code will be distributed to testers before proceeding to functional testing.
* Each tester performs step by step execution and updates the executions status. The tester enters the test's ultimate result into Bugzilla.
* Failed tests and flaws discovered during exploratory will be raised as defects with standard severity guidelines.
* Testing team will participate in defect triage meetings in order to ensure all test cases are executed with either pass/fail category.
* This process is repeated until all test cases are executed fully with Pass/Fail status.
* During the subsequent cycle, any defects fixes applied will be tested and results will be updated in Bugzilla.

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. | 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 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. |

## 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. | Test Lead | Steven Mayner | steven.h.mayner@gmail.com |
| 2. | Test VP | Bentley Kang | bentleykang01@gmail.com |

### Project Management

* Project management falls to the test team.

### 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).

### 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.

### 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.

# TEST ENVIRONMENT

WordCount will be run on multiple operating systems that support Python 3. Tests will be conducted in both a Windows 7 and Macintosh OS 9.3 environment.