Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge (PICK)

**Test plan**

Version 1.0

April 15, 2020

**Document Control**

**Approval**

The Guidance Team and the customer shall approve this document.

**Document Change Control**

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**Distribution List**

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**Change Summary**

The following table details changes made between versions of this document

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Modifier | Description |
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|  |  |  |  |
|  |  |  |  |

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**Table of Contents**

Document control II

Approval II

Document Change Control II

Distribution List II

Change Summary II

1. Introduction 1
   1. Purpose 1
   2. Scope 1
   3. System Overview 1
   4. Suspension and Exit Criteria 1
   5. Document Overview 1
   6. References 2
2. Test Items and Features 3
3. Testing Approach 5
4. Test F1
5. Test F2
6. Test F3
7. Test F4
8. Test F5
9. Test F6
10. Test F7
11. Test F8
12. Test F9
13. Test F10
14. Test F11
15. Test F12
16. Test F13
17. Test F14
18. Test F15
19. Test F16
20. Test F17
21. Test F18
22. Test F19
23. Test F20
24. Test F21
25. Test F22
26. Test F23
27. User Interface Testing
28. Test Schedule
29. Other Sections
30. Appendix

# **Int**ro**duction**

The following section will provide detailed information pertaining to the testing of the system.

## **Purpose**

The purpose of the test plan is to provide documentation regarding the testing of the system. A test plan shows the testing items and features, the testing approach, and it addresses any issues within the system that are to be fixed in accordance to their criticality. The purpose of this test plan is to document all testing strategies and details for the PICK system.

## **Scope**

The project software version is the current pre-production version where all testing can be performed and issues can be addressed before the release of the final version into production.

## **Syste**m **Overview**

This test plan will focus on testing the entire PICK tool and all its functionalities. PICK shall be a tool used by the white team analysts in order to efficiently sort through documents pertaining to adversarial assessments. These include computer log files and screenshots. These documents are then used to piece together an attack log to analyze the way in which the blue team responds to the red team’s attack. Without the tool, analysts are currently having to open up all the files that they wish to reference in their attack graphs. In addition, this system shall simplify the way in which data is filled for nodes in the attack graph. The ultimate goal of the system is to reduce the amount of time doing each analysis to approximately two weeks.

LSH recognizes the complexity and the time it takes to analyze the applicable logs, observation notes, and other artifacts gathered from an adversarial assessment from the red, blue, and white teams and generate a report that presents the events that took place during the adversarial assessment. They want a system that would aid their analysts in correlating red team’s activities to blue team’s responses and represent the events that took place during an adversarial assessment graphically. UTEP and LSH are collaborating to develop Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge System (PICK) that will provide the ability to correlate red team’s activities to blue team’s responses and graphically represent the events that took place during an adversarial assessment.

## **Suspension and Exit Criteri**a

The testing of the application will be done based on the described approaches in section 3. If any of the high criticality tests fails, the testing will be suspended until corrections are made to the source code. If the overall test pass rate is below 50%, testing will be suspended to find and fix any issues that are causing the low pass rate. for the testing phase to exit, all the tests with a criticality level of high must pass the testing. For the testing phase to exit, an overall success rate of 90% is required.

## **Document Overview**

This test plan will be broken into eight sections. The following is the document overview.

* Section 1 is used to introduce the test plan and the system.
* Section 2 is used to describe test items and features.
* Section 3 is used to layout the types of tests to be performed, the objectives of the test, and the type of criticality.
* Section 4 is used to layout specific test cases by documenting test input, specific test procedures, and outcomes.
* Section 5 is used to focus on the interaction between the user and the system.
* Section 6 is used to keep track of test schedules.
* Section 7 is used for all extra information.
* Section 8 is used as an appendix.

## References

[1] Tai Ramirez, Elsa, Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge System (PICK) [SRS] El Paso, TX: UTEP, 2020

[2] Spice Girls, Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge (PICK) System, El Paso, TX: UTEP, 2020

# Test Items and Features

The following information within the table will provide information pertaining to the test items/features that will be focused on when the system will be tested, as well provide a description of the item or feature.

