Manual Testing

Manual Testing Objectives:

- Understanding that what is Software testing?
- Understanding the Software development process.
- Understanding various Software development life cycle models.
- Understanding the Role of Software testing phase in Software development
- Understanding various Software test types.
- Understanding various Software test levels.
- Understanding Software test design techniques.
- Understanding Software test life cycle
- Understanding how to create & execute a test plan
- Understanding how to document test cases
- Understanding how to execute test cases and find defects.
- Tracking defects, confirmation testing, and closing the defects.
- Documenting of the test reports and test enclosure activities.

1) Software Testing Introduction

> What is Software testing?
> Importance of Software testing
> How to conduct Software testing.
> Basic terminology of Software testing
> Manual Testing Process
> Difference between Manual and Automated Testing
> Software testing Roles and Responsibilities

2) Software Development Life Cycle and various SDLC Models

Phases of Software Development Life Cycle

i) Requirements Phase.
ii) Analysis Phase.
iii) Design phase.
iv) Coding Phase.

v) Testing phase.
vi) Release and Maintenance Phase.

Software Development Life Cycle Models

i) Waterfall Model.
ii) V Model
iii) Agile Model.
etc..

3) Test Case Design Techniques

Static Techniques:

i) Informal Reviews
ii) Walkthroughs
iii) Technical Reviews
iv) Inspection

Dynamic Techniques:

a) Black-box Test Techniques

i) Equivalence Partitioning
ii) Boundary Value Analysis
iii) Decision Table Testing
iv) State Transition Testing
v) Use Case Testing

b) Experience-based Test Techniques

i) Error Guessing
ii) Exploratory Testing
iii) Checklist-based Testing

4) Levels and Types of Software Testing

Four Levels of Testing

i) Unit Testing
ii) Integration Testing
iii) System Testing
iv) Acceptance Testing

5) Types of Testing

i) Functional Testing

Unit Testing
Integration Testing
System Testing
User Acceptance Testing.
Sanity/Smoke Testing.
Re & Regression Testing.
etc…

ii) Non-Functional Testing

Performance Testing. (Load, Stress, Spike and Endurance Testing)
Usability Testing
Compatibility Testing
Reliability Testing
Security Testing
Cookies Testing
Etc…

6) Software Testing Life Cycle

i) Requirements Analysis/Design

Understand the requirements
Prepare Traceability Matrix

ii) Test Planning

iii) Test Case Design

Derive Test Scenarios
Document Test cases
Collect Test data
Review Test cases

iv) Test Environment Setup

v) Test Execution

vi) Test Cycle Closure

7) Software Test Documents

We create & use test documents before, during, and after Software Testing.

1. **Test Policy**
2. **Test Strategy**
3. **System Test Plan**
4. **Requirements Traceability Matrix**
5. **Test Scenario**
6. **Test Case**
7. **Test Data**
8. **Test Metrics**
9. **Defect Report**
10. **Test Summary Report**

8) Defect life cycle

9) TestCase Development

10) TestCase Management tool (Test Rail)

11) Jira