Section 1:
Introduction & Basics

Session 1.1
An Introduction to
Selenium

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Ice-Breaking and Context Setting

At the end of this training session (200 hours), participants will be able to get an idea on–

- Basics of IT Industry and How the Projects work
- SDLC Projects and vital role of Testing
- Testing using Java – by learning basic Java (no specific prerequisite expected)
- Test Automation using Selenium and scripts written in Java
- Other required tools such as Git, Jenkins etc.

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Introduction to Selenium

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

- Selenium and various components of Selenium
- Selenium drivers and the versatility each driver brings
- https://www.selenium.dev/ - website overview and documentation
- Steps at high-level to automate a web-based application
- Recap and Session specific Q&A

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How do we work together – next 200 hours

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

- Detailed walkthrough of the course
- Ready reckoner cheat sheets to revise the course in a short period.
- Recap and Session specific Q&A

Organization and the Projects

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

- Organization Structures of IT and Business units
- Importance of Quality from Organization perspective
- Do's and Don'ts for who desired to be a tester.
- Recap and Session specific Q&A

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Applications and Different Architectures

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

- Application Architectures and Architecture design approaches based on the requirements of the project
- Importance of database in web application development and various databases used in application development.
- Components to be tested to ensure the application is bug free.
- Recap and Session specific Q&A

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SSAD and OOAD Overview

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

- Structural System Analysis and Object Oriented Analysis approaches in web development
- Understanding of Object oriented programming at high level
- Vital roles of OOPs features such as abstraction, inheritance, polymorphism and encapsulation.
- Different ways to create objects
- Recap and Session specific Q&A

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Basics of Web Architecture, Design Pattern with specific emphasis on MVC

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

- Detailed walkthrough of layered architecture and specific roles and responsibilities within the application
- The paradigm shift with MVC - the key advantages.
- Cloud and microservices with reference to distributed architecture and how do they work
- Recap and Session specific Q&A

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Basics of Web Technology

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

- Distributed systems
- How does the Internetwork
- Browser's high level structure
- HTML Parser with DOM methods and CSS selector.
- Selenium Approach to handle DOM
- Recap and Session specific Q&A

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Quiz and Recap

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

- Organization and functionality of each department
- Technology / methodology / architecture to be preferred based on the project requirement
- Realignment according to the evolving technology
- Recap and Session specific Q&A

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Required IDEs and Installation Steps

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

- Step by step installation procedures and pre-requisites for Java, Eclipse and Selenium Web Driver software's
- Recap and Session specific Q&A

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Basic Scripting Exercises

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

- Logical implementation and algorithm implementation approach

Language independent -pseudo code and algorithm to emphasize on increments, iterations, and break conditions. Simple cron and shell subroutines to 'set the right context'.

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Module Recap

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

Quiz, Discussion and Overview on all the topics

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Module Assessment Test / Discussion

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

Should discuss and plan (prefer open book / proctor based assessment).

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