|  |  |  |
| --- | --- | --- |
| **Test Case ID** | **Item/Feature** | **Item/Feature Description** |
| F1 | Start Project | Create a project from scratch or start a current project |
| F2 | Database | Database |
| F3 | Team Configuration | Access and edit team configuration |
| F4 | Splunk Configuration | Access and edit Splunk configuration |
| F5 | Event Configuration | Access and edit event configuration |
| F6 | Directory configuration | Access and edit directory configuration |
| F7 | Vector Configuration | Access and edit vector configuration |
| F8 | Icon Configuration | Access and edit icon configuration |
| F9 | Complete Setup | Start project after setup |
| F10 | Preferences/Settings | Edit settings at any time during the project |
| F11 | Save | Save project immediately or by saving it manually |
| F12 | Export Configuration | Access and edit export configuration |
| F13 | Log File Configuration | Edit Log File Configuration and enforcement reports |
| F14 | Cleanse | Remove empty rows and columns from log files |
| F15 | Validate | Check if given information has timestamps within ranges |
| F16 | Ingest | Transfer logs from splunk to internal database |
| F17 | Splunk Interface | Uploading log files to splunk and pulling log entries from splunk into PICK |
| F18 | Transcribe | Transcription: audio to text, image to test, and video to text |
| F19 | Sort | Sort tables from ascending to descending or descending to ascending according to timestamp |
| F20 | Graph and Table | Display and modify graph’s visual features |
| F21 | Search and Filter | Search based on keyword, filter based on source, timestamp, creator, and event type |
| F22 | Network | Ability to share work (database) with the entire team |

# Testing Approach

The following Section will provide information concerning the approach that will be used to test the application. The table below provides grouped test suites that were created. Criticality will be defined by the degree of impact that defects within the test case will have on the overall system.

**Table 1: Test Plan**

|  |  |  |
| --- | --- | --- |
| **TEST SUITE <PICK>** | | |
| **Description of Test Suite** | This test suite contains 22 test cases to test the PICK system as well as their criticality. | |
| **Test Case Identifier** | **Objective** | **Criticality** |
| F1 | Start Project | High |
| F2 | Database | High |
| F3 | Team Configuration | High |
| F4 | Splunk Configuration | High |
| F5 | Event Configuration | High |
| F6 | Directory configuration | High |
| F7 | Vector Configuration | High |
| F8 | Icon Configuration | Normal |
| F9 | Complete Setup | High |
| F10 | Preferences/Settings | High |
| F11 | Save | High |
| F12 | Export Configuration | High |
| F13 | Log File Configuration | High |
| F14 | Cleanse | High |
| F15 | Validate | High |
| F16 | Ingest | High |
| F17 | Splunk Interface | High |
| F18 | Transcribe | High |
| F19 | Sort | Normal |
| F20 | Graph and Table | High |
| F21 | Search and Filter | High |
| F22 | Network | High |

# Test F1

The following section gives detailed descriptions of how to test each test case for F1.

## 4.1. Test TC1

**Objective:** Start a new project

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: TC1 | | | | Current Status: Pending | | |
| Test title: Start a new project | | | | | | |
| Testing approach: To run this test, you need access to the pick-tool-team15-spicegirls repository. You also need python 3 installed to be able to run it. | | | | | | |
| STEP | OPERATOR ACTION | PURPOSE  . | | | EXPECTED RESULTS | COMMENTS |
| 1 | PICK Tool is executed. | Initial Condition | | | The user is given the option between creating a new project or continuing an existing project. |  |
| 2 | Click the create new project option. | Start a new project | | | The user is asked for the project configuration. |  |
| 3 | User inputs all the project configurations and clicks on the complete setup option. | Set up completes | | | Populated table and graph are shown. Project is available for user to use. |  |
| Concluding Remarks: | | | | | | |
| Testing Team: | | | Date Completed: | | | |

## 4.2. Test TC2

**Objective:** Open a current project

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: TC2 | | | | Current Status: Pending | | |
| Test title: Open a current project | | | | | | |
| Testing approach: To run this test, you need access to the pick-tool-team15-spicegirls repository. You also need python 3 installed to be able to run it. | | | | | | |
| STEP | OPERATOR ACTION | PURPOSE  . | | | EXPECTED RESULTS | COMMENTS |
| 1 | PICK Tool is executed. | Initial Condition | | | The user is given the option between creating a new project or continuing an existing project. |  |
| 2 | Click the go to current project option. | open a pre existing project | | | Project is available for user to use. |  |
| Concluding Remarks: | | | | | | |
| Testing Team: | | | Date Completed: | | | |

# Test F2

The following section gives detailed descriptions of how to test each test case for F2.

## 5.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F3

The following section gives detailed descriptions of how to test each test case for F1.

## 6.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F4

The following section gives detailed descriptions of how to test each test case for F1.

