TEST PLAN for RRTS
(IEEE 829 FORMAT)

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TEST PLAN for RRTS

1 TEST PLAN IDENTIFIER

RRTS_g24 version 1.0 by group 24

2 REFERENCES

- SRS
- Use Case diagram
- Class diagram

3 INTRODUCTION

This is the master Test Plan for the Road Repair and Tracking project. This plan will address only those items and elements that are related to the Road Repair and Tracking Software, both directly and indirectly affected elements will be addressed.

The Project will have two levels of testing, Unit and User Interface. The details for each testing will be addressed in the approach section and will be further defined in the level specific plans.

4 TEST ITEMS (FUNCTIONS)

1.1 setPassword()
1.2 checkPassword()
2.1 registerComplaint()
2.2 updateComplaint()
3.1 updateResources()
4.1 scheduleRepair()
5.1 workStatistics()
5.2 unfinishedWorks()
5.3 resourceStatistics()

5 SOFTWARE RISK ISSUES

There are several parts of the project that are not within the control of the Road Repair and Tracking application but have direct impacts on the process and must be checked as well.

A. The user must make sure that the version of the programming language on the device should be compatible with that of the application.
B. The backup and recovery of the local databases and restart of the application must be carefully checked.
C. The ability to restart the application in the middle of the process is a critical factor to application reliability. This is especially true in the case of the transmission files as once the data is pulled from the mailbox it is no longer available there and must be protected locally.
D. Database security and access must be defined and verified, The application must make sure that unauthorised users must not be able to access the data.

6 FEATURES TO BE TESTED

The following is a list of the areas to be focused on during testing of the application.

- Extent of optimization the application can give during scheduling of work.
- Redesigned/Converted reports.
- User Interface
- Data accessibility with/without using the application.
- Data accessibility with respect to the user.
- Computation of the overall statistics whenever needed.

7 FEATURES NOT TO BE TESTED

Nil

8 APPROACH (STRATEGY)

The testing for the Road Repair and Tracking Software will consist of Unit tests and GUI test levels.

The UNIT Testing will be done in a automated manner and will be approved by the TA. Proof of unit testing (test case list, sample output) will provided by the team to the TA before unit testing will be accepted and passed. All unit test information will also be provided to the test person.

GUI Testing will be performed manually by TA with assistance from the team members as required. No specific test tools are available for this project. Programs will enter into GUI test after all critical defects have been corrected.

No special tools required other than the softwares required to run the RRTS. For unit tests only the output through the terminal will be checked. For GUI testing the response output given through the Interface is checked.

There is no need for testing of hardware if the hardware met the minimum requirements mentioned in SRS.

9 ITEM PASS/FAIL CRITERIA

At unit test level all the test cases should give expected output in the terminal.

For Master test level the software should give expected response for all the use case scenarios.

10 SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

The testing will be done in the following order as unit testing followed by user interface testing.

A) No following tests will be done if Unit test cases fail.

As the unit tests will be done primarily, failure in any case results in the failure of the entire application hence the following tests will be suspended till the issue is resolved.

B) Tests can be continued if they are meant to test independent aspects of the application.

Incase of encountering any errors or test failures, further tests can be continued as long as the tests do not interfere with this failing part of the application. If the number of tests that are failing are increasing then it is preferable to suspend any further tests and contact the developers to resolve the issues.

11 TEST DELIVERABLES

.Design specifications already provided in SRS

Unit test case are provide in a separate file.

12 REMAINING TEST TASKS

No other Remaining test tasks

13 ENVIRONMENTAL NEEDS

The following elements are required to support the overall testing effort at all levels within the project:

A. Active python environment installed locally to run the project>

B. Access to the connected database management system used for backend

C. Some required python GUI packages installed those were used for front end development

D. Access to the master control tables (databases) for controlling the production/testing environment in the system.

14 STAFFING AND TRAINING NEEDS

It is preferred that there will be at least oneclerk assigned to the project for the system/integration and acceptance testing phases of the project. This will require assignment of a person part time at the beginning of the project to participate in reviews. If a separate test person is not available the project developer will assume this role.In order to provide complete and proper testing the following areas need to be addressed in terms of training.

A. The developers and tester(s) are familiar with basic interaction with the GUI interface.
B. The clerks and supervisors will require training in the ways input is provided and accessing the data they are allowed to obtain.
C. At least one clerk or branch member needs to be trained on the control of the PC based project . The administrator personnel will also have to be trained on the PC based package and its operational characteristics.

15 RESPONSIBILITIES

The development team will be responsible for the verification and acceptance of all unit test plans and documentation.

The project development team is responsible for all test plans and documentation.

The entire project team will participate in the review of the system and detail designs as well as review of any change requests that are generated by the user or as a result of defects discovered during development and testing. The evaluating staff is also required to participate in the initial system review.

The administrating staff will provide a person, as required, throughout the project to verify test results and answer questions as they arise. This person will also be responsible for participating in the execution of the acceptance test plan.

16 SCHEDULE

Time has been allocated within the project plan for the following testing activities. The specific dates and times for each activity are defined in the project plan timeline. The persons required for each process are detailed in the project timeline and plan as well. Coordination of the personnel required for each task, test team,supervising team,development team will be handled in conjunction with the development and test team leaders.

A. Review of SRS documents by test team personnel (with other team members) and initial creation of classes, sub-classes and objectives.

B. Development of test plan by team members and test with time allocated for review of the plan.

C. Review of the System design document by test team personnel. This will provide the team with a clearer understanding of the application structure and will further define the classes, sub-classes and objectives.

D. Development of System/Integration and Acceptance test plans by project development members and other essential personnel with time allocated for review of the plans.

E. Unit test time within the development process.

F. Time allocated for both System/Integration and Acceptance test processes.