

TECHGENX

Manual Testing

Please Note: All below course content will be covered in practical scenarios and regular assignments will be shared. All sessions will be recorded and shared with student for future reference (free of cost). Along with below course.

- **Fundamentals of Software Testing**

- What is Software
- What is Software Testing
- What is Quality
- What is Product
- What is Project

- **Fundamentals of Software Testing**

- What are the fundamentals of Software testing
- Why software Testing is required
- How much testing is possible?

- **SDLC (Software Development Life Cycle)**

- Initial Phase of SDLC
 - Contact Customer
 - Planning
 - Requirement
- Design phase of SDLC
 - Design document as per requirement
 - Development of Software as per design
- Execution Phase of SDLC
 - Testing of developed software
 - Implementation of developed software
- Maintenance phase of SDLC
 - Enhancement of existing software
 - Re-Engineering of Developed Software

Test Deliverables

- Documents supporting Software testing deliverables
- Objectives of Test Plan creation
- What Is Test Case
- Format of writing Test Cases
- Submission of Defect Report
- **Basic Testing Terminology**
 - What is a Bug
 - What is Defect
 - What is an Error

- What is a Failure
- Difference between Failure and Error
- Difference between Bug and Defect
- What is Verification and where do we use Verification
- What is Validation and where do we use validation
- Difference between Verification and Validation
- What is Authorization and where do we use Authorization
- What is Authentication and where do we use Authentication
- Difference between Authorization and Authentication

▪ **Testing Technique**

- What is Black Box testing
- Who all perform Black box testing
- What is White Box testing
- Who all perform White Box testing
- What is Grey box testing
- Who all perform Grey box testing

▪ **STLC (Software Testing Life Cycle)**

- Initial Phase of STLC
- Analysis of initial phase of requirement
- Preparing Test Plan
- Environmental Set up
- Design Phase of STLC
- Designing of Test Cases
- Designing of Automation framework
- Execution Phase of STLC
- Test Case Execution
- Executing Automation scripts
- Reporting phase of STLC
- Tracking of Bugs
- Reporting of Bugs
- Maintenance phase of STLC
- Retesting and Regression testing of product
- Closure report of STLC

▪ **Assignments and Interview Preparation**

- Daily Assignments and practical session
- Daily Mock Interview session and Interview Preparation

Skill-Set 2: Advance – Software Testing

▪ **Factors of Quality**

- What is Completeness and what is the importance of it in IT industry
- What is Correctness and how do we measure correctness of software
- What is Usability and how to measure usability of software
- What is Portability and how we can test portability of given software
- What is Maintainability and how we measure the same of a given software
- What is effectiveness and how we can develop an effective software
- What is efficiency and difference between effectiveness and efficiency
- What is durability and how to measure it

- What is Reliability and how we can make a reliable software
- What is security and what all measure of it

▪ **Common terminology**

- RFP VS RFI
- BRS Vs SRS
- Cost of Bug
- How do we calculate a Cost of Bug
- What is SCAMPI
- Quality Analysis
- Quality Control
- Ad-Hoc Testing
- Exploratory Testing
- Authorization
- Authentication
- Smoke Testing
- Sanity Testing
- Monkey Testing
- Gorilla Testing

▪ **Testing Methodologies**

- Waterfall Model
- Prototype Model
- Incremental Model
- Spiral Model
- V Model
- W/Double V Model
- Agile Methodology and Principles of Agile Methodology

▪ **ISO VS CMMI**

- What is ISO
- What are the Quality standards of ISO
- What is CMMI model
- What are all levels of CMMI model
- Importance of CMMI
- Discussion on 25 Key Process Areas of CMMI model

▪ **Use Case Vs Test Scenarios**

- What is Use Case
- Who design Use Case
- What is Test Scenarios
- What factors to be consider while designing Test Scenarios
- Who design Test Scenarios

▪ **Verification as a process**

- What is Verification process
- What are principles of Verification
- All Verification process including:
 - Inspection

- Walkthrough
- Reviews

▪ **Validation as a process**

- What is Validation
- When do we perform Validation
- All principles of Validation

▪ **Types of Bug**

- What is Priority and types of Priority
- What is Severity and types of Severity

▪ **Types of Black Box Testing**

- Boundary Value Analysis and where do we use it
- Equivalence Partitioning and where it is actually used
- Cause effect Graph
- Error Guessing and who all perform Error Guessing
- State Transition Testing

▪ **Types of White Box testing**

- What is Structured based testing
- What is Condition Coverage
- What is Basis Path testing
- What is Branch Testing

▪ **Testing Levels**

- Unit Testing and who all perform Unit Testing
- Integration Testing and when do we perform Integration Testing
- System Testing and when do we need to execute System Testing
- User Acceptance Testing and who all participate in UAT

▪ **Categories of Testing**

- GUI level testing
- Functional Testing of application
- Validation testing process
- Security Testing of application/software

▪ **Functional Testing**

- Types of Functional Testing
- Requirement Based Testing
- Business Process bases testing

▪ **Non-functional Testing**

- What all includes in Non-functional Testing
- Types of Non-functional Testing
- Documentation testing
- Usability testing
- Volume Testing
- Endurance Testing

- Load Testing
- Stress testing
- Scalability testing
- Recovery Testing
- Maintainability testing
- Portability Testing
- Baseline Testing
- Localization Testing
- Security Testing

▪ **Project Level Document**

- What all we include in Project level Document
- What is Project Type and how to differentiate that
- What is Application Type and how to measure the behavior of Application
- What is Responsibility Matrix and who design it
- How to design Requirement Traceability
 - Factors of Requirement Traceability
 - Backward Traceability
 - Forward Traceability
- Creating a Test Plan and What all documents includes in a Test Plan
- Designing a format of Test Cases and what all factors need to be consider in Test Case Writing
- What is Suspension Criteria and Resumption Criteria

▪ **Bug Life Cycle**

- What is Bug Life Cycle
- How it is designed
- What all are status of Bug

▪ **Defect Clustering Vs Pesticide Paradox**

- Defect Clustering and factors use to measure defect clustering
- Pesticide Paradox and when do we need to perform Pesticide Paradox

▪ **Skill-Set 3: Mobile & API Testing**

▪ **Mobile Testing**

- What all factors to be determine while performing Mobile Testing

▪ **Types of Mobile Testing**

- Functional Testing
- Performance Testing
- Memory Leakage Testing
- Interrupt Testing
- Usability Testing
- Installation Testing
- Operational Testing
- Security Testing

- **Tools to be used in Mobile Application Testing**
 - Charles Proxy
 - Fiddler Proxy
- **API Testing**
 - What is an API
 - What is Web Services
 - What is Application Server
 - What is Web Server
 - What is Restfull Method and who had design it
- **Methods of Restful API**
 - What is POST method and when to use POST method
 - What is PUT method and when developer use PUT method
 - What is GET method and when do we use Get Method
 - What is DELETE method and when do we use Delete Method
- **Tools for API Testing**
 - Advanced Rest provided by Google as plug-in.
 - Postman and how to integrate Postman with Web Browser