



Quality Assurance (QA Testing)

From Yes-M Systems LLC

Length: Approx 8-9 weeks/100+ hours

Audience: Students with or without IT experience or knowledge

Student Location – To students from around the world

Delivery Method: Instructor-Led – Live Training

Classroom and/or Online

Quality Assurance (QA Course Details)



Table of Contents:

A. Course Summary	3
About this Course:	3
AT COURSE COMPLETION	4
B. Contact us for more details:	4
Quality Assurance (QA) Details	5
1. Introduction to System Development Methodologies	5
2. Software Testing:	5
3. Test automation using Selenium IDE – Java and Web Driver	6
4. QTP	8
5. Mobile Testing with Automation	8
6. Soap UI, WebServices and SOA	10
7. SQL and Advanced SQL	11
8. Quality Center tool	12
9. Unix and Shell Scripting	12
10. Interview and Resume preparations	12
C. About Yes-M Systems:	13
D. Courses we offer:	14

A. Course Summary

About this Course:

This 100+ hour course is designed to give students a solid knowledge in the role and responsibility of a QA Tester. Topics are reinforced with intense hands-on practices including in class exercises, projects, home works with home work feedbacks. This course is taught by experienced instructors who have over 20+ years of IT experience. During and after the regular course, students will get to attend mock interview sessions and resume preparation sessions.

This course will allow the students to understand various QA concepts (Quality Assurance, Testing) including:

- (i) Software development methodologies (waterfall, Agile)
- (ii) Scrum.
- (iii) Manual testing hands-on and related theory
- (iv) HP Automation Tools - Quality Center and Quick Test Pro (QTP)
- (v) Automation tool: Selenium WebDriver with Java
- (vi) Advanced Testing: Mobile Testing with Automation, SOAP UI, Web Services Testing with hands-on and SOA.
- (vii) Unix and SQL with hands-on
- (viii) BA concepts – User, Functional and Non-Functional.
- (ix) Interview Questions, mock interviews and resume Preparation sessions.

Projects/mini-projects/Hands-on sessions via class work and/or home work on the following topics:

- (i) Manual testing - Testing and Writing Test cases
- (ii) QTP
- (iii) Selenium with Java Programming
- (iv) Mobile Testing with Automation, Web Services and SOAP UI
- (v) Unix
- (vi) SQL Queries

AT COURSE COMPLETION

1. Perform the role of a QA Tester or Test Engineer or IT Tester
 - a. QA Testing (manual)
 - b. Writing SQL queries
 - c. Handle Unix commands
 - d. Mobile testing with Automation
 - e. Automation Testing using Selenium and Java
 - f. Automation testing using QTP
 - g. Database Testing

B. Contact us for more details:

Company name: Yes-M Systems

Website: <http://myyesm.com>,

Phone numbers (USA): 678-643-7777, 678-248-0302

Phone number (India): 91-8220006968

Kudzu Reviews: <http://www.kudzu.com/m/Yes-M-Systems-30363491/reviews/>

Facebook: <http://www.facebook.com/yesmsystems>

Youtube: <http://www.youtube.com/yesmsystems>

Quality Assurance (QA) Details

1. Introduction to System Development Methodologies

1.1. Waterfall method

1.1.1. Various phases will be covered in detail

1.1.1.1. Understand the role of a BA, QA

1.1.1.2. BA role in detail:

1.1.1.2.1. User Requirements

1.1.1.2.2. Functional Requirements

1.1.1.2.3. Non-Functional Requirements

1.1.1.3. Overview of SDLC phases

1.2. Agile:

1.2.1. Explain Agile

1.2.2. Scrum

1.2.2.1. Scrum Basics

1.2.2.2. Sprint

1.2.2.3. Product Backlog

1.2.2.4. Sprint Backlog

1.2.2.5. Burn down chart

1.2.2.6. Sprint Planning Meeting

1.2.2.7. Stand-up meeting.

1.2.2.8. Examples

2. Software Testing:

2.1. Manual Testing: Case Studies/Homework:

2.1.1. What is testing? Why to test?

2.1.2. What is a test case?

2.1.3. How to develop test cases from IT requirements?

2.1.4. Analyze requirements, Design a test case, Write a test case, Test a requirement and Record the results.

2.2. Test Cases: In class 9 to 10 Manual Testing Exercises and Homework

2.2.1. Cover real-time applications.

2.3. Manual Testing theory

- 2.3.1. Unit, MAT, Functional/Module, Integration
- 2.3.2. System Integration, Alpha, Beta, Black Box, White Box,
- 2.3.3. Volume Testing, Regression Testing
- 2.3.4. STLC (Software Testing Life-Cycle)
- 2.3.5. Test Plans
- 2.3.6. Change Management

