Software Testing : A Test Case Execution with Good Understanding Using Clear Quest

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ABSTRACT

A Test case is a series of steps designed to test the correctness of software functionality or important part of an application. Test cases need to be simple and easily understandable when someone reads a test case for the first time, he or she should be able to understand and execute a script without any assistance. The classic objective of test cases or testing is to find defects. The best test case identifies errors with good probability. The important conventions and guidelines such as testing concepts need to be followed while executing good test cases. One or more test cases should be designed to test one requirement. Care should be taken not to have too many requirements mapped to a single test case. Tracking becomes easier when you have at least one test case per requirement to yield good test results. Check should be made to verify if the test cases have all the functionalities and requirements covered as per Requirement Traceability Matrix. A Clear Quest tool is one of the best automation tools for defect management and workflow. It is used for a defect and Change Request monitoring tool for testing related projects. We can track the present stage and situation of a project development at any point.

Keywords : Testing, Test Case, Execution, Clear Quest, Defect, Change Request, Templates

I. INTRODUCTION

A Test case is a series of steps designed to test the correctness of software functionality or an important part of an application. Test cases are accepted to be simple and easily understandable. The classic objective of test cases or testing in general is to find defects. A best test case has identifies an error with good probability. When someone reads a test case for the first time, he or she should be able to understand and execute a script without any assistance. Below are certain conventions and guidelines which are to be followed while executing good test cases.

One or more test cases should be designed to test one requirement. Effort should be made not to have too many requirements mapped to a single test case. Tracking becomes easier, and is good to have at least one test case per requirement and also yields good test results.

Check should be made to verify if the test cases have all the functionalities and requirements covered as per Requirement Traceability Matrix.

A ClearQuest tool is a one of the good automation tool for defect management and workflow. It is used for a defect and Change Request monitoring tool for testing related projects. We can track the present

stage and situation of a project development at any point.

II. USES OF CLEAR QUEST

- The Clear Quest manages defect information and Change Request of a project.
- In Client- Server environment also Clear Quest tool used.
- With the help of Clear Quest, we can view the project's current status and analytics through running queries.
- The Schema and Schema Repository are important terminologies in Clear Quest.
- Schema: Structure for a database which helps model or organize the data, processes of a project.
- Schema Repository: A database with one or more Schemas is known as Schema Repository.
- Which we can use and modify it as per your requirement, Clear Quest contains some predefined schemas.
- The routine activities of project can be managed through Clear Quest tool.
- With the help of Clear Quest tool, Everyone work easily and simply i.e., developers, testers, project leaders, project managers, Clients etc.,
- We can process and customize Clear Quest based on requirements in the project.

III. CLEAR QUEST LOGIN

To open Clear Quest, click on Start Menu -> Rational ClearQuest
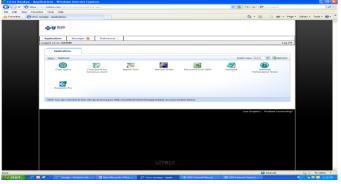
To login into Clear Quest, a unique login ID is required. For every team member, a Clear Quest unique login ID will be created by the required authorities (Like Administrator).

Note: Default username to login into Clear Quest is 'admin' and do not require any password for this admin login.

IV. CREATE DATA BASE

To create a database in clear quest follow the below steps:

Select clear Quest from citrix website.

Figure 1

Go to File menu, Select Database, Select Connection and select new connection.

Figure 2

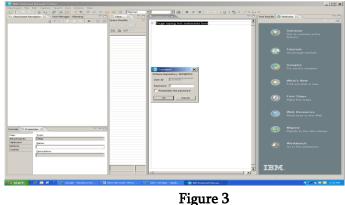Enter Employee User id and Password, Select Ok button.

Figure 3

Go to Clear Quest Navigator, Select Public Queries -> TM Queries ->Configured Test Cases.

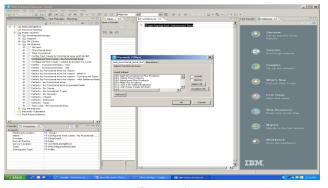Select the corresponding Data base and click on "OK" button.

