Testers Training Academy (Softsmith) - Course Syllabus

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Manual Testing

1. Introduction to testing

2. Basic Questions on Testing (Why, what , how etc)

3. Software Development Lifecycle   (RFP, LOI, Proposals, URS, SRS, HLD, LLD, Coding, Testing, release)

4. Process models (Waterfall, Incremental, prototyping, Extreme etc)

5. Maintenance Phase (Preventive, Adaptive, Enhancement, Upgradation

6. Test Levels (Unit, Integration, System, Acceptance testing etc)

7. Testing tools, Test Script Preparation

8. Detailed Test Plan (Overview, Configuration, Functionality, Security, Performance etc)

9. Detailed test cases (Overview, Test Cases, Test Case Formats)

10. Review reports : Review formats, understanding review docs, checking for missouts, duplication etc

11. Test Bed Set-up : Test environmental set up, test data preparation, execution, installation and navigation

12. Test Execution and Fault reports

13. Bug Tracking : Introduction to bug, bug report Format, Bug Cycle with demo using live projects.

14. Test Record introduction, formats, test reports, summary reports

15. Non functional testing methods 1 (Volume, Load, stress, Scalability testing etc)

16. Non functional testing methods 2 (Usability, Localisation, Globalisation Inter-operability etc)

17. Non functional testing methods 3 (Recovery, Security, Benchmarking etc)

18. Non functional testing methods 4 (Vertical, Horizontal, Whitebox, Gray box, Black box etc)

19. Different Testing Techniques   (Differences between Unit testing, System testing & Integration testing)

20. Release Management

21. Defect Analysis (Defect Age, Defect density, Defect distribution, Residual density etc)

22. Requirements Traceability Matrix

23. Quality Management System (Introduction to ISO, SEI CMM, Process Management, Quality Management System, Metrics)

24. Master Test Plan (MTP Overview, Test Levels, Roles & Responsibilities, Testing tools, Risks & Mitigation, Regression Test Approach, Test Groups, priorities, Status collection, Reporting, Record & Summary)

25. Bug Triages and Escalation procedure etc.

Winrunner

1. Testing tool concepts- Automated Vs Manual testing

2. Win Runner Functions– an Introduction, Testing process using Winrunner.

3. GUI Learning – GUI Map Editor, introduction, creating, editing, configuring, Virtual object Wizard, GUI spy etc. Record & replay – Context sensitive and analog modes, running scripts, debugging scripts

4. Programming with TSL: Enhancing Test Scripts with programming, generating functions, Calling Tests, Creating user – defined functions, Creating compiled modules, Calling functions from External Libraries etc.

5. GUI Objects –Checking of GUI Objects, Single property Value, Objects, Modifying Checkpoints, Dialog boxes, Property and   default Checks, expected value of property, Expected results of a GUI Checkpoint etc

6. Bitmaps – Checking window, object and area bitmaps, Addition of check points to test scripts and viewing of results.

7. Synchronization – When to Synchronise, Setting changes, Windows & Objects: Waiting, Property Values, and Bitmaps.

8. Data Driven Tests – Definition & DDT process, Creation, Adjusting the script with Regular Expression, Basic tests to DDT, Data tables, Running of DDT and Analysing of DDT results, Assigning the main data Table for a test, using TSL with DDT

9. Batch testing – Definition, Creation, Running of Batch tests, Storing, Viewing and Analysis of Batch test results etc

10. Reading Text - Window/ Object, Verifying, Comparing & Searching for text etc, using regular expressions & its syntax.

11. Checking Table contents – Defaults checks, Understanding and Editing check Dialog Box, Checking Specifying Checks etc.