3. Test automation using Selenium IDE – Java and Web Driver

3.1 Introduction:

- 3.1.1 Automation Testing
- 3.1.2 Selenium IDE
- 3.1.3 Selenium WebDriver

3.2 Installation

- 3.2.1 Selenium IDE
- 3.2.2 Java JDK
- 3.2.3 IntelliJ IDEA
- 3.2.4 WebDriver

3.3 Java: Data Types/Operators/Console I/O

- 3.3.1 Introduction to java Programming
- 3.3.2 Writing Java Code and Execution
- 3.3.3 Data Types & Variables
- 3.3.4 Constants
- 3.3.5 Operators
- 3.3.6 Type Casting & Boxing
- 3.3.7 Console I/O
- 3.3.8 Example Programs

3.4 Java: Conditional & Loops

- 3.4.1 if Statement
- 3.4.2 if-else statement
- 3.4.3 if-else-if Statement
- 3.4.4 Nested if Statement
- 3.4.5 switch statement
- 3.4.6 while Loop
- 3.4.7 do-while Loop

Quality Assurance (QA Course Details)



- 3.4.8 for Loop
- 3.4.9 break, continue ;
- 3.4.10 Example Programs
- 3.5 Java: Arrays
 - 3.5.1 Declaring and Initializing
 - 3.5.2 Accessing Array Elements
 - 3.5.3 For Each
 - 3.5.4 Multidimensional
 - 3.5.5 Example Programs
- 3.6 Java: Methods
 - 3.6.1 Defining a Method
 - 3.6.2 Calling a Method
 - 3.6.3 Recursion
 - 3.6.4 Method Overloading
 - 3.6.5 Passing Arrays
 - 3.6.6 Argument List
 - 3.6.7 Example Programs
- 3.7 Selenium IDE & Locators
- 3.8 WebDriver Basics
- 3.9 Web Element Functions including Form Elements
- 3.10 Exceptions in Selenium
- 3.11 Navigation & Cookies
- 3.12 Windows Functions
- 3.13 Handling Alerts & PopUps
- 3.14 Mouse & keyboard Actions
- 3.15 Cross Browser Testing
- 3.16 Headless Browser Testing
- 3.17 Chrome & Firefox profile Testing
- 3.18 Waits & Handling Ajax websites
- 3.19 Taking Screen shots & JavaScript Executor
- 3.20 Introduction to Frameworks
- 3.21 Interview Questions

4. QTP

- 4.1. Introduction to Automated Testing Principles
- 4.2. Introduction to QTP
- 4.3. Preparing to Record
- 4.4. Record a Test using both Keyword and Expert View
- 4.5. Working with Objects including managing test objects.
- 4.6. Using Synchronization to enhance Test script.
- 4.7. Using Standard Checkpoints
- 4.8. Use of Regular Expression in Standard Checkpoints
- 4.9. Using Parameterization (Data Driven Testing)
- 4.10. Reusable and Multiple Actions
- 4.11. Add steps without recording
- 4.12. Create Tests on a Web Application
- 4.13. Custom Checkpoints
- 4.14. Database Checkpoints
- 4.15. Intro to Advanced topics
 - 4.15.1. Special focus on VB Scripting
 - 4.15.2. Descriptive programming
 - 4.15.3. Regular Expressions.
- 4.16. Lab
 - 4.16.1. Instructor Driven Lab Exercises
 - 4.16.2. Homework Exercises
 - 4.16.3. QTP Interview Questions

5. Mobile Testing with Automation

- 5.1. Introduction to Mobile Application Testing
 - 5.1.1. Complexity of Mobile Applications and Testing
 - 5.1.2. Overview of Mobile Domain
 - 5.1.3. User Expectations
 - 5.1.4. Mobile Application Testing vs Traditional Application Testing
- 5.2. Different Types of Mobile Applications
 - 5.2.1. Native
 - 5.2.2. Web
 - 5.2.3. Hybrid

