

Test Plan

Abuse Reporting System

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1. Introduction

This test plan document describes the scope, approach, resources, and schedule of the testing activities for the Abuse Reporting System. The purpose of this test plan is to identify the items being tested, the functions to be tested, the testing tasks to be performed, the personnel responsible for each task, and the risks associated with the test plan.

2. Relationship to Other Documents

This section explains the relationship of the test plan to the other documents produced during the development effort. The list of references is also included in this section.

2.1 Relationship between System Requirements Specification Document and Test Plan

The functional requirements recognized in system requirements specification document are mapped to functional test cases listed in test cases as follows:

ID	Requirement Description	Requirement Statement	Test Case
001	Allows particular type of users to enter and edit initial abuse report.	SRS 3.2.1.4	ARS_TC_01 & ARS_TC_02
002	Allows particular type of users to submit initial abuse report.	SRS 3.2.1.5	ARS_TC_03
003	Allows users to log into the system and assigns different privilege.	SRS 3.2.1.2	ARS_TC_04
004	Allows users to change their passwords.	SRS 3.2.1.3	ARS_TC_05
005	Allows particular type of users to review the abuse report submitted.	SRS 3.2.2.3	ARS_TC_06
006	All required fields should be checked by the system before submission.	SRS 2.2	ARS_TC_07
007	Confidential information (e.g. name) should be preserved by system.	SRS 2.2	ARS_TC_08
008	Each investigation report is assigned a Public Log Number for tracking.	SRS 3.2.2.8	ARS_TC_09
009	Allows particular type of users to edit the abuse report submitted.	SRS 3.2.2.4 & 3.2.2.5	ARS_TC_10

010	Allows particular type of users to print the abuse report.	SRS 3.2.2.7	ARS_TC_11
011	Allows particular type of users to upload files related to report.	SRS 3.2.3.6	ARS_TC_12
012	All the documents will be purged based on retention criteria.	SRS 2.2	ARS_TC_13
013	Shows action dates on a calendar.	SRS 2.2	ARS_TC_14
014	Provides an audit trail of accesses to the system.	SRS 2.2	ARS_TC_15
015	Administrator should be able to add and change the user profiles.	SRS 3.2.5.2 & 3.2.5.3	ARS_TC_16 & ARS_TC_17
016	Administrator should be able to assign and change user privileges.	SRS 3.2.5.4	ARS_TC_18

The following non-functional requirements need to be tested using performance testing:

- Particular web browser support requirements
 - Support for IE 7.0+, Chrome, Firefox, Safari, Opera, etc.
- Central computer requirements
- Reliability requirements
 - The system should be available 24hrs/365days per year.
- Performance requirements:
 - The interaction between user and system should not exceed 2s(speed test)
 - Can be accessed by more than 1000 people at the same time (pressure test)
- Usability requirements
 - The columns in the list should be sortable
 - The installation and user guide documents are complete

2.2 References

Bruegge, B. & Dutoit, A. (2010), Object-oriented software engineering: using UML, patterns, And Java. Boston: Prentice Hall.

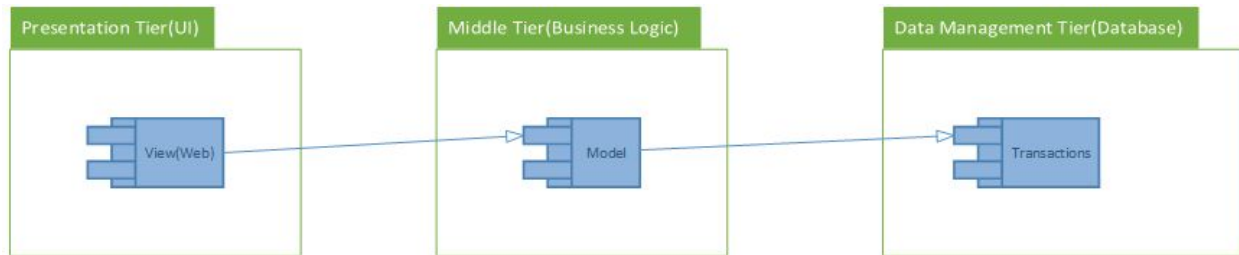
Software & Systems Engineering Standards Committee of the IEEE Computer Society (2008), “IEEE Std 829-2008, IEEE Standard for Software and System Test Documentation”.

