Session 1.5

Training walkthrough
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What do we cover in 200 hours?

AN INITIATIVE BY

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Introduction

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What will be covered in this session?

- A Business Organization and various functions
- Programs and Projects – from business / users' perspective
- SDLC – V Process model – 2 hours
- Importance of Testing, Quality, and the critical role of a Tester
- Types of Testing – a quick overview

Part 4: Hands-on Sessions (100 h)

- Use cases and traceability
- Test data and scenarios
- Day to day work
- Defect prevention, RCA and other value add aspects

Part 3: Automated Testing (50 h)

- Selenium Overview
- Web Driver, Locators
- Elements, and more
- Automation and Runs

Part 2: Concepts of Testing (30 h)

- Types of Testing
- Common Testing Tools
- Manual Testing – Test cases, Data, Scenarios etc.
- Case-studies and Scenarios

Part 1: The Basics (20 hours)

- Organization& its working
- SDLC & STLC Overview
- Basics of OOPS, Database Java essentials for Testing
- Overview on few Testing roles Job Descriptions

Let's go!!!

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Learning Objective Recap

At the end of this training, participants will be able to get an idea on–

1. Selenium Test Environment set-up that covers installation of Java, IDE and Selenium executables including Test frameworks' executables
2. Various Types of Testing – and when do we use Automated testing?
3. Basics of SDLC – types of projects, technologies, and various architectures
4. Essential concepts of Java and Object-oriented programming for Test automation
5. Accessing different web elements of a web page using Java in Selenium
6. Overview of Testing frameworks with specific focus on TestNG
7. Data-driven Testing using Microsoft Excel and Apache POI
8. Basics of Test Reporting and reports through Extent Reports
9. The Integrated Approach in 'big testing' projects - Marven, Jenkins, Git, and Apache POI

Training Module wise Details

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BASICS

- What is an Organization and how an IT Project starts and gets executed in an Organization?
- What are the various types of Projects, Technologies, and Architectures?
- SDLC and STLC Life Cycles
- Environment Setup and prerequisites (setup as well as the knowledge) to be a successful Tester – particularly in automation

TESTING CONCEPTS

- Projects and Project phases
- Critical project documents in typical 'SDLC' project
- Walkthrough of the applications that we use for testing during this training
- Test cases and Test data preparation (Manual Testing)
- Standard checklists and templates for Testing
- Hands-on Exercises

JAVA & OOPs

- Basics – language, compile, link, and build
- Variables and data types
- Concepts of Object oriented
- Operators & Control flow
- Exceptions and Debugging
- Basic SQL and RDBS
- JDBC, API and External Data concepts
- Projects - packages and build
- Hands-on Exercises

SELENIUM

- Selenium WebDriver
- DOM & Locator Techniques
- Tools to identify Objects
- Xpath and CSS Selectors
- Basics of Events and Alerts
- Data-driven Testing
- Testing Frameworks – TestING focused
- Extent Reports - capturing, formatting, and logging.

OTHER TOOL

- Git - Version Controlling and Importance
- Marven Projects and Dependencies Management
- Workflow Automation using Jenkins
- Behavior driven Development

Module 1 - Basics

- What is an Organization and how an IT Project starts and gets executed in an Organization?
- What are the various types of Projects, Technologies, and Architectures?
- SDLC and STLC Life Cycles
- Environment Setup and prerequisites (setup as well as the knowledge) to be a successful Tester – particularly in automation

- There are no pre-requisites to attend this segment
- This section mainly focuses to get an overview of practical aspects of Project execution such as business requirement, budget allocation, project teams and structure, how the technology and approach get finalized?
- After getting an overview on Projects, we will try to understand Development Life Cycle and Test Life Cycle in IT.
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- By the time, this session ends – you will have fairly good idea on projects within an organization. Also, you will be ready to setup Selenium based test environment for browser based testing projects.

Module 2 – Testing Concepts

- Projects and Project phases
- Critical project documents in typical 'SDLC' project
- Walkthrough of the applications that we use for testing during this training
- Test cases and Test data preparation (Manual Testing)
- Standard checklists and templates for Testing
- Hands-on Exercises

- V-Process based Project execution – starting from requirements to final deployment will be the initial session.
- After that, we briefly go over critical SDLC documents that matter for 'quality' such as SRS, SDD, UTC, UTR, ATP, ATR, and various checklists and templates
- You will get a hands-on experience with Test cases and Test data preparation for two web-based projects

- By the time this session ends, you will be getting pragmatic insight into Tester's life. The hands-on exercises and quizzes enable you to get the best possible learning experience. So- don't miss these!

Module 3 – Java and Object Oriented

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- Basics – language, compile, link, and build
- Variables and data types
- Concepts of Object oriented
- Operators & Control flow
- Exceptions and Debugging
- Basic SQL and RDBS
- JDBC, API and External Data concepts
- Projects - packages and build
- Hands-on Exercises

- This section starts with basic fundamentals of a language – keywords, syntax and semantic rules of a language.
- Overview of Java and key segments of Java language – variables, loops, collections, controls etc. will be covered briefly. This section is meant only to refresh your Java skills rather teaching from scratch. So, additional learning is essential to get the best out of theses sessions.

- By the time this session ends, you will be learning the basic required Java concepts to write Automation test scripts by using Java and Selenium.

Module 4 – Selenium

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- Selenium WebDriver
- DOM & Locator Techniques
- Tools to identify Objects
- Xpath and CSS Selectors
- Basics of Events and Alerts
- Data-driven Testing
- Testing Frameworks – TestING focused
- Extent Reports - capturing, formatting, and logging.

- This is the core section of the training that is allocated almost 50% of the time.
- It is essential to complete the class works, home works, and additional learning on daily basis – without any delays. Not missing / skipping any session is also a critical factor.

- By the time, this session ends – you will have good knowledge on Selenium WebDriver, Web Elements, Testing Frameworks and Test Reports' Generation.

Module 5 – Important Tools

- Git - Version Controlling and Importance
- Marven Projects and Dependencies Management
- Workflow Automation using Jenkins
- Behavior driven Development

- This section focuses on the essential aspects of 'practical projects' – the tools that are out side of normal 'Selenium Framework', but fall under essential tools for a successful project execution are covered in this section.

- This section will not go in 'deep'. The topics covered in this section will give an overview of the integrated approach. You can plan additional learning based on your specific project requirements with your instructors' help.

Session Recap

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