Software Quality Assurance & Testing Boot Camp

A Comprehensive Hands-On Introduction

Tezza Business Solutions

ABOUT OUR TRAINERS

Our trainers have spent the last 2 decades implementing Software Quality Assurance processes and Software Testing programs for various United States' fortune 5oo companies and major organizations in East Africa.

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Course: **101** Type: **Hands-On Training** Duration: **3 Days**

You Will Learn How To

- Apply general software testing principles and fundamental test processes
- Implement test levels and types to various software development models
- Conduct static techniques using proper roles, responsibilities and tools
- Perform specification- and structure-based test design techniques
- Manage tests including planning, estimating, monitoring and controlling

Course Benefits

The proper testing of software can save an organization time, effort and money. In this course, software professionals and managers gain thorough knowledge of testing approaches that can be integrated into the software life cycle. Through hands-on exercises, you learn how to build testing methods into your work process to correctly design products that are functional and maintainable.

Who Should Attend

This course is aimed at anyone who wants a basic understanding of software testing, such as Testers, Test Analysts, Test Engineers, Test Consultants, Test Managers, User Acceptance Testers, and Software Developers. It is also appropriate for Project Managers, Quality Managers, Software Development Managers, Business Analysts, IT Directors and Management Consultants.

Hands-On Training

Hands-on exercises to provide you with practical experience in software testing, including:

- Test Planning – Creation of a Test Plan and Documentation
- Business Requirements & System Requirements Specification Review
- Test Case creation
- How to create a Requirements Traceability Matrix (RTM)
- Recognizing equivalence partitions
- Performing boundary value analysis
- Conducting state transition testing
- Ensuring statement, decision and condition coverage
- Organizing test development processes
- Writing and assessing an incident report
- Defect Management & Defect Remediation Process

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COURSE OUTLINE

Day One

Fundamentals of Testing

Learn and understand why testing is needed; its limitations, objectives and purpose; the principles behind testing; the process that testers follow; and some of the psychological factors that testers must consider in their work

Testing throughout the software life cycle

You will learn about the most commonly applied software development models, test levels and test types.

Day Two

Static Techniques & Introducing a Tool into an Organization

You will learn about Static Test techniques as a powerful way to improve the quality and productivity of software development. We will also review Software Test automation tools in terms of their general functionality.

Design Techniques

You will learn how to differentiate and identify various test documents, write test cases and translate test cases into a well-structured test procedure specification and write test execution schedules

Day Three

Test Management

Testing is a complex activity. Testing is often a distinct sub-project within the larger software development, maintenance, or integration project. Testing usually accounts for a substantial proportion of the overall project budget. In this class we try to understand how we should manage the testing we do.

Introducing a Tool into an Organization

We will also review Software Test automation tools in terms of their general functionality.

WHAT WOULD BE COVERED

Fundamentals of Software Testing
- Grasping the software systems context
- Identifying causes of software defects
- Bug
- Defect
- Error
- Failure
- Fault
- Mistake
- Quality
- Risk

Ensuring Software Success Through Testing

The key objectives of testing
- Finding defects during development
- Providing confidence and information

Adhering to seven testing principles
- Presence of defects
- Exhaustive testing
- Early testing
- Defect clustering
- Pesticide paradox
- Context dependent
- Absence-of-errors fallacy

Applying common sense processes
- Planning and controlling
- Analyzing and designing
- Implementing and executing
- Evaluating exit criteria and reporting
- Closing activities

Coping with the psychology of testing
- Contrasting developer vs. tester mindset
- Discerning levels of independence

Testing and the Software Life Cycle

Distinguishing software development models
- Adapting to V-model and iterative models
- Performing tests within a life cycle model

Conducting the main test levels
- Component
- Integration
- System
- Acceptance

Comparing four software test types
- Recognizing functional and structural tests
- Performing non-functional testing
- Analyzing software structure/architecture
- Conducting confirmation and regression tests

Performing maintenance testing
- Identifying reasons for maintenance testing
- Modification
- Migration
- Retirement

Finding Defects with Static Techniques

Comparing static analysis to dynamic testing
- Detection
- Correction
- Improvement

Differentiating various review types
- Informal
- Technical
- Walkthrough
- Inspection

Leveraging Test Design Techniques

Differentiating various "specifications"
- Test design
- Test case
- Test procedure