Rajeevalochana, A., Guha, P., Bheemarajaiah, S., Nagaraj, S., Mohan, K., Prabhakar, A., Narayan, N., & Natarajan, R. (2007), Ambulance Dispatch System Test Plan, https://www.utdallas.edu/~chung/CS6354/CS6354_U07_source/GoE/ObjectSpecification Document.doc

3. System Overview

This section focuses on the structural aspects of testing. It provides an overview of the system in terms of the components that are tested during the unit test.

3.1 Software Architecture Overview



3.1.1 User Interface

User interface is the most top module of our system. It contains two modules which are view and controller. The view renders a presentation of modeled data. Some technologies such as HTML5, CSS3, and JavaScript are used for the implementation of abuse reporting system. Controller handles requests from user. It is responsible for rendering back a response with the aid of Model module.

3.1.2 Business Logic

Business logic is the transition module of our system. It coordinates the application, processes commands, makes logical decision and evaluation and performs calculations. The model is responsible for the retrieving data and converting it into meaningful data for our application. This includes processing, validating, association or other tasks relate to handling data.

3.1.3 Database

Database is the lowest module in our system. Information is stored and retrieved from a database.

4. Features to Be Tested/Not to Be Tested

This section focuses on the functional aspects of testing, identifies all features and combinations of features to be tested.

4.1 Features to Be Tested

- Whether the staff, supervisor and other users of the system can log in successfully after authenticated with their respective username and password?
- Does the system force password change on first-time login?
- Can the password be changed successfully?
- Once inside the system, can particular type of users enter the initial abuse report?
- Can the initial abuse report be edited?
- Does the system check all the fields and prevent submission if any required field has not filled up yet?
- Can the user submit the initial abuse report to the system successfully?
- Is the particular type of users able to view the abuse report submitted?
- Does the system preserve those confidential information (e.g. name) when displaying the abuse report?
- Is each investigation report assigned a unique Public Log Number for tracking?
- Is the particular type of uses able to edit the abuse report submitted?
- Can the report be printed out by the particular type of users?
- Can particular type of users be able to upload files that are related to the report?
- Does the system purge all the documents based on retention criteria?
- Does the system show the action dates or deadline on a calendar?
- Does the system record all the accesses to the system and provide an audit trail?
- Can administrator add and change the user profiles?
- Can administrator assign and change the user privileges?

4.2 Features That Cannot Be Tested

- Can the particular type of users receive confirmation emails once the reports have submitted?

This feature will be released in this version of the software, but this feature is not tested or documented as a functional part of the release of this version.

5. Pass/Fail Criteria

5.1 Component Pass/Fail Criteria

Tests executed on components only pass when they satisfy the requirements dictated by the system requirements specification and system design document for that component. If pre conditions and post conditions are satisfied then it is the (black box) success otherwise failure. White box testing goes more into the execution paths of the program.

5.2 Integration Pass/Fail Criteria

Tests executed on integration only pass when they satisfy the requirements dictated by the system requirements specification and system design document. When testing the integration of multiple modules, these modules are expected to complete required tasks then it is the success. If the module fails to perform a task which is intended to do then it is a failure.

5.3 System Pass/Fail Criteria

Tests executed against the system use the functional requirements, non-functional requirements, and use cases as the oracle to determine pass or fail. The test process will be pass if the particular type of users is able to file an abuse report, which is processed by the supervisor and he/she is able to finalize the report and print it out. Other particular type of users is able to view the report and upload files that are related to the report. These are what we call as the pass criteria. A problem in any place in the entire process will be considered as fail criteria.

6. Approach

This section describes general approach to the testing process.

6.1 General Test Strategy

Unit testing and component testing will be done by the developers. The proof of the unit testing is provided by the development team. All unit test information will be provided to the test team. Test will be executed using the test code in the form of custom test tools run against the components.

Integration testing is performed by the developers who were involved with the entire development. Testing data will be entered into system. There is no specific test tool is used for this phase.

Acceptance or installation testing is performed by the actual users (i.e. clients) with the assistance of the developing team.

6.2 Integration Testing Strategy

The bottom-up integration testing strategy will be used as integration testing strategy for this project.

7. Testing Materials

This section identifies the resources that are needed for testing.

7.1 Hardware Requirements

The hardware components in a single set are a database server, a web server and a client computer with a web browser that supports Java and JavaScript.

