

Body Of Knowledge

Total duration 1 1/2 month.

3 hrs a day

Manual Testing. (16 hrs)

Software Testing Concepts and Terminology

- What is Testing
- Purpose of Software Testing
- Approaches of Testing
- Objective of Testing
- Hurdles Of Testing
- Categories of Testing
- Defect Distribution
- Psychology of Tester
- Characteristics of tester
- Roll of a Tester

Software Development Life cycle

- Requirements Role and Importance
- BRS and SRS Documents
- Use Case Components
- Using Use Cases to find missing requirements
- Deriving Tests based on Use Cases
- Negative Testing based on Use Cases
- Requirement Validation
- Planning and Analysis
- Designing
- HLD and LLD Documents
- Coding
- Testing
- Black box testing
- White Box testing
- Release and Maintenance
- Sequential
- Iterative
- Incremental
- Waterfall Model
- Prototype Model
- Spiral Model
- RAD Model

V- Model

Static Testing

- Why do we need to inspect
- Benefits of inspection
- Why do inspection programs fail
- Inspection after or before unit testing
- Different forms of inspection
- Formal reviews
- Internal review cycle
- Walkthroughs
- Formal inspections
- Verification and validation

Testing Life Cycle

- Disciplined Software Testing Practices (Planning)
- Requirements are crucial for effective testing
- Test both functional and quality requirements
- Adopt Model-Based requirements
- Formally design your tests
- Perform both positive and negative testing
- Trace requirements to test components
- Trace test cases to database components
- Perform thorough regression testing
- Define your test process
- Select tools to support your process
- Perform both static and dynamic testing
- Test design basics
- Test design activities
- Deliverables of the test design phase
- Conditions and test cases
- System Test Planning
- Developing a test strategy
- Test documentation
- Components of a test plan
- A test plan template
- Test Case Design Techniques
- Strategies for generating test cases
- Black Box testing
- Equivalence Class Partitioning
- Boundary Value Analysis
- Cause-Effect Diagram
- Decision Tables
- Glass Box testing
- Statement/decision/condition coverage
- Path coverage
- Program complexity and basis path coverage

Bug Life Cycle

- Error, Defect and Bug
- Categories of Defects
- Defect Report Format
- Managing the test process
- Project Management
- Risk management
- Controlling the Testing Process
- Measures and Metrics
- Product
- Process

Testing Levels

- Unit testing
- Integration testing
- System testing
- Major areas of systems testing
- Usability and GUI testing
- GUI Navigation Diagrams
- User acceptance
- Regression testing

Quality

- Definition of Quality
- Quality Assurance
- Quality Control
- Cmm levels
- Sixsigma

Data Base fundamentals for testers (3hrs)

- Why should test professionals know Relational DB basics?
- SQL DML Basics
- Select statements for Testing
- SQL Basics - Select
- Order of clauses in SQL Select statement:
- SQL Basics – Insert, Update, Delete
- Combining Data from Multiple Tables
- Introduction to Joins
- Constraints between fields
- Primary Key Fields
- Cross Joins
- Using Subqueries

Introduction to C Language (2hrs)

- Data Types
- Variables
- Operators
- Conditional Statements
- Looping Statements
- Arrays
- Functions
- Exercise

Automation Testing (1hr)

- Introduction to Automation Testing
- Drawbacks in manual Testing
- Advantages of Automation Testing
- Limitations of Automation Testing
- Why to automate When to automate
- Selecting test cases for automation

WinRunner (15hrs)

Introduction to Win Runner

- Testing Process
- Recording Modes
- Context sensitive Recording
- Analog Recording
- GUI Map Editor
- GUI Map Configuration
- Virtual Object Wizard
- Data Driven testing
- Recovery Scenario Manager
- Checkpoints
- Synchronization
- Regular Expressions
- Transactions
- creating functions and calling
- Function generator
- Debugging
- Running Modes
- Batch Testing

QuickTest Professional (25hrs)

- Introduction to QTP
- Advantages of QTP over WR
- QTP Supporting Environments
- Features of QTP
- Testing Process

- Recording Modes
- Object Identification
- Object Repository
- Object spy
- Associate repository
- Repository manager
- Actions
- Creating the Actions
- Call to copy of actions
- Call to existing actions
- Parameterize the Action
- Splitting the Action
- Call to win runner
- Parameterization
- Input through Keyboard
- Notepad
- Excel Sheet
- Front end Objects
- Importing data from database
- Recovery Manager
- Batch Testing
- Regular Expressions
- Synchronization
- Checkpoints
- Output Values
- Step Generator
- Debugging
- Running Modes

- QTP Object Models
- QTP Automation Frameworks
- Linear frameworks
- Library framework
- Keyword driven framework
- Datadriven framework
- Hybrid framework
- Advantages of Descriptive Programming
- Descriptive Programming
- Creating Objects
- Working with Web Application
- Introduction to VB Script
- Variable
- Data Types
- String, Date, Array and Conversion functions
- Reading the Values from DB, External Excel Sheet and XML File
- Test Execution
- Test Report
- HTML Report

Quality Center (2hrs)

- Introduction to QC
- Advantage of using Test management tools
- Configuration Management

- Creating the Domain
- Creating the Project
- Adding the users
- Requirements
- Test Plan
- Test Lab
- Defects
- Manual Testing Using QC
- Automation Testing using QC

Silk Test (2hrs)

- Introduction to Silk Test
- Creating the Test Frame
- Creating the Test Plan
- Creating the Test Script
- Check Points
- Parameterization
- Data Driven Framework
- Recovery System
- Batch Testing
- Regular Expressions
- Synchronization

Load Runner (4hrs)

- Introduction to Performance Testing
- Manual Vs Automation Performance Testing
- Need for performance testing
- Introduction to Load Runner
- Load Runner Components
- Virtual user generator
- Controller
- Result analysis
- Record and Runtime settings
- Ramp Up and Ramp down
- Manual scenario
- Goal Oriented scenario
- Correlation
- parameterization
- Transactions
- Rendezvous Point