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## Planning Effective Software Testing

**Duration: 2 Days    Course Code: GK2516**

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### Overview:

Learn proven techniques for planning, estimating, and managing your software test plans to ensure your testing is done more effectively and within available time, budget, and resources.

A complete test plan has the same sort of information as any other good plan. It defines what will be done and what will not. It estimates resources that will be required and lists a schedule of activities. It establishes a basis for managing the testing activities, reporting status, and mitigating testing risks.

In this course, you will learn how to completely plan your test activities. You will walk through the test planning process, and you'll identify all of the inputs you will need and the things you should produce. You will receive guidance on how to plan for test case creation, defect tracking, status monitoring, and progress reporting.

This course will equip you with all the tools you need to create a test plan that will serve all your needs. In-class exercises help you identify and examine firsthand problems you may be experiencing. Through group effort, you and your peers will examine ways your department or company should be handling problems up front and how you can improve on your current procedures.

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### Target Audience:

Quality analysts, engineers, and managers, Testers and testing leads, Project managers and Software engineers.

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### Objectives:

- Produce better software products by truly understanding the entire test planning process and its critical effect on product success or failure
  - Different types of tests required to produce a market-worthy "Goldrelease"
  - Test cases and planning for their timely development and execution
  - Quickly obtain organizational commitment to your test plan
  - Use a thorough and powerful traceability matrix to guarantee the comprehensiveness of your testing
  - Accomplish risk planning and management for fail-safe testing activities
  - Track and manage the testing effort and take corrective action to avoid costly human or technical errors
  - Capture relevant stakeholder buy-in for your testing effort to eliminate delays, surprises, and unintended consequences
  - Integrate your test plans with other project plans to guarantee their relevance and effectiveness
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### Prerequisites:

- There are no prerequisites for this course.
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### Follow-on-Courses:

- Web Testing Core Fundamentals
  - The Test Automation Workshop
  - Agile & High Speed Testing Techniques
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## Content:

### **1. The Test Planning Process**

- How testing fits within the software development lifecycle
- Role and use of a test plan
- How the test plan relates to other plans (e.g. Project plan ; Quality plan)
- Inputs to test planning
- Outputs from test planning
- Perform peer reviews of the test plan
- Obtain organizational commitment to the test plan
- Track progress against the test plan, report status, and re-plan

### **2. Test Plan: Scope and Lifecycle**

- Requirements against which the testing will be done
- Define the goals and objectives for testing
- Boundaries : What will and will not be tested
- Phases and steps in the testing lifecycle
- How the testing lifecycle integrates with the project lifecycle
- Specific entry criteria: How you know when testing can begin
- Specific exit criteria: How you know when testing is complete
- Testing services that will be purchased rather than done in-house

### **3. Test Plan: Traceability Matrix**

- List every requirement and goal or objectives in one place
- List every test and test case in one place
- Map requirements to test cases
- Assure that every requirement has at least one test case
- Assure that every test case corresponds to at least one requirement
- Avoid overkill (or under emphasis) in testing
- Determine the impact of skipping test cases

### **4. Test Plan: Required Tests**

- Tests for functional requirements
- Tests for performance requirements
- Tests for security and safety requirements
- Tests for usability, maintainability, and other requirements
- Define objectives and success criteria for each test
- Document each test in the traceability matrix
- Use the traceability matrix to assure complete coverage

### **5. Test Plan: Test Cases**

- Test cases required to satisfy the objectives for each test
- Identify positive, negative, boundary and special test cases
- Define objectives and success criteria for each test case
- Document each test case in the traceability matrix
- Use the traceability matrix to assure complete coverage

### **6. Test Plan: Test Case Size Estimates**

- Test case description and instructions
- Input data and/or database records required by the test case
- Output data and/or database records the test case will produce
- Special resources required by the test case
- Execution time for the test case

### **7. Test Plan: Resources**

- Testing and test case development environment (e.g. hardware, operating systems, networks, software, databases)
- Specify any special systems (e.g. test automation, defect tracking)
- Enumerate knowledge and skills needed
- Plan for hiring, contracting, and training

### **8. Test Plan: Effort, Cost, Budget, and Schedule**

- Activities required to produce and execute all of the test cases, track defects, and retest and all of the other tasks
- associated with the testing lifecycle
- Estimate the effort required based on the size estimates and identified activities
- Identify all costs (e.g. labor, equipment, software contracted work)
- Establish a schedule for all testing-related activities
- Spread the costs across the schedule to produce a budget
- Validate budget and schedule against project constraints
- Resolve budget or schedule issues

### **9. Test Plan: Risks**

- Brainstorm a testing-related risk list
- Group and consolidate risks
- Quantify risk probability and impact
- Make risk tracking plans
- Make risk mitigation plans
- Make risk contingency plans

### **10. Test Plan: Management, Tracking, and Reporting**

- Measurements that will be used in tracking and managing the testing activities
- How the data and reports that are generated by the testing process will be stored, managed, and made available
- How often testing status will be checked and who will participate in status checking activities
- Triggers for corrective actions when the testing activities deviate from the plan
- What must happen when the test plan must be updated
- Identify all individuals and groups that have a stake in the testing activities
- How the stakeholders will be involved and kept informed about testing-related activities

### 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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