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5.3. Challenges in Mobile Application Testing

- 5.3.1. Mobile Platforms
- 5.3.2. Mobile Browsers
- 5.3.3. Customers
- 5.3.4. Interfaces

5.4. Mobile Application Development Platforms

5.5. Mobile Testing Types

- 5.5.1. Emulators, Simulators, Real Devices
- 5.5.2. Manual vs Automation
- 5.5.3. Baseline Testing Criteria for Android/iOS
- 5.5.4. Functional/UI Testing
- 5.5.5. Hands-On : Web App Testing Using Firefox/Chrome Emulator
- 5.5.6. Hands-On: Native App Testing Using Android Emulator

5.6. Mobile Application Testing Strategy

- 5.6.1. Defining Requirements
- 5.6.2. Testing Scope
- 5.6.3. Use cases
- 5.6.4. Test Levels
- 5.6.5. Testing Techniques
- 5.6.6. Test Data
- 5.6.7. Target Devices
- 5.6.8. Test Environment
- 5.6.9. Test Automation
- 5.6.10. Risks

5.7. Mobile Application Testing Tools

- 5.7.1. Android Tools
- 5.7.2. IOS Tools

5.8. Cloud Testing

5.9. Mobile Cloud Testing on real devices

- 5.9.1. Samsung Remote Lab – Demo and Hands-on

- 5.10. Mobile Automation Testing with Calabash-Android
 - 5.10.1. Overview of Calabash-Android and Cucumber (a BDD tool)
 - 5.10.2. Hands-on: Writing Calabash-Android Test-cases and running them on cloud
 - 5.10.3. Hands-on: View and Analyze results
- 5.11. Mobile Application Testing –Important Skills for Testers
 - 5.11.1. Interview Questions

6. Soap UI, WebServices and SOA

- 6.1 Principles
- 6.1 Components
- 6.2 Standards
 - 6.2.1 Soap
 - 6.2.2 WSDL
- 6.3 Types of Web Services
 - 6.3.1 Enterprise/Soap
 - 6.3.2 REST
- 6.4 Hands-on Testing of Web Services with SoapUI
 - 6.4.1 Installation
 - 6.4.2 Testing Soap/WSDL Web Service
 - 6.4.3 Create Soap Project
 - 6.4.4 Generate Test-suite
 - 6.4.5 Adding assertions to Test steps
 - 6.4.6 Using Regular Expressions (Regex) in assertions.
- 6.5 Testing REST Web Service
 - 6.5.1 Create REST Project
 - 6.5.2 Generate Test-suite
 - 6.5.3 Adding assertions
 - 6.5.4 Using XPath and Regex in assertions

7. SQL and Advanced SQL

7.1 Intro to SQL

- 7.1.1 SQL
- 7.1.2 Database
- 7.1.3 Table, Rows and Columns
- 7.1.4 Data Types
- 7.1.5 Primary Key, Alternate/Secondary Keys/NOT NULL/UNIQUE/CHECK and Foreign Keys

7.2 Statements:

- 7.2.1 SQL
- 7.2.2 Select and Select *
- 7.2.3 Column Alias, Null Value, Arithmetic Expressions
- 7.2.4 Concatenation Operator(||), Literal, DISTINCT
- 7.2.5 Where
- 7.2.6 Order By (Desc, Asc)
- 7.2.7 And & OR, Like
- 7.2.8 Not
- 7.2.9 IN
- 7.2.10 Not In
- 7.2.11 Insert, Update, Delete
- 7.2.12 DESCRIBE

7.3 Advanced SQL with Oracle

- 7.3.1 SQL commands:
- 7.3.2 Update, Delete
- 7.3.3 Create, Alter, Drop
- 7.3.4 Truncate, Select with various operators,
- 7.3.5 Count, Sum, Distinct,
- 7.3.6 Order by, Group by, Having
- 7.3.7 Working With Dates
- 7.3.8 Sub Query
- 7.3.9 Introduction to Joins
 - 7.3.9.1 Inner Join
 - 7.3.9.2 Self Join
 - 7.3.9.3 Outer Joins – Left/Right/Full
- 7.3.10 Hands on all above with Oracle APEX online

