Test Plan

Instructions: Pick one testing strategy from each of the following two categories that your team will employ as you implement your software. Note that the suggested methods are in bold and underlined. If your team chooses either Load testing or Integration testing, meet with me to discuss appropriate test plan format in places where it might differ from that below.

1. **Unit testing** OR Code review
2. **Functional testing** OR Load testing OR Integration testing

Document your test plan using the template provided below.

# The Skyentists: GPP and RECO Calibration Software

Mark Matas, Lucas Hamilton, Jake Pennington, Max Thibeau

# Date:

04/17/20

# OVERVIEW

## Purpose of the Test Plan Document

The Test Plan defines the testing strategies and approaches for the completion of testing on the calibration software. This document also includes the results of the testing scenarios. The intended viewers of this test plan are the developers of the calibration software and any future developers and testers, although this document can be shared with any user/client/stakeholder whose input is needed and valued.

## Testing Strategies

The team’s overall approach to testing includes both the unit and functional testing strategies. Unit testing is an approach that includes

[Describe the overall approach to testing. Explain which testing strategies you will use and what each will test. Explain how the two (or more) testing strategies you choose will complement each other--rather than being redundant to one another--and thus provide more through overall testing coverage. Specify how each approach will ensure that all features and functionality will be adequately tested.]

## Test Risks / Issues

[Describe the risks associated with product testing. Also outline appropriate mitigation strategies and contingency plans for such risks.]

# 2. TESTING METHOD 1: UNIT TESTING

## 2.1 Scope

[First, describe the items/features/functions to be tested and not tested. For all items to be tested, include an indication of when they will be tested and by whom. Use a table like that below.]

|  |
| --- |
| Unit Test Scope |
| **In Scope** |
| *List functions that will be tested.* |
| **Out of Scope** |
| *List functions that will NOT be tested, and give a brief explanation as to why.* |

## 2.2 Methodology

[Describe the testing procedure to be used to test the project’s product. Provide an outline and brief description of all testing steps and who will be responsible for each. Use the resources discussed in class and posted on Moodle to help you complete this section and to provide additional templates. Be thorough!

If you are using code review, be sure to include a clearly labeled and well-articulated section on the standards and guidelines your team will use during the review process. Also describe the rules and processes your team will follow when dealing with results of the code review. ]

## Test Readiness

[Describe what conditions have to be met before the testing procedure can commence.]

## Control Procedures

### 2.4.1 Problem Reporting

[Document the procedures to follow when an incident is encountered during the testing process. It is highly recommended that a standard form is used for this; attach a blank copy as an "Appendix" to the Test Plan. In the event you are using an automated incident logging system, write those procedures in this section.]

### 2.4.2 Change Requests

[Document the process of modifications to the software. Identify who will sign off on the changes and what would be the criteria for including the changes to the current product. If the changes will affect existing programs, these modules need to be identified.]

## Test Cases

*[Identify the test cases along with the expected results.]*

|  |  |  |  |
| --- | --- | --- | --- |
| E.g., Unit Test Cases | | | |
| **ID** | **Test Case** | **Input** | **Expected Output** |
| 1.0 | *addNumbers function(x,y)* | *x=2, y=3* | *Result = 5* |
|  | *…Add all rows necessary for a complete plan of test cases.* |  |  |

|  |  |  |
| --- | --- | --- |
| E.g., Code Review Cases | | |
| **ID** | **Program** | **Function** |
| 1.0 | *LoginController* | *Login()* |
|  | *…Add all rows necessary for a complete plan of test cases.* |  |

|  |
| --- |
| E.g., Requirements Test Cases |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID\*** | **Test Case Summary** | **Prerequisites** | **Test Procedure** | **Input Data** | **Expected Result** |
| 2.2 | *Add Challenge on Admin page with overlapping dates* | 1. *User must be created in system* 2. *User must have Admin privileges* | 1. *Navigate to Admin page* 2. *Select Add Challenge feature* 3. *Enter input data* 4. *Select Submit* | *Title: Title*  *Description: Description*  *Start Date: 03/01/19*  *End Date:03/01/18* | *Error Message displayed that start date must be before end date* |
|  | *…Add all rows necessary for a complete plan of test cases.* |  |  |  |  |

***\*Test Case IDs should link back to SRS***

## Test Results (this section to be completed by Week 9)

Note that for this section, you can either expand the table you created in 2.5 above with the additional necessary columns added, or you may create new tables with some redundant columns removed, as shown below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| E.g., Unit Test Results | | | |  |  |  |  |
| **ID** | **Test Case** | **Input Value** | **Expected Output** | **Actual Output** | **Tester name & date** | **Pass/Fail** | **Resolution** |
| 1.0 | *addNumbers function(x,y)* | *x=2, y=3* | *Result = 5* | *Result = 4* | *Jane Doe, 2-15-2019* | *Fail* | *Testing incident report #1.0 created (see Appendix A). Retested as ID 9.1* |
| … |  |  |  |  |  |  |  |
| 9.1 | *addNumbers function(x,y)* | *x=2, y=3* | *Result = 5* | *Result = 4* | *Jane Doe, 2-15-2019* | *Pass* | *Complete* |
|  | *…Add all rows necessary for a complete plan of test cases.* |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| E.g., Code Review Results | | |  |  |  |
| **ID** | **Program** | **Function** | **Reviewer name & date** | **Pass/Fail** | **Resolution** |
| 1.0 | *LoginController* | *Login()* | *Jane Doe, 2-15-2019* | *Failed review standard 2.3 & 6.1 (you define these; make sure clear)* | *Code review resolution procedure 3 followed. Resubmitted as ID 9.2.* |
|  | *…Add all rows necessary for a complete plan of test cases.* |  |  |  |  |

|  |
| --- |
| E.g., Functional Test Results |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **ID\*** | **Test Case Summary** | **Input Data** | **Expected Result** | **Actual Result** | **Tester name & date** | **Pass/Fail** | **Resolution** |
| 1.0 | *Login with a user incorrect account.* | *Username: abc*  *Password: abc* | *An error will be displayed for the wrong credentials.* |  | *Jane Doe, 2-15-2019* |  |  |
| 2.2 | *Add Challenge on Admin page with overlapping dates* | *Title: Title*  *Description: Description*  *Start Date: 03/01/19*  *End Date:03/01/18* | *Error Message displayed that start date must be before end date* |  |  |  |  |
| 3.5 | *Create new user* | *first name: abc*  *last name: abc*  *username: abc*  *email: abc@gmail.com password: abc*  *password again: abc*  *rent or own: rent*  *home size: 1000*  *household size: 2*  *other energy: no* | *User is successfully logged in, added to database, has all functionality available* |  | *Jane Doe, 2-15-2019* |  |  |
|  | *…Add all rows necessary for a complete plan of test cases.* |  |  |  |  |  |  |

***\*Test Case IDs should link back to SRS***

# Acceptance and Approval

*[Provide a place for the sponsor(s) and each team member to sign this document. This should include names, signatures, and dates for approval. ]*

# References

*[Include any references you used.]*

# Appendices

*[Include any extra documentation in the appendices that supplements the main document text.]*