7.2 Software Requirements

No specific software is required for this system. The database server needs the appropriate database which is MySQL installed, setup, and configured properly.

The web server needs Apache installed to host the web application.

The client computer needs Java 1.6.0 and above installed and properly configured with Internet Explorer 8.0 and above, Firefox 12 and above, or Google Chrome.

8. Test Cases

This section lists the test cases that are used during testing.

Test Case Specification Identifier:

ARS_TC_01

Test Items:

create_draft

Input Specification:

The user select “Create new report” icon from the menu.

Fill required field for the report.

Save the draft.

Output Specification:

Web application stores the report draft and show draft is created or edited successfully after save the draft.

Environmental Needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural Requirements:

None needed

Entry Condition:

The user must login the system and have corresponding permission.

Test Case Specification Identifier:

ARS_TC_02

Test Items:

edit_draft

Input Specification:

Choose existing draft.

Select “Edit” icon.

The user can choose adding information or deleting draft.

Output Specification:

When choosing adding information, the application will show the user selected draft to add information and then save the change.

When choosing deleting draft, the application will require user to confirm the action and show deleting draft successfully.

Environmental Needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural Requirements:

The user must choose the existing draft before adding information or deleting.

Entry Condition:

The user must login the system and have corresponding permission.

Test Case Specification Identifier:

ARS_TC_03

Test Items:

submit_draft

Input Specification:

The user select “submit” icon.

Output Specification:

The web application shows the report is submitted successfully and stored in the system.

Environmental Needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural Requirements:

All required fields of the report must be filled.

Entry Condition:

The user must login the system and have corresponding permission.

Test Case Specification Identifier:

ARS_TC_04

Test Items:

login_account

Input Specification:

The user types in username and password.

Then select “login” icon.

Output Specification:

Web Application takes user to menu with functions corresponding to user's permission.

Environmental Needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural Requirements:

The password must match the username.

Entry Condition:

The user must be added to the system user list by the administrator.

Test Case Specification Identifier:

ARS_TC_05

Test Items:

change_password

Input Specification:

The user chooses "change password" icon.

Type in new password.

Select "Confirm".

Output Specification:

Web application shows "The password is changed successfully."

Environmental Needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural Requirements:

None Needed

Entry Condition:

The user must login the system.

Test Case Specification Identifier:

ARS_TC_06

Test Items:

view_report

Input Specification:

The user select "View Report" icon

Output Specification:

The web application shows the user selected reports.

Environmental Needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural Requirements:

The user cannot modify the report.

Inter-case Dependencies:

The user must login the system and has the corresponding permission.

Test case specification identifier:

ARS_TC_07

Test Items:

check_report

Input specification:

User clicks “submit” button in the test report draft.

Output Specification:

If the report is correctly filled, it shows a message of successfully submitted.

If the report has some blanks that are required to be filled, it shows the report draft with a message that there are some blanks which needs to be filled.

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

None needed

Entry condition:

There should be a draft report before we can test this functional requirement.

Test case specification identifier:

ARS_TC_08

Test Items:

preserve_info

Input specification:

User click “view” button in a submitted report.

Output Specification:

The system shows the information in the report and the confidential information is automated preserved.

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

None needed

Entry condition:

There should be a submitted report before we can test this functional requirement.

Test case specification identifier:

ARS_TC_09

Test Items:

assign_PLN

Input specification:

User selects an investigation report file

User clicks “upload” button

Output Specification:

The system should show the file name and an auto generated Public Log Number.

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

None needed

Entry condition:

There should be a draft report before we can test this functional requirement.

Test case specification identifier:

ARS_TC_10

Test Items:

edit_report

Input specification:

User clicks “edit” button in a submitted report.

Output Specification:

The system shows the information in the report and allows the user to edit the information.

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

None needed

Entry condition:

There should be a submitted report before we can test this functional requirement.

Test case specification identifier

ARS_TC_11

Test Items:

print_report

Input specification:

- User selects “print_report” button from menu
- Fills out all necessary blanks on “print_report” menu
- Submits instruction to system to print the report

Output Specification:

- Application connects the printer and prints out the report in proper format

Environmental needs:

- A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

- None needed

Entry condition:

- Proper document has been uploaded and stored in the system.

Test case specification identifier

ARS_TC_12

Test Items:

- upload_report

Input specification:

- User selects “upload_report” button from menu.
- Fills out all necessary blanks and chooses document from file on “upload_report” menu.
- Submits files to system.