7.4 Why QA professionals need to know SQL basics

- 7.4.1 Sample queries for data verification
- 7.4.2 acquiring test data

- 7.4.3 SQL Injection attack
- 7.4.4 What to test in Relational DB apps

8. Quality Center tool

- 8.1 Discuss the Need for Test Management System
- 8.2 Discuss the overall features of Quality Center
- 8.3 Discuss in detail various modules of QC:
 - 8.3.1 Requirements
 - 8.3.2 Test Plan,
 - 8.3.3 Test Lab,
 - 8.3.4 Defects, Analysis
 - 8.3.5 Reporting features
- 8.4 Discuss the Test coverage, email features
- 8.5 Defect Management

9. Unix and Shell Scripting

- 9.1 Introduction to Unix
- 9.2 Telnet/Putty/WinSCP
- 9.3 Unix Architecture
- 9.4 Files and Processes
- 9.5 Directory Structure
- 9.6 Paths - Absolute/Relative
- 9.7 Commonly used UNIX Commands + Hands on
- 9.8 Vi/Vim Editor Commands + Hands-on Editing
- 9.9 Hands on with shell scripting

10. Interview and Resume preparations

- 10.1 HR Questions
- 10.2 General IT
- 10.3 QA questions
- 10.4 Resume preparations, Mock Interview, Job Placement Help

Disclaimer: Yes-M Systems and/or their instructors reserve the right to make any changes to the syllabus as deemed necessary to best fulfil the course objectives. Students registered for this course will be made aware of any changes in a timely fashion using reasonable means.

C. About Yes-M Systems:

- a. Established in 2005 (Atlanta, GA, USA), 10th year in business.
- b. A+ accreditation from US Better Business Bureau
(<http://www.bbb.org/atlanta/business-reviews/internet-consultants/yes-m-systems-in-duluth-ga-27431372>)
- c. Received the “Best of 2012”, “Best of 2013” and “Best of 2014” awards from US-based Kudzu (<http://www.kudzu.com/m/Yes-M-Systems-30363491/reviews/>)
- d. Trained close to 4000+ students from all over the world.
- e. Experienced, passionate and committed trainers
- f. IT Training in various technologies including Java, Dot Net, SAP, Oracle, QA, BA etc (See Courses We offer section for more information)
- g. Professional guidance/help with resumes and interview preparations.
- h. Recruiter help with marketing/jobs
- i. Certification at the end of the training.

D. Courses we offer:

1. QA and BA courses:
 - QA [Quality Assurance or QA Testing]
 - BA [Business Analysis or Business Analyst]
 - QA and BA as a single course (Integrated QA+BA) at a reduced fee.
 - Advanced/specialization courses:
 - a. 70-hour Selenium course with Core Java and Python
 - b. ETL Testing
 - c. Advanced Mobile Testing
 - d. Advanced QTP
 - e. Any combination of a, b, c, d.
 - Certification QA
 - a. QTP
 - b. ISTQB
 - c. Quality Center
 - Healthcare and Finance specialization
 - a. Healthcare as a Domain Class
 - b. Healthcare BA [Business Analyst with specialization in Healthcare]
 - c. Healthcare QA [Business Analyst with specialization in Healthcare]
 - d. Healthcare QA [Quality Assurance or QA Testing]
 - e. Business analyst with Finance specialization.
 - f. Quality Assurance with Finance specialization

Quality Assurance (QA Course Details)



2. Java courses:
 - a. Core Java
 - b. Advanced Java [Java J2EE]
 - c. Combination of Core Java and Advanced Java.
3. Microsoft Courses:
 - a. Dot Net
 - b. Microsoft Business Intelligence [MS BI]
 - c. Sharepoint
 - d. MS SQL Server
4. SAP Courses:
 - a. SAP FICO
 - b. SAP MM
 - c. SAP HR
 - d. SAP BO
 - e. SAP BI
 - f. SAP HANA
5. Oracle Courses:
 - a. Oracle Financial
 - b. Oracle DBA
 - c. PL/SQL
 - d. Oracle R12

Quality Assurance (QA Course Details)



6. Other Courses:

- a. Hadoop
- b. Hadoop with Java
- c. Salesforce
- d. Project Management (PMP)
- e. Maximo
- f. Tableau
- g. Informatica
- h. Cognos

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