**SAS Test Plan**

For

SAS Interview

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TEST PLAN

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# **1 Introduction**

The purpose of the test Plan is to provide a testing schedule, define the objectives and strategies, idenitfy resources, and to devide the testable areas and their sub-sets.

# 1.1 Test Objectives

The unit tests should validate from both the requirement perspective and the business perspective that:

* All loop functions work correctly
* Reveal performance bottlenecks
* To reveal loop repetition issues
* Identify initialization problems

# 1.2 Scope of Testing

The test scope includes the following:

* All details included in the interview prompt provided by SAS.

Out of scope:

* User interface testing
* Requirements and business needs which were not presented

# 1.2 Definitions

|  |  |
| --- | --- |
| Requirement | Description of features and functionalities of the target system. |
| Test Tool | Any vehicle that assists in testing. |
| Unit Testing | A level of testing in which the smallest units of a system are separately tested. |

# **2 Approach**

# 2.1 Assumptions

* The developers have met all requirements presented in the Requirements Traceability Matrix
* The solution introduced by the developers will be available in the presented build
* The test team will support and provide appropriate guidance to Analysts and Developers
* Major dependencies and issues should be reported immediately after the testing kickoff has begun
* Final code has been approved
* Test results will be reported daily

# 2.2 Coverage

Test coverage will be measure by:

* A completed matrix of testable requirements and test cases
* A completed matrix of business needs and functionality

# 2.3 Test Tools

* Test Manager
* Code IDE
* Defect Tracker

# 2.4 Test Type

The following types of testing will be performed:

* Unit testing: by preforming tests which are based on the DO Loop provided
  + Unit testing is ideally conducted by the developer during the code development process to verify proper functionality and to ensure code coverage benchmarks are achieved.

# **3 Plan**

# 3.1 Test Team

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Title | Level of Involvement | Responsibilities |
| Amber Sanchez | SDET | 40 hrs/wk | Lead all testing actives, including planning, test execution, and reporting |

# 3.2 Team Reviews

The following reviews will be conducted by the test team and a representative from the QA department.

* Test Plan Review
* Test Case Review
* Test Progress Review
* Post-Test Review

# 3.3 Major Tasks and Deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Start** | **Stop** | **Deliverable(s)** |
| Validate/ Assess Test Environment | 11/24/22 | 11/24/22 | Stable Testing Platform |
| Test Case Design | 11/24/22 | 11/28/22 | Unit Test Cases |
| Train Test Team | 12/1/22 | 12/3/22 | Trained Testers |
| Test Execution | 12/4/22 | 12/5/22 | Solution Tested |
| Test Summary Report | 12/5/22 | 12/5/22 | Test Summary Report |

# 3.4 Training

Test team members who have not been trained in the testing process will be trained in the testing techniques by the QA staff. The training will be conducted over three days. The training will take place at the SAS training facility on the dates of 12/1/22 - 12/3/22.

# **4 Features to be Tested**

# 4.1 Proposed Solution

* **In response to this customer request, development has proposed adding an optional <BY increment> to the existing syntax.** 
  + DO index = start TO stop <BY increment>;

<statement-list>

END;

# **5 Features not to be Tested**

# 5.1 System Functions Outside of Scope

* Extra Do loops included in the build
* Intergration features which lie outside of scope
* UI functions

# **6 Testing Procedures**

# 6.1 Test Execution

# 6.1.1 Test Cases

For each requirement or business process, the tester will execute a set of pre-determined test cases. Each test case will have a series of actions and expected results. As each action is performed, the results are evaluated. If the observed results are equal to the expected results, the test will be included in the pass column of the Test Summary Report. In the same fashion, any test which deviates from the expected results, will be included in the failure column of the Test Summary Report.

# 6.2 Pass Fail Criteria

**Pass**

* Test takes in provided criteria and returns the expected results

**Fail**

* Test runs longer than expected or times out
* The test gets stuck running indefinitely

# 6.3 Suspension Criteria and Resumption Requirements

Testing will be suspended at COB each day. At that time, all test cases executed during the day will be marked as tested. The test team will have practices in place to save the updated test files. When all tests have been executed, testing will be suspended, and results will be documented.

# **7 Bug Triage**

Bug triages will be the responsibility of the Test Lead. Triages will be held on a regular basis. The time frame/occurrence will be dependent upon bug severity and sprint iteration length. The Test Lead will provide the required documentation, tickets and reports on bugs for all attendees. The purpose of the triage to determine a schedule for the “To be Fixed Bugs.” Development will then assign the bugs to the appropriate developer for fixes and updates to the bug tracking ticket system.