12. Checking Database – Choosing a database, Create a default check & custom check on a database, check point dialog,   boxes, Check point wizard. Modifying & Parameterize database check point, Using Edit check dialog box, TSL functions

13. Exception handling : Pop-up, TSL, Object.

14. Debugging : Debugging Test Scripts, Using Breakpoints, Monitoring Variable etc.

15. Web testing – Web precautions, Web text checkpoints

Load Runner

1. Introduction to Load Runner, Performance testing Concepts

2. Load test Planning – analyzing the Client Server System, Defining the testing Objectives, Planning for implementation

3. Load Runner - Virtual User Generator Module - Planning, Creating the V User Scripts, Creating and running the Scenario

4. Load Runner Controller module – Selecting Load runner Commands, managing Scenario files, filtering & sorting info etc

5. Load Runner Scheduler Module - Creating a Scenario – Creation of Script list , Adding & modifying Script, using relative paths etc, Creating VUsers & user groups, Scheduling Vusers & User groups, Setting default GUI Vuser type etc

6. Configuring a Scenario: Setting the location where Run-Time Files are Stored, Specifying the Applications that the Scenario Invokes, Setting the Scenario Duration etc.

7. Running a Scenario: Disabling and Enabling Rendezvous points, Disabling and Enabling Vusers at Rendezvous points, setting of rendezvous attributes, correlating queries for tables with Constraints. Storing and Collating Results of a Scenario, Controlling Individual Vusers and Vuser Groups, Manually Releasing Vusers from a Rendezvous, Monitoring Vusers, Viewing Scenario Execution Messages, Naming Scenario Runs for Cross-Scenario Analysis.

8. Load runner – Results Analyser Module: Result directory file structure, Analysis, Graphs and Reports, Viewing Scenario, Running V Users graph, Rendezvous Graph and Report, Transactions per second graph, Failed Transactions graph and Report, Failed V-user Report, Analyzing Scenario Performance.

9. Web Vuser Scripts: Concepts of Web Vusers Scripts, Using the text – based and graphical Web Vuser Scripts, Recording a browser Session, Inserting transactions and Rendezvous Points

10. Configuring web run time settings: Performance Settings, HTTP Settings, Timing Settings, Server Settings.

11. Running and Modifying Web VUser Scripts

12. Parameterizing a Web Vuser Script : Introducing Data-table Parameterization, Specifying the Arguments to parameterize, Replacing Parameterized Arguments with Constants, Automatically Specifying Parameterized Arguments Editing Information in the Data Table

Test Director

1. Introduction to Test Management Process: Manage Projects, Manage users and roles, Manage Requirements, Manage Tests, Manage Test Sets and Runs, Manage Defects, Generate Reports and Graphs, Status based email alerts and notifications, Customizable fields and history maintenance.

2. Customization of Test Director : Site Admin Features, create/delete projects, Global users creation, modifying the License details,   server locations, global configuration settings

3. Project Admin Features: Customize project specific code (Customize), create different user groups (Setup User Groups), user group access rights for different portfolio (Permissions), Mapping users from global user list to user groups (setup users), customize project entities, by altering attributes of system defined fields and user defined fields, Maintain different list of values for priority, severity, version, status codes, configure email alert options.

4. Project User Features: Project User access rights, Allot user to one or more user groups and inherits all the access rights of those groups, Workflow is definition to the user, Setting email notifications and alerts to notify the users, user access to four available options – Requirement, Plan, Test Lab, Defects, Setting search and filter across all options, Standard reports built-in with the product, customizing required graphs, be saved in HTML format.

5. Requirements: Adding requirements, maintaining parent-child relationship of requirements, Creating auto generated Requirements ID, providing Detailed description, priority, type, attachment etc, maintenance of History, Privilege based status modification, mapping of Requirements to test cases thru coverage view, mailing requirements, visibility of Required columns

6. Plan : Creation of Test folders (scenarios), adding test cases, viewing modes, Test cases and its associated requirement mapping, reordering Test steps, maintenance of History, mailing test cases, Generation of reports and graphs analysis.

7. Test Lab : Creation of test sets (test rounds), associating test cases to test set, Using Execution Grid, assigning planned execution date, tester, host machine, feeding the test run details (actual results) execution of Manual and automated test cases, Reports generation and Graphs analysis.

8. Defects : Adding defects, defining bug cycle, bug history, Selective emailing, standard reporting, filtered display of bugs, saving bugs in html, excel, word or text files.

QTP

1. Test Automation Concepts : DOs and DONTs of Test automation, How testing cycle shrinks, Test maintenance & automation process

2. GUI Learning: Object Spy – properties and methods, Object repository, Object Identification Mechanism, Dynamic labels and regular expressions Virtual Objects.