## 7.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F5

The following section gives detailed descriptions of how to test each test case for F1.

## 8.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F6

The following section gives detailed descriptions of how to test each test case for F1.

## 9.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F7

The following section gives detailed descriptions of how to test each test case for F1.

## 10.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F8

The following section gives detailed descriptions of how to test each test case for F1.

## 11.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F9

The following section gives detailed descriptions of how to test each test case for F1.

## 12.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F10

The following section gives detailed descriptions of how to test each test case for F1.

## 13.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F11

The following section gives detailed descriptions of how to test each test case for F1.

## 14.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F12

The following section gives detailed descriptions of how to test each test case for F1.

## 15.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F13

The following section gives detailed descriptions of how to test each test case for F1.

## 16.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F14

The following section gives detailed descriptions of how to test each test case for F1.

## 17.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F15

The following section gives detailed descriptions of how to test each test case for F1.

## 18.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F16

The following section gives detailed descriptions of how to test each test case for F1.

## 19.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F17

The following section gives detailed descriptions of how to test each test case for F1.

## 20.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F18

The following section gives detailed descriptions of how to test each test case for F1.

## 21.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F19

The following section gives detailed descriptions of how to test each test case for F1.

## 22.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F20

The following section gives detailed descriptions of how to test each test case for F1.

## 23.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F21

The following section gives detailed descriptions of how to test each test case for F1.

## 24.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F22

The following section gives detailed descriptions of how to test each test case for F1.

## 25.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# Test F23

The following section gives detailed descriptions of how to test each test case for F1.

## 26.1. Test <<test id>>

**Objective: <**< Define the objective of Test XX.Y. >>

**Notes:** <<This area provides general notes concerning the test procedure. Such notes might include comments on how to execute the test procedure, an estimate of the test duration, the requirements of the procedure tests, or a statement of resources needed for this test.>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test No.: << Unique test ID >> | | | | Current Status: << Passed / Failed / Pending >> | | |
| Test title: <<This line contains the long title of the test procedure.>> | | | | | | |
| Testing approach: <<Included in this section is a description of test harnesses, testing frameworks, environmental requirements, test tools and test automation that will be employed to achieve testing. Include naming conventions for tests and test scripts if appropriate. Provide requirements traceability and test priority.  >> | | | | | | |
| STEP  <<N>> | OPERATOR ACTION  Describe the actions taken by the person executing the test procedure. Include the test suite, or the name of the test file (in this case, the contents of the file should be given in the appendix). | PURPOSE  Describe the reason for the step. | | | EXEPCTED RESULTS  Describe the expected response of the system being tested to the action specified under OPERATOR ACTION. This should be derived from the SRS and SDD. Clearly indicate how we determine whether the step passes. | COMMENTS |
| Concluding Remarks: | | | | | | |
| Testing Team:  << List members of testing team and lead >> | | | Date Completed: | | | |

# **User Inte**r**face Testi**n**g**

<<This section focuses on the interaction between the user and the system. For testing the user interface, consider the following traits:

* Consistent terminology, shortcut keys, menu selections, and presentation
* Correct language, spelling, and grammar.
* Flexibility in navigation between windows and interface elements.
* Error handling that will inform user of critical operations.
* Follows standards and guidelines such as placement of scroll bars, windows, and menu items.

This section could be integrated into Section 4.

>>

# **Test Schedul**e

<< Specify the schedule for testing activities. A table with the order and completion dates of the tests is useful. The table below might be useful.>>

|  |  |  |
| --- | --- | --- |
| **Task and date** | **People** | **Description** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# **Other Sections**

<< Other sections that may appear in a test plan (but not required for this course) are:

* Test Management Requirements: how testing is to be managed; a delineation of responsibilities of each project organization involved with testing
* Staffing and training needs: delineate the responsibilities of those individuals who are to perform the testing, level of skill required, and training to be provided
* Environmental Requirements: describe the hardware (including communication and network equipment) needed to support testing; describe configuration of hardware components on which software and database to be tested are to operate.
* Software Requirements: describe the software needed to support testing; include the software code and databases that are object of the testing. Also include software tools such as compilers, CASE instruments and simulators that are needed to model the user’s operational environment.
* Risk and contingencies
* Cost: include an estimate of costs.
* Approvals
* Test Deliverables

>>

# **Appendi**x

<< possibly more readable to put the expected output here and refer to it in the previous sections. Might also provide explicit directions for analysis of output, if it’s easier to read as an appendix or if analysis is post execution. >>

$