Figure 4

V. CREATE TEST PLAN

To create a Test plan in clear quest follow the below steps:

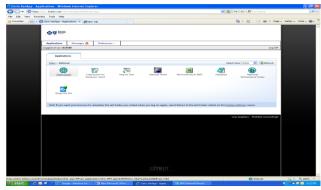Select clear Quest from citrix website.

Figure 5

Go to File menu, Select Database, Select Connection and select existing Database.
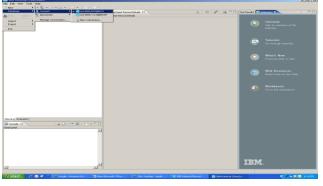

Figure 6

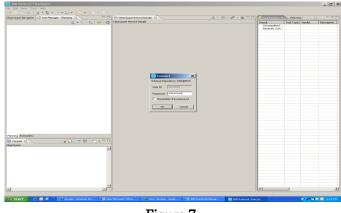Enter Employee User id and Password, Select Ok button.

Figure 7

Go to Test Manager Planning, Select Database, Select MOS Projects, Select Test plan and Right click on it to select new Test plan.

Figure 8

Create (TM Testplan) dialog box will appear; Fill all the required fields to create a new Test plan.

Figure 9

VI. LOAD TEST CASES

To Load test cases in test plan for clear quest follow the below steps:

Test Case Import Template should be prepared according to the test matrix given. (All the special character should be removed) and save it with type text (tab delimiter)

Select the notepad and copy all the data from text (tab delimiter) into notepad and save it in the system id folder.
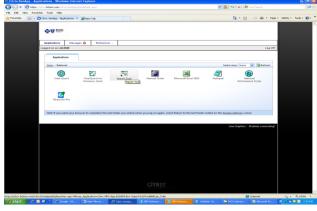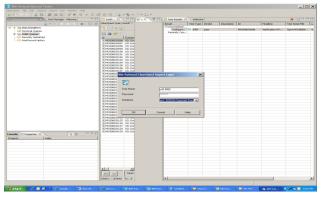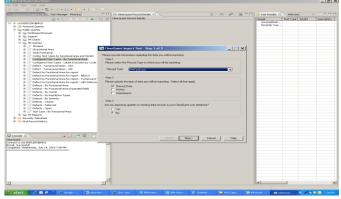
Select "Import Tool" from Citrix website.

Figure 10

Select Clear Quest Navigator, Select Public Queries and enter User Name, Password and select Database. Click on OK button.

Figure 11

Select record type as TM Test Case, Select Record Data, Select No and click on "Next".

Figure 12

Browse for the "Input File Name" and put the same input filename with the extension of log for "Discarded Data log" and "Field delimiter" should be <tab>.Click on "Next".

Example:

Input File Name: H:\abc.txt
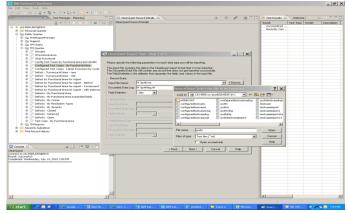
Discarded Data log: H:\abclog.txt
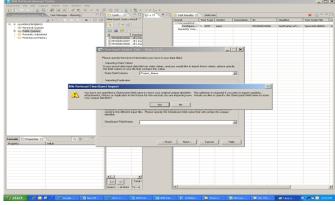

Figure 13

Select "No"

Figure 14

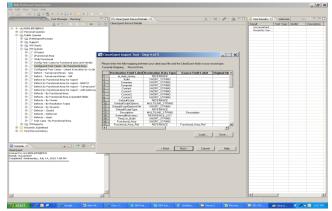Verify all the columns in the test case import template should be present.

Figure 15

Change Specify how many errors encountered to terminate the import to 1 and click on "Import".
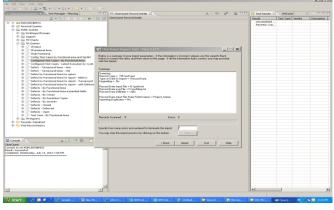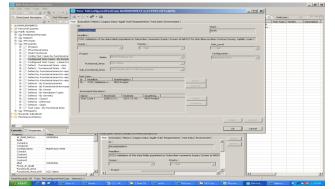

Figure 16

Configured Test Case Import Template should be prepared according to the test matrix given , one of the column TESTCASE should be filled by a field ID by double clicking on the test cases which were loaded previously.(All the special character should be removed) and save it with type text (tab delimiter).

