

KOENIG SOLUTIONS • COURSE OUTLINE

ISTQB Certified Tester Foundation with Comprehensive Testing

5 Days

40 HOURS

13

MODULES

105

TOPICS

2

HANDS-ON ACTIVITIES

LEARNING OBJECTIVES

- Explain testing principles, objectives and terminology
- Describe testing activities across the software development lifecycle
- Apply static testing and review processes to work products
- Apply black-box, white-box and experience-based test techniques
- Plan test activities, including risk management and estimation
- Identify tool support and risks of test automation
- Design acceptance criteria and acceptance tests using Gherkin
- Assess non-functional requirements such as usability and performance

13 Modules, 105 Topics

01

Fundamentals of Testing

WHAT IS TESTING?

- Test Objectives
- Testing and Debugging

WHY IS TESTING NECESSARY?

- Testing's Contributions to Success
- Testing and Quality Assurance (QA)
- Errors, Defects, Failures, and Root Causes
- Testing Principles

TEST ACTIVITIES, TESTWARE AND TEST ROLES

- Test Activities and Tasks
- Test Process in Context
- Testware
- Traceability between the Test Basis and Testware
- Roles in Testing

ESSENTIAL SKILLS AND GOOD PRACTICES IN TESTING

- Generic Skills Required for Testing
- Whole Team Approach
- Independence of Testing

02

Testing Throughout the Software Development Lifecycle

TESTING IN THE CONTEXT OF A SOFTWARE DEVELOPMENT LIFECYCLE

- Impact of the Software Development Lifecycle on Testing
- Software Development Lifecycle and Good Testing Practices
- Testing as a Driver for Software Development
- DevOps and Testing
- Shift-Left Approach
- Retrospectives and Process Improvement

TEST LEVELS AND TEST TYPES

- Test Levels
- Test Types
- Confirmation Testing and Regression Testing
- Maintenance Testing

03

Static Testing

STATIC TESTING BASICS

- Work Products Examinable by Static Testing
- Value of Static Testing
- Differences between Static Testing and Dynamic Testing

FEEDBACK AND REVIEW PROCESS

- Benefits of Early and Frequent Stakeholder Feedback
- Review Process Activities
- Roles and Responsibilities in Reviews
- Review Types
- Success Factors for Reviews

04

Test Analysis and Design

TOPICS

Test Techniques Overview

BLACK-BOX TEST TECHNIQUES

Equivalence Partitioning · Boundary Value Analysis · Decision Table Testing · State Transition Testing

WHITE-BOX TEST TECHNIQUES

Statement Testing and Statement Coverage · Branch Testing and Branch Coverage · The Value of White-box Testing

EXPERIENCE-BASED TEST TECHNIQUES

Error Guessing · Exploratory Testing · Checklist-Based Testing

COLLABORATION-BASED TEST APPROACHES

Collaborative User Story Writing · Acceptance Criteria · Acceptance Test-driven Development (ATDD)

05

Managing the Test Activities

TEST PLANNING

- Purpose and Content of a Test Plan
- Tester's Contribution to Iteration and Release Planning
- Entry Criteria and Exit Criteria
- Estimation Techniques
- Test Case Prioritization
- Test Pyramid
- Testing Quadrants

RISK MANAGEMENT

- Risk Definition and Risk Attributes
- Project Risks and Product Risks
- Product Risk Analysis
- Product Risk Control

Managing the Test Activities (continued)

TEST MONITORING, TEST CONTROL AND TEST COMPLETION

- Metrics used in Testing
- Purpose, Content and Audience for Test Reports
- Communicating the Status of Testing
- Configuration Management
- Defect Management

06

Test Tools

TOPICS

Tool Support for Testing · Benefits and Risks of Test Automation

07

Introduction and Foundations of User Acceptance Testing

FUNDAMENTAL RELATIONSHIPS

- Business Goals, Business Needs and Requirements
- Requirements / User Stories, Acceptance Criteria and Acceptance Tests
- The Importance of the Quality of the Requirements

BUSINESS ANALYSIS AND ACCEPTANCE TESTING

- Relationship between Business Analysis and Testing Activities
- Collaboration between Business Analysts and Testers
- How Acceptance Testing Can Drive the Development Process: ATDD and BDD

08

Acceptance Criteria, Acceptance Tests and Experience-Based Practices

TOPICS

- Writing Acceptance Criteria

DESIGNING ACCEPTANCE TESTS

- Test Techniques for Acceptance Testing
- Using the Gherkin Language to Write Test Cases

EXPERIENCE-BASED APPROACHES FOR ACCEPTANCE TESTING

- Exploratory Testing
- Beta Testing

09

Business Process and Business Rules Modelling

TOPICS

- Modelling Business Processes and Rules
- Deriving Acceptance Tests from Business Process/Rule Models

BUSINESS PROCESS MODELLING FOR ACCEPTANCE TESTING

- Good Practices for Business Process Modelling for Acceptance Testing
- Using Business Process Models for ATDD

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Acceptance Testing for Non-Functional Requirements

NON-FUNCTIONAL CHARACTERISTICS AND QUALITY IN USE

- Non-functional Quality Characteristics and Sub-characteristics
- Quality in Use

USABILITY AND USER EXPERIENCE

- UX Requirements Analysis
- Usability Testing

PERFORMANCE EFFICIENCY

- High-level Performance Acceptance Tests
- Acceptance Criteria for Performance Acceptance Tests
- Security

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Collaborative Acceptance Testing

TOPICS

Collaboration

ACTIVITIES

Defect Analysis · Reporting · QA Activities for Acceptance Testing

Tool Support

More into Acceptance Test Plans and Templates

TOPICS

- Designing an Acceptance Test Plan
- Prerequisites for Conducting UAT
- Expanding the Acceptance Criteria
- Checklist of Common Problems to Test
- Equivalence Classes and Boundary Values
- GUI Features that Always Need to be Tested
- **Constructing Use Cases:** One- and Two-column Use Case Formats
- User Acceptance Test Plan, Test Scenarios, Test Report Templates for Reference

PRACTICAL EXERCISES

- Practical Exercises

Test Cases in Detail

TOPICS

- | | |
|---|--|
| ■ Identification of Test Scenarios and Test Cases | ■ Capturing Results and Checking Correctness |
| ■ Differentiating Test Cases and Test Data | ■ Documentation, Training |
| ■ Positive and Negative Test Cases | ■ User's Defect Tracking and Metrics |

PRACTICAL EXERCISES

- Practical Exercises

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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Fly-Me-A-Trainer (FMAT)

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