BLACKBIRD FOR TRAINING

Software Testing Foundation (Based on ISTQB v4.0 Framework)

27 September – 1 October 2027
Lyon (France)



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Introduction

Delivering reliable and high-quality software has become essential in today's technology-driven environment. As systems grow more complex, the need for structured, efficient, and well-designed testing processes becomes a critical element of successful software development. The Software Testing Foundation Based on ISTQB v4.0 Framework course provides a comprehensive understanding of testing fundamentals, principles, and best practices that align with global quality standards.

This 1-week program offers a balanced combination of theoretical concepts and practical application. It helps participants understand the role of testing in software development, explore essential test design techniques, manage defects efficiently, and apply testing strategies across different development models—including Agile, DevOps, and traditional lifecycles.

The course is ideal for professionals seeking to strengthen their testing capabilities, develop practical quality-assurance skills, and enhance their ability to contribute effectively to software projects. By the end of the program, participants will gain a solid foundation that supports structured thinking, accurate defect analysis, and quality-driven decision-making.

Course Objectives

By completing the Software Testing Foundation Based on ISTQB v4.0 Framework program, participants will be able to:

- Understand the fundamental concepts and terminology of software testing.
- Apply core testing principles across various development environments.
- Design test cases using black-box and white-box techniques.
- Plan and manage testing processes across different lifecycles, including Agile and DevOps.
- Detect, document, and communicate defects using standardized approaches.
- Apply scenario-based and risk-based testing strategies.
- Execute test activities and evaluate results to support quality improvement.
- Enhance software quality through practical, real-world testing skills.



Course Outlines

Day 1 - Foundations of Software Testing

- Introduction to software testing and its role in quality assurance.
- Understanding the value of testing in the software development life cycle.
- Core principles, goals, and responsibilities of testers.
- Essential terminology based on ISTQB v4.0.
- Types of testing: functional, non-functional, static, and dynamic.
- Practical exercise: identifying testing needs in real projects.

Day 2 - Software Development Models & Testing Approaches

- Overview of major SDLC models: Waterfall, V-Model, Agile, and DevOps.
- Testing in Agile and continuous integration environments.
- Testing levels: unit, integration, system, and acceptance.
- Test planning steps: estimation, scheduling, and prioritization.
- Aligning testing activities with project methodologies.
- Workshop: mapping test levels within a sample project.

Day 3 - Test Design Techniques

- Black-box techniques: equivalence partitioning, boundary value analysis, and decision tables.
- White-box techniques: statement coverage, branch coverage, and code walkthroughs.
- Applying risk-based testing to improve efficiency.
- Designing scenarios aligned with business requirements.
- Creating effective and structured test cases.
- Hands-on exercises using multiple design techniques.

Day 4 - Test Execution & Defect Management

- Executing tests and documenting results.
- Defect lifecycle: discovery, reporting, verification, closure.
- Writing clear and actionable defect reports.
- Understanding test documentation and quality metrics.
- Introduction to testing tools for automation and test management.
- Practical activity: running test cases and managing defects.



Day 5 - Advanced Practices & Practical Application

- Reviewing real-world challenges in software testing.
- Continuous testing in Agile and DevOps environments.
- Strengthening collaboration between QA, development, and business teams.
- Prioritizing tests based on risk assessment.
- Capstone project: full-cycle test planning, execution, and evaluation.
- Integrating testing insights into quality-driven decision-making.

Why Attend this Course: Wins & Losses!

- Gain a globally aligned foundation based on the ISTQB v4.0 framework.
- Understand how to design and execute effective test cases.
- Improve your ability to identify and document defects.
- Strengthen your contribution to software quality within any development team.
- Apply structured approaches suitable for real-world projects.
- Enhance collaboration between testing, development, and business stakeholders.
- Increase test accuracy and reduce project risks.
- Build confidence in evaluating and improving system quality.

Conclusion

The Software Testing Foundation Based on ISTQB v4.0 Framework course provides a comprehensive pathway for developing strong testing knowledge and practical skills. By understanding essential principles, applying structured design methodologies, and practicing effective defect management, participants become better equipped to support software quality in any developmental context.

Through in-depth modules, real-world exercises, and strategic application of testing principles, the course ensures a complete learning experience that enhances analytical thinking, strengthens decision-making, and builds the competence required to ensure software reliability. This foundation enables professionals to contribute to higher-quality systems, smoother project delivery, and more efficient development cycles.