Output Specification:

- Application stores the document into database.

Environmental needs:

- A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

- None needed

Entry condition:

- User has created the specific report.

Test case specification identifier

ARS_TC_13

Test Items:

- purge_docs

Input specification:

- Administrator sets up the retention criteria for purging the document.
- Administrator submits the configuration to system.

Output Specification:

Application stores the configuration and deletes the selected documents from the database based on retention criteria.

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

None needed

Entry condition:

Dependent on the fact that the chosen documents meets the retention criteria.

The user has noticed the condition of the document.

Test case specification identifier:

ARS_TC_14

Test Items:

show_date

Input specification:

User opens a report or a relative document

User clicks on button “Show action dates/deadline”

Output Specification:

System shows a calendar in which the action date/deadline is marked

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

None needed

Entry condition:

A report or related document has been open

Test case specification identifier:

ARS_TC_15

Test Items:

show_audit_trail

Input specification:

User logs in or logs out the system

Administrator logs in

Administrator clicks “Show audit trail”

Output Specification:

System records the login/logout information in the database the records is shown to the administrator.

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

The audit trail can only be viewed by administrator

Entry condition:

None

Test case specification identifier:

ARS_TC_16

Test Items:

add_user

Input specification:

Administrator clicks “Add user” button

Administrator fills information of the new user including username and password

Administrator clicks “Confirm” button

Output Specification:

System add the corresponding user’s information to the database

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

The user belongs to the user group of Administrator

Entry condition:

The user is logged into the system

Test case specification identifier:

ARS_TC_17

Test Items:

delete_user

Input specification:

Administrator clicks “Edit user” button

Administrator selects a user

Administrator clicks “Delete” button

Administrator clicks “Confirm” button

Output Specification:

System deletes the user from the database

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

The user belongs to the user group of Administrator

Entry condition:

The user is logged into the system

Test case specification identifier:

ARS_TC_18

Test Items:

change_user_privileges

Input specification:

Administrator clicks “Change user”s privileges” button

Administrator selects a user

Administrator selects corresponding user”s privilege

Administrator clicks “Confirm” button

Output Specification:

System changes the corresponding user”s privilege in the system

Environmental needs:

A client PC or mobile device with web browser (Internet Explorer 8+, Mozilla Firefox 12+, Google Chrome, Android Browser or Apple Safari).

Special Procedural requirements:

The user belongs to the user group of Administrator

Entry condition:

The user is logged into the system

9. Bug Tracking/ Bug Process

During testing, the testing team members normally encounter behavior that goes against a specified or implied design requirement in the product. When this happens, we will document and reproduce the bugs for the developers.

Expectation of a bug:

- Keep track of what version of the application the bug is found
- Determine if bug has already been written up
- Indicate the steps to reproduce the bug – write enough details for others looking at the bug to be able to duplicate it; exclude unnecessary steps (i.e. If access point is irrelevant, be more general in your steps).
- Actual results – be specific on your findings.
- Expected results – how the product should behave based on the specified or implied requirements.

- Implications – How does the defect affect the quality of the product?

9.1 Bug Report

Any bug should be reported in the GitHub page at [issue page](#).

10. Testing Schedule

This section covers responsibilities, staffing and training needs, risks and contingencies, and the test schedule.

10.1 Test Schedule

We as a team divided the responsibility among ourselves as following:

<u>Test Phase</u>	<u>Date</u>	<u>Owner</u>	<u>Status</u>
Test Plan Creation	3/24/2014	Cheng	Completed
Test Specification Creation	3/25/2014	Kexin	Completed
Test Specification Team Review	4/1/2014	Hao	Completed
Component Testing	4/14/2014	Sihao	Pending
Integration Testing	4/14/2014	Guanxiong	Pending
System Testing	4/15/2014	Chao	Pending
Performance Testing	4/15/2014	Hao	Pending
Use Case Validation	4/16/2014	Cheng	Pending

10.2 Risks and contingencies

The various risks should be considered and the system should be tested properly. For example:

- Unauthorized or illegal access to central server room
- Network security or snooping

These risks are likely to expose abuser privacy information. The preventative plan include storing data in secure location with surveillance camera system and card access device installed, and encrypting all the data in database.

Some other things which should also be checked are:

- A back-up server should be provided and used for backing up all the data on the central server.
- The central server should have the scalability and flexibility for future expand.