Applying specification-based techniques
- Equivalence partitioning
- State transition
- Boundary value analysis
- Use case
- Decision table

Utilizing structure-based techniques
- Statement
- Decision
- Condition

Deploying experience-based knowledge
- Intuition
- Experience
- Knowledge

Managing the Testing Process

Organizing and assigning responsibilities
- Independence
- Test leader
- Tester

Planning and estimating the activities
- Metrics-based vs. expert-based approach
- Justifying exit criteria adequacy
- Standardizing test documentation

Monitoring and controlling test progress
- Applying common metrics
- Interpreting test summary reports

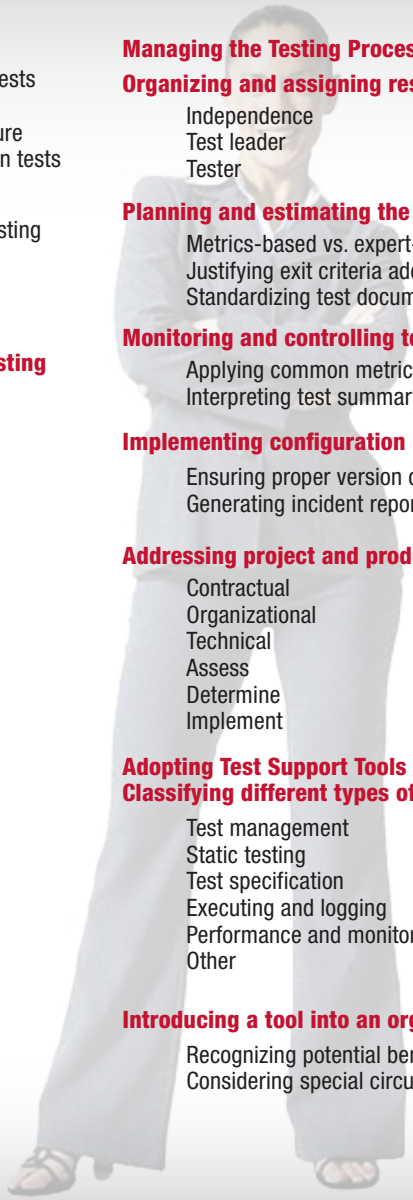
Implementing configuration management
- Ensuring proper version control
- Generating incident reports

Addressing project and product risks
- Contractual
- Organizational
- Technical
- Assess
- Determine
- Implement

Adopting Test Support Tools

Classifying different types of test tools
- Test management
- Static testing
- Test specification
- Executing and logging
- Performance and monitoring
- Other

Introducing a tool into an organization
- Recognizing potential benefits and risks
- Considering special circumstances



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Tezza Business Solutions

SOFTWARE QUALITY ASSURANCE & TESTING

Tezza Business Solutions LLC is a U.S. based Business Solutions Company (with a local presence in Kenya, Nigeria, Tanzania and Uganda) with specialization in providing personalized Software Quality Assurance and Software Testing Services within a stream-lined phased delivery channel. We operate as a Limited Liability Company in the following countries - Kenya, Nigeria, Tanzania and Uganda.

WHY ?

To ensure overall quality, consistency in delivery, reduced production and implementation costs and most importantly, to ensure customer satisfaction, organizations that develop or consume off-the-shelf software must setup and adhere to stringent Quality Assurance and Software testing processes and practices.

The purpose of Software Quality Assurance within any organization is to provide management with appropriate visibility into the processes being used by the software development group and the products they
build. Software Quality Assurance involves reviewing and auditing software products and activities to verify that they comply with the applicable procedures and standards and providing the software project team and other appropriate managers with the results of these reviews and audits.

To facilitate audit and verification of work, Organizations must establish Quality Control measures of which, Software Testing is paramount. Quality Control is a set of activities designed to evaluate a developed system and Software Testing is the process of executing a system with the intent of finding defects.

WHAT TO BRING

- Laptop: You will need a laptop in order to complete daily assignments and exercises.

WHAT TO EXPECT

- CD containing all Training Materials such as Course Syllabus, PowerPoint Slides and sample Certification Exams.

COURSE BOOKING

To book a place on the **SOFTWARE QUALITY ASSURANCE & TESTING BOOT CAMP** or to receive further information about Tezza Business Solutions' courses and services please contact us:

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