MANUAL TESTING COURSE CONTENT

Module 1: Software Testing Introduction

In this module you learn about Importance of testing. Why Testers need industry, software program/application/product: meets the business and technical requirements that guided its design and development works as expected.

- What is testing?
- Importance of testing
- Roles and Responsibilities
- Principles of software testing
- What is Quality?
- How much testing is enough?
- Differences between Manual and Automation Testing.

Module 2: Software Development Life Cycle

In this module you learn about development procedure .SDLC stands for Software development life cycle. It is a process that describes how to develop, design and maintain the software project ensuring that all the functional & user requirement, goals and objective are met.

1. **SDLC Phases**
    - Requirements Phase.
    - Analysis Phase.
    - Design phase.
    - Coding Phase.
    - Testing phase.
    - Delivery and Maintenance Phase.

2. **SDLC Models**
    - Waterfall Model.
    - V Model
    - Agile Model.
    - Prototype Model.
    - Spiral Model.

Module 3: Software Testing Methodologies

In this module you learn about deferent types of software testing. Software Testing Methodology is defined as strategies and testing types used to certify that the application under test meets client expectations.

- White Box Testing.
- Black Box Testing.
- Grey Box Testing.

Module 4: Test Case Design Techniques

In this module you learn design test cases in such a way that we get the maximum coverage using an optimal set of Test cases. Focus on highlighting the various Methods and Techniques in designing test cases for both Black Box Testing and White Box testing.

Static Techniques:

- Informal Reviews
- Walkthroughs
- Technical Reviews
- Inspection

Dynamic Techniques:

Structural Techniques or White Box Techniques

- Statement Coverage Testing
- Branch Coverage Testing
- Path Coverage Testing
- Conditional Coverage Testing
- Loop Coverage Testing

Black Box Techniques

- Boundary Value Analysis
- Equivalence Class Partition
- State Transition Technique
- Decision Table
- Use Case Testing

Experienced Based Techniques:

- Error guessing
- Exploratory testing

Module 5: Levels of Testing

In this module you learn about levels of testing are frequently grouped by where they are added in the software development process, or by the level of specificity of the test.

1. **Functional Testing**
    - Unit Testing
    - Integration Testing
    - System Testing
    - Beta/User Acceptance Testing.
    - Sanity/Smoke Testing.
    - Regression Test.
    - Retest.
2. **Non Functional Testing**
    - Performance Testing.
    - Load Testing.
    - Stress Testing.
    - Compatibility Testing.
    - Security Testing.
    - Cookies Testing.
    - Session Testing.
    - Recovery Testing.
    - Installation Testing.
    - Adhoc Testing.
    - Risk Based Testing.
    - Compliance Testing.

Module 6: Software Testing Life Cycle

In this module learn about in detail description of Test Life Cycle, importance of Test Plan roles and responsibilities of Test Manager, Test Lead, Test Engineer,

1. **Requirements Analysis/Design**
    - Understand the requirements
    - Prepare Traceability Matrix

2. **Test Planning**
    - Object.
    - Scope of Testing.
    - Schedule.
    - Approach.
    - Roles &Responsibilities.
    - Assumptions.
    - Risks &Mitigations.
    - Entry & Exit Criteria.
    - Test Automation.
    - Deliverables.
3. **Test Cases Design**
    - Write Test cases
    - Review Test cases
    - Test Cases Template
    - Types of Test Cases
    - Difference between Test Scenarios and Test Cases.
4. **Test Environment setup**
    - Understand the SRS
    - Hardware and software requirements
    - Test Data
5. **Test Execution**
    - Execute test cases
    - Defect Tracking and Reporting
        - Types of Bugs.
        - Identifying the Bugs.
        - Bug/Defect Life Cycle.
        - Reporting the Bugs.
        - Severity and priority
6. **Test Closure**
    - Criteria for test closure
    - Test summary report

Module 7: QA & QC & Testing

In this module you learn about QA & QC and How to log bugs in Project management tool, how to give severity, priority to bugs.

- What is Quality Assurance?
- What is Quality Control?
- Differences of QA & QC &Testing

Test Management with JIRA or TFS

- JIRA Introduction
- How to Install JIRA
- JIRA Features
- Creating Scrum Project in JIRA
- Adding Users to our JIRA Account
- JIRA Issues
- Workflow for a Project
- Creating Product backlog Tn JIRA
- Creating EPICS in JIRA
- Creating User Stories in JIRA
- Starting Sprint
- Writing Test Cases in JIRA
- Executing Test Cases from JIRA
- Adding Bugs to the JIRA Project
- Attaching screenshots of defects in JIRA
- Defect Creation/Tracking in JIRA

Agile Testing:

- What is Agile Testing?
- Scrum Introduction
- Getting Agile with Scrum
- Scrum Approach
- Release Planning
- Sprint Planning
- Product backlog
- Concept of Epics
- Writing Epics — Examples
- Concept of User Stories
- Writing User Stories- Examples
- Defining Tasks
- Starting Sprint
- Monitoring Sprint status
- Completing Sprint
- The Daily Scrum Meeting
- Sprint Review Meeting
- Sprint Retrospection

Will discuss most of the above concepts involving in Real-time Project