3. Test Steps Recording and Replay : Managing actions, Manage Transactions, Low Level, Analog and context sensitive recording, Script view and tree view Active screen viewer, Test steps automatic documentation, Normal replay and debug mode, splitting actions, reusable actions, snapshot viewer

4. Language Elements : Variables, Loops, If conditions, Action and Script parameters, Logging output messages, utility commands, built-in functions.

5. Check Points : GUI Objects- data and property – standard, Text checkpoints, Image checkpoints, XML check points, constants and regular expressions, expected values from tables

6. Database concepts : Connections and Queries, Feeding expected results, checkpoint wizard

7. Datadriven tests : Global and Script wise data Sheets, driver wizard, importing and exporting data to data tables

8. Recovery Manager : PopUP, Script Failure, Object Failure, Application Crash

9. Batch testing – grouping scripts, running as a batch, viewing batch results

Rational Robot

1. Testing tool concepts

2. Rational Test Administrator and Test Manager features for projects, Data Pool creations, Add-in manager, Inspector

3. Robot – GUI Recording, Low Level Recording and Replay, Timers and Logging, record and playback options, object recognition order

4. SQA Basic – variables, control structures, loops, subroutines, functions, parameters, built-in functions, library functions, debugging scripts

5. Verification Points – GUI objects, Images, Object Properties and Object Data

6. Results Analysis – builds and log files, transaction timers

7. Rational Site Check – link checks, broken links

8. SQL Interface – database connectivity, programming for SQL commands, dynamic data checks

9. Data Pool Interface – connectivity to data pool, data retrieval mechanism from data pool

10. Test Suite Concepts – batch tests, batch results analysis

Silk Test

1. Functional test automation concepts

2. Functional Test Automation Planning – test case independence, base states, linkage between test cases

3. Silk Test architecture – plan, test case, script, results, GUI files, logs

4. Silk Test record and run – application and test case base states, sequencing, synchronizing, execute options

5. GUI abstraction – generalizations, tags, script/UI independence

6. Test elements, creating reusable scripts – variables, functions, loops, control structures, parameters, script debugging

7. Dynamic Data, synchronization – data driver enabling, data selection

8. Database checks, Distributed tests – connectivity, querying, silk test agent execution

9. Test Automation Disciplines – standards, dependencies, test bed cleanliness

10. Test Script Architecture, Design, Traceability

11. Batch Run, Results Analysis

Test Lead Programme

1. Requirement Analysis – new requirements, Change requests, impact analysis

2. Master test planning test strategy preparation – estimation, configuration management, task allocation etc

3. Review of work products – test plans and test cases – adequacy and completeness criteria

4. Daily status collection and reporting – metrics collection and analysis

5. Team handling – shuffling, rotation, peer backup

6. Wait time utilization – reviews, gap analysis, data preparation

7. Triage meetings - dispute handling, severity assignments, commitments

8. Managing regression tests – module analysis, test coverage

9. Release process- QA Certification – release request, release notes, release lists, release certificate

10. Risk Analysis – definition, tracking, escalation

11. Change requirements process – impact analysis, rewriting test documents, commitments

12. Impact analysis – schedule, effort and cost impacts Vs Quality impacts

Software Quality Assurance

1. SDLC phases – a quick tour

2. Organisational needs

3. Vision, Mission, Quality Policy statements

4. Quality Manual & Organisational Manual

5. Organisational processes, Templates, Forms and CheckLists

6. Reviews, Configuration Management Concepts

7. Project Groups and Support Groups

8. ISO introduction

9. ISO Clauses and process mapping

10. Internal quality Audits –process audits, Configuration Audits, Follow-up Audits

11. Quality Facilitation

12. Non Conformance reporting, Correction and Prevention

13. ISO Certification mechanism

14. SEI CMM – An introduction

15. SEI CMM Key process Areas

16. SEI CMM – Certification Mechanism

17. Metrics : Schedule Variance, Effort Variance, Size Variance, Requirement stability index, Defect density, Residual density, Defect Distribution, SRS Review Efficiency, Design Review Efficiency etc.

18. Metrics Analysis and process improvements

19. Usage QAMonitor and CQO to implement processes across organization