

This is a 2 day, practical hands-on seminar to cover the critical path of risk assessment and the steps involved in the early introduction of testing into the development process to help mitigate the risk. Students will learn and standardize on the terminology, processes, and challenges of incorporating risk management testing into real world applications. This workshop will allow developers to create software that will enhance maintainability and reduce the costs associated with modifications and enhancements. Attendees will gain a comprehensive working knowledge of testing and what it takes to design and conduct an effective test of the software, regardless of technology.

Course Objectives:

- Learn how to assess risk and incorporate test strategies for software rollouts.
- Identify the appropriate metrics to measure progress, performance and quality.
- Learn techniques to ensure that an information system protects and secures your data.

Audience: Programmers, system testers and managers looking to improve quality through risk management within the software development organization.

Prerequisites: Previous testing and development of software.

Number of Days: 2 days

1	<p>Introduction to Testing & QA Objectives / Observations Impediments, Opportunities, and Managing Responsibilities during Testing Testing Definitions Starting Testing Early vs. Late Start Testing Quality Assurance, Quality Control and IS Quality Tools/Steps/Suggestions Opportunities to Improve the Testing Process Comparing / Contrasting Development Life Cycles (Waterfall/Agile/TDD)</p>		<p>Assigning a Relative Cost to Testing The Principles of Installing a Risk Mitigation Process</p>
	<p>Risk Analysis Calculating Risk Understanding the Types of Risk Understanding How Risk Affects Our Projects Ascertaining the Value of a Test Assessing the Level of Risk</p>	3	<p>Risk Identification Identifying/Classifying Functional Specifications Defects Identifying/Classifying Design Defects Identifying/Classifying Coding Defects Identifying/Classifying Testing Defects Defining/Enforcing the Coding/Testing Standards</p>
2		4	<p>Identifying Areas of Risk during the Analysis Process Functional Specifications and Design Documents Preparing and Validating the Specifications Specification Problems/ Defect Classification Detailing the Scripts and Cases Implementing the Scripts into the Code Using some of the Common Tools to Assist with Testing</p>

- Unit vs System or Acceptance Testing
- Positive and Negative Testing
- Applying to use Cases for Testing
- Regulating the Change Control Process
- Mitigating the Risk during the Analysis process

5 Reducing Risk Through the Use of Test Methodologies

- Setting Test Objectives and Identifying Tests
- Testing Methodologies
- Computing/Applying Test Coverage
- BVT – Boundary Value Testing
- DBT – Decision based Testing
- Decision Tables
- State Machines
- Test Factor Analysis
- OATS – Orthogonal Array Testing System

6 Documenting Risk during the Test Planning Stage

- Unit Testing
- Creating and Auditing the Unit Test Plan
- Integration Testing and System Testing
- System / Acceptance Testing
- Crating and Auditing the System Test Plan
- Regression Testing
- Defining the Traceability Matrix
- Operability/ Usability Testing

7 Risk Analysis during the Test Execution and Evaluation Stage

- Exploring the Test Logs
- Test Logging Scenarios
- Exploring the Defect Tracking Report
- Retesting and Follow-up Procedures
- Understanding the Value of Root Cause Analysis