**Video Guide**

**Your Guide to Start a Software Testing Career**[**https://lnkd.in/dFueNN3V**](https://lnkd.in/dFueNN3V) **Introduction to Software Testing or Software QA**[**https://lnkd.in/d2kAEfWE**](https://lnkd.in/d2kAEfWE) **Manual Testing Crash Course for Software Testers**[**https://lnkd.in/dQ53au4S**](https://lnkd.in/dQ53au4S) **Foundations of Agile Software Testing**[**https://lnkd.in/ddywUrbD**](https://lnkd.in/ddywUrbD) **Git & GitHub for Automation Testing**[**https://lnkd.in/dW2Hfx42**](https://lnkd.in/dW2Hfx42) **Everything About Software Testing :**[**https://lnkd.in/dEfn5ivg**](https://lnkd.in/dEfn5ivg) **Software Testing Simple (Software Quality Assurance QA)**[**https://lnkd.in/d2q9KvWF**](https://lnkd.in/d2q9KvWF)

**Resources**

[**https://www.guru99.com/software-testing.html**](https://www.guru99.com/software-testing.html)

[**https://km33l1wn.hashnode.dev/**](https://km33l1wn.hashnode.dev/)

[**https://www.testbytes.net/resources/pdf/**](https://www.testbytes.net/resources/pdf/)

[**https://www.ministryoftesting.com/learn**](https://www.ministryoftesting.com/learn)

**Day 1.**

1. QA/QC/Testing
2. Human and errors
3. Testing VS Debugging
4. Software Quality
5. Software Requirement

**Exercise:**

* Research and outline the differences between Quality Assurance (QA), Quality Control (QC), and Testing.
* Write a short summary highlighting the importance of each in software development.

**Day 2.**

1. Characteristics of a Good Requirement
2. Objective of Testing and Correctness
3. Input Space of a Program
4. Testing Process
5. Psychology of Testing

**Exercise:**

* Define what constitutes a good software requirement.
* Discuss why understanding the objective of testing is crucial in software development.

**Day 3.**

1. General Principles of Testing
2. Test Metrics and its type
3. SDLC and its stages
4. Waterfall Model, Spiral Model, V Model, Agile Methodology

**Exercise:**

* Explain the Principles of Testing also the importance of Test Metrics.
* Compare and contrast the Waterfall Model, Spiral Model, V Model, and Agile Methodology.
* Map out the stages of the Software Development Life Cycle (SDLC).

**Day 4.**

1. Static Testing
2. Software Review
3. Types of Review
4. Dynamic Testing
5. Black Box Testing
6. Equivalence Class Partitioning

**Exercise:**

* Describe the differences between Static Testing and Dynamic Testing.
* Provide examples of each testing type and discuss their importance.

**Day 5.**

1. Boundary Value Analysis
2. State Transition Test
3. Cause Effect Graphing
4. Decision Table Technique
5. Use Case Testing

**Exercise:**

* Explain the concept of Black Box Testing.
* Detail how Equivalence Class Partitioning is used in Black Box Testing.

**Day 6.**

1. Advanced black box techniques
2. White Box Testing
3. Statement Coverage
4. Branch Coverage
5. Test of Conditions

**Exercise:**

* Define White Box Testing and its objectives.
* Discuss the importance of Statement Coverage in White Box Testing.

**Day 7.**

1. Path Coverage
2. Advanced White Box Techniques
3. Instrumentation and Tool Support
4. Gray Box Testing
5. Intuitive and Experience Based Testing

**Exercise:**

* Define White Box Testing and its objectives.
* Discuss the importance of Statement Coverage in White Box Testing.
* Why is Gray Box testing different than white and Black Box Testing.
* Explain the concept of Path Coverage in testing.
* Describe the characteristics of Gray Box Testing.

**Day 8.**

* **Verification & Validation**
  + Verification
    1. Inspection
    2. Walkthrough
    3. Reviews
  + Validation
    1. Unit
    2. Integration
    3. Functional
    4. System
    5. Acceptance
    6. Alpha and Beta testing
  + Difference between Verification and Validation

**Exercise**

* Differentiate between Verification and Validation.
* Discuss various methods of Verification and Validation.

**Day 9 and Day 10**

* **Type, Methodology and Levels of Testing**
  + Levels
    1. Unit
    2. Integration
    3. Functional
    4. System
    5. Acceptance
    6. Alpha and Beta Testing
  + Types
    1. Usability
    2. Performance
    3. Load
    4. Stress
    5. Security
    6. Volume Testing
    7. Sanity Testing
    8. Smoke Testing
    9. Regression Testing
    10. Mutation Testing
  + Methodology
    1. Functional
    2. Non-Functional

**Exercise**

* **Outline different levels and types of testing.**
* **Discuss the methodologies used in software testing.**

**Day 11.**

**Test Cases**

* Introduction
* Test Scenarios
* Test Case Design and Template
* Types of Test Cases
* Difference between Test Scenario and Test Case
* Creating Test Cases for Sample Application

**Exercise**

* Create test cases for a sample application focusing on various scenarios.   
  **Link**: <https://www.saucedemo.com/>
* Differentiate between Test Scenarios and Test Cases.

**Day 12.**

**Test Management and Test Strategy**

* Test Plan
* Test Criteria
* Entry Criteria
* Suspend Criteria
* Resume Criteria
* Exit Criteria
* Test Strategy and Types
* Test Activity Management
* Incident Management
* Configuration Management

**Exercise**

* Develop a test plan for a hypothetical project. **Link**: <https://www.saucedemo.com/>
* Discuss the importance of Incident Management and Configuration Management in test management.

**Day 13.**

**Bug Reporting and Tracking**

* Error, Defect, Bug and CR
* Bug Reporting Approach
* Bug Reporting Steps
* Severity and Priority
* Bug Life Cycle

**Exercise**

* Practice bug reporting by identifying and documenting bugs in a sample application. **Link**: <https://www.saucedemo.com/>
* Understand the Bug Life Cycle and prioritize bugs based on Severity and Priority.

**Day 14 to 18.**

### API Testing Using Postman

* Postman Basics
* Introduction to API
* REST and SOAP
* API Testing with Postman
* Download and Install Postman
* Postman Navigation
* Create New Request in Postman
* GET Request in Postman
* Response in Postman
* Request Parameters in Postman
* POST Request using Postman
* Basic Authentication in Postman
* Environment Variables in Postman
* Collections In Postman
* Test and Collection Runner in Postman
* Monitor Collections in Postman
* Workflows in Postman
* Pre Request Script in Postman

**Learning Resources:** <https://www.youtube.com/watch?v=VywxIQ2ZXw4>

**Exercise:** [**https://petstore3.swagger.io/**](https://petstore3.swagger.io/)

**Exercise:** [**https://reqres.in/**](https://reqres.in/)

**Day 19 to 23.**

### Performance testing Core concepts

* JMeter Introduction
* Record and Replay
* Thread Group
* Samplers
* Config Elements
* Controllers
* Timers
* Assertions
* Listeners
* Parameterization
* Correlation
* JMeter Plugins
* Functions
* Non-GUI Mode Test Execution and Distributed Mode
* Dashboard Reporting

**Learning Resource:** <https://www.youtube.com/watch?v=SoW2pBak1_Q>

**Exercise:** <https://www.saucedemo.com/>

**Day 24 to Day 30.**

**Using Concepts to Test a Website**

**Exercise:** [**https://github.com/KarkiMilan/Stock-Management-System**](https://github.com/KarkiMilan/Stock-Management-System)

**Exercise:** [**https://demoqa.com/books**](https://demoqa.com/books)

**Day 30 to Day 45.**