And the same above process should be followed to import configured test case import template.
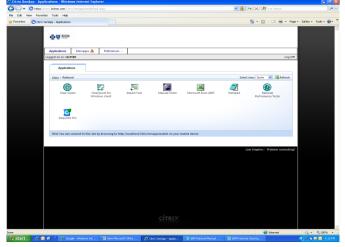

Figure 17

VII. TEST CASE EXECUTION

To execute a test case go to manual tester.

Figure 18

Connect to the Database.

Figure 19

Enter Employee User id and Password, Select Ok button.

Go to Clear Quest Navigator, Select Public Queries -> TM Queries ->Configured Test Cases.
Select the corresponding Test plan and click on "OK" button.

Double click on the test case to be executed and select execute from the menu list displayed.
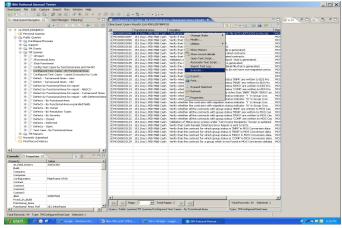
Figure 20

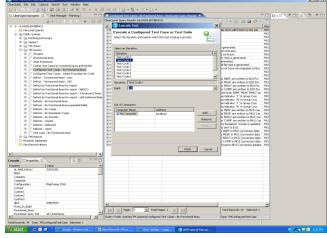Select iteration and click on "Finish".

Figure 21

Select the required item (pass/fail) from the drop down list and click on "APPLY" button.
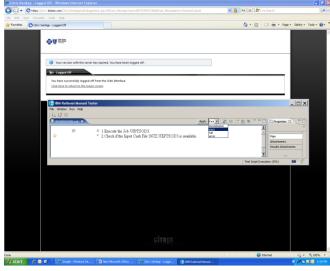

Figure 22

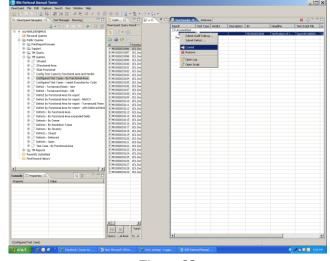Select commit to execute the test case. So now the test case is executed.

Figure 23

VIII. CONCLUSION

The test case is executed for every step in it and the pass or fail results are documented as test logs based on comparing the expected value with actual value from the system. All the test cases should be designed, reviewed and completed with required requirement coverage percentage. The clear quest is one of the best automation software for defect management and workflow to execute test cases manually or directly and it can be the best change request management tool for tracking and managing change requests and defects on any development project. With Clear Quest tool, we can write difficult queries with more filters and conditions with the specified data on any particular record. Using Clear Quest tool, we can put any query to execute immediately when login to Clear Quest and it is a customizable tool, we can customize the look and feel of the display format of the result set data.

IX. REFERENCES

[1]. 'Implementing IBM Rational ClearQuest An End-to-End Deployment Guide' By Christian D. Buckley, Darren W. Pulsipher, and Kendall Scott, ISBN-10: 0-321-33486-8

[2]. 'Implementing the IBM Rational Unified Process and Solutions' By Joshua Barnes ISBN-10: 0-321-36945-9

[3]. 'Software Test Engineering with IBM Rational Functional Tester The Definitive Resource' By Chip Davis, Daniel Chirillo, Daniel Gouveia, Fariz Saracevic, Jeffrey B. Bocarsley, Larry Quesada, Lee B. Thomas, and Marc van Lint, ISBN-10: 0-13-700066-9

[4]. 'Work Item Management with IBM Rational Clear Quest and Jazz' By Shmuel Bashan and David E. Bellagio, IBM Press

[5]. https://www.guru99.com/ibm-rational clearquest.html

[6]. https://en.wikipedia.org/wiki/Rational_ClearQues t

[7]. https://www.softwaretestinghelp.com/ibm-rational-clearquest-tool-tutorial/

[8]. http://www.informit.com/articles/article.aspx?p=6 67414&seqNum=3