Fundamentals of Software Testing

Duration: 2 Days   Course Code: GK2515

Overview:

Reaching beyond the basics to maximize the impact of your testing process, you will leave this workshop with high-performance, high-yield software testing solutions.

The current global economic crisis is placing pressure on companies to do more with less. Coming under added pressure are functions often considered support, such as testing. Despite a clear and definitive understanding about its purpose and value, software testing is being asked to do more with less. Are your methods streamlined and versatile enough to meet this challenge in a productive way? Or will you simply choose to reduce scope and hope major issues are avoided?

The course is specifically designed to meet the challenges facing businesses today and to advance you to a higher level of responsible test behavior. This intense and interactive program takes you from test foundations, understanding and promoting present practices, to addressing the wide variety of testing situations that are common in today's business climate.

Information contained in this valuable program goes beyond introduction. You will practice, explore, and challenge each topic, establishing a base of ownership. In-class hands-on exercises and activities will powerfully reinforce what you learn, giving you the practice needed to successfully integrate your new skills immediately.

Target Audience:

Software engineers, testers of all types and levels, QA professionals, business analysts, project managers, IT specialists (security, capacity management, networking, etc.), business stakeholders, outsourcing staff (buyers & suppliers), QA managers, QA directors, test management, application development managers.

Objectives:

- A strategic plan to improve and enhance your testing process

- Flexible and fluid approach to testing under varying situations

- Reliably advocate an appropriate level of testing, predict quality results, and form a professional platform for Release 2 testing

- Gain confidence and provide subject matter leadership on the project/business team

- Develop a compelling reason for stakeholders to want to be engaged in the project

- Practice the art and science of writing test cases, including types (white box, black box, positive, negative, load testing, and beta testing)

- Regression testing, what it is, and why it needs to be done

- Testing in an Agile environment, writing test cases before/during development not after, getting acceptance testing from customers while gathering requirements

- How to speed up testing, increase code coverage, and run many test permutations with test automation

- Tie your test cases back to your requirements through traceability

Prerequisites:

- There are no prerequisites for this course.

Follow-on-Courses:
- Web Testing Core Fundamentals
- The Test Automation Workshop
- Planning Effective Software Testing

Content:

1. Software Testing Foundations ; Conventional Thinking

- Test Framework
- Orientation in Terms of Development Method
- Test Phases: Planning/Acquisition/Measurement
- Levels of Testing
- Candidates for Standardization
- Test Deliverables
- IEEE 829 Collective (Plans, Design, Scripts, Reporting)
- Automated Supported Resources and Application
- Forming Testing Benchmark Standards
- Test Planning
- Sources
- Master and Level-Specific Test Planning
- Purpose and Effective Formatting
- Elements
- Test Case Design
- Establishing Objectives
- Facilitating Requirement Quality Improvements
- Maintaining Traceability (calibration)
- Designing Effective Tests
- Communicating Test Results
- Progress Reporting
- Adapting to Project Changes
- Relating Meaningful Status

2. Test Planning Development Considerations

- Key Planning Considerations
- Resourcing
- Scope Definition
- Formalities
- Test Budgeting Methods
- Percentage-Based Methods
- Task-Driven Approach
- Critical Chain Buffering (CCB)
- Budget Adjustments
- Delivery-Driven Projects
- Synchronizing with Development Delivery Segments
- Functioning in Aggressive or Iterative Projects

3. Systematic Software Testing Practices

- High-Yield and Beneficial Methods
- Harvesting ; Qualifying Test Objectives
- Calibration Value (even in Agile environments)
- Leveraging Risk
- Test Methods ; Practices
- Developing Test Cases
- Effective Regression Testing
- Managing Effective Testware Repositories
- Full ; Partial Regression Testing
- Utilizing Exploratory and Ad Hoc Testware

5. Testing Challenges

- Testing Situation Challenges
- Routine Maintenance
- Emergency Repair
- Commercial Off The Shelf (COTS) Solutions
- Hybrids
- Managing Challenges that Jeopardize Committed Test Projects
- Test Urgency Management
- Test Resource Deployment/Redeployment
- Minimizing Negative Test Cadence

6. Right-Fitting Testing to Various Development Approaches

- Why One-Size Doesn't Fit All
- Method Specific Test Adaptations
- UML
- Rapid Development Models
- Iterative Development
- Outsourced Projects
- Agile Engineering
- Addressing Multi-Discipline Projects

7. Business Cultural Pressures and Conditions

- Understanding HOW BIG Change Is
- The CONE of Uncertainty
- Resourcing
- Flexible Staffing
- Adaptive Test Design
- Employing Testware Assets
- Delivery Variations ; Test Adjustments

8. Business Dynamics and Control Effects in Testing

- Business Value and Delivery Importance
- Proper Placement of Test Energy
- Utilizing and Adapting to Changing Baselines
- Engaging Stakeholders: Accessibility ; Engagement

9. Special Niche Testing Areas

- Sequencing
- Beyond Functional Validation Confirmation
- Testing Targets

10. Supporting World-Class Test Success

- (Test) Resource Development ; Utilization
- Tools and Related Current Practice Technologies (e.g. Wiki's, Collaborative Facilities.)
- Testing Methods and Established Techniques
- Dealing with Real-World Test Challenges

4. What is Testing Trying to Say?

- Effecting Positive Test Communication
- Low-Cost/High-Yield Test Reporting Radiators
- Valuable ; Useful Testing Metrics
- Using Test Information Effectively: Shaping Engineering ; Test Practices
- Drawing Interest through Participation
- Balancing Content with Form in Test Radiators
- Overall Visible Reporting Forms
- Understanding the Test Audience
- Removing Misguided Assumptions for Testing Services

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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