Selenium Course Contents	Duration
CORE JAVA	1 WEEK