Manual Testing Course Content

Chapter 1 : Introduction

- ➢ Software Testing introduction
- ➢ Verification and Validation
- ➢ Application types
  - • Console Desktop
  - • Windows application or Desktop Application – Standalone and Client/Server applications
  - • Web application – 3- tier or N-tier application
  - • Web Portals
  - • Mobile Applications.
- ➢ Difference between desktop application and web applications
- ➢ Web application vs Web Portals
- ➢ Mobile application testing and its introduction

Chapter 2: SDLC Models

- ➢ Need of SDLC and its Phases introduction
- ➢ Waterfall Model
- ➢ Prototype Model
- ➢ Spiral Model
- ➢ V- Model
- ➢ Analysis of traditional sdlc model and current model
- ➢ Incremental Model – Agile and Scrum Framework
- ➢ Agile Manifesto
- ➢ Importance of Agile and its different framework
- ➢ Scrum roles and responsibilities
- ➢ Scrum user story splitting and estimation techniques
- ➢ Pros and cons of Scrum framework

Chapter 3 : STLC– Software Testing Life Cycle

- ➢ Difference between Use cases, Test cases and Scenarios
- ➢ Difference between Test plan and Strategy
- ➢ How to prepare test report?

- ➢ Concept about Error, bug, defect and failure.
- ➢ Preparing Bug report
- ➢ Bug life Cycle
- ➢ Entry and Exit Criteria
- ➢ Priority and severity
- ➢ Introduction to test management tool
- ➢ Exercises with test management tools like bug tracker

Chapter 4: Jira – Project Management Tool

- ➢ Creating Project
- ➢ Adding User stories to Back log
- ➢ Creating Sprint
- ➢ Practical execution of all sprint activities and following ceremonies
- ➢ Creating defects in Jira and following bug life cycle
- ➢ Reports in Burn down charts

Chapter 5 : Principles of testing

- ➢ Seven Principles of testing - Importance
- ➢ Real time examples for below principles
  - • Exhaustive testing is impossible
  - • Defect Clustering
  - • Pesticide Paradox
  - • None of the application is bug free
  - • Testing is context dependent of the application
  - • Intension of application is to identify flaws in an application
  - • Importance of avoiding late testing

Chapter 6: Types of testing

- ➢ Static and Dynamic testing
- ➢ Functional and Non Functional testing

Chapter 7 : Non functional testing

- ➢ Black Box testing and its types –
  - • BVA (Boundary Value Analysis)
  - • Equivalence partitioning,
  - • Decision tables
  - • Graph based methods – State transition diagram
  - • All Pairs testing
- ➢ White box testing and its nature
- ➢ Statement coverage
- ➢ Path coverage
- ➢ Branch coverage

- How to calculate the complexity of the program
- SIT - System Integration testing
- UAT – User Acceptance testing
- Adhoc testing
- Regression testing
- Progression testing
- Alpha and beta testing
- Positive and Negative testing
- Integration – Big Bang approach and Incremental approach
- Top Down and Bottom up integration approach
- Importance of Integration testing and its test case preparation

Chapter 8 : Non functional testing

- Importance of Non-functional testing
- Types of Non-Functional testing

    - Performance testing (Stress and Load)
    - Volume
    - Security
    - Compatibility
    - Configuration testing
    - Comparison
    - Scalability

- Requirement traceability matrix – Requirement mapping
- Test Coverage or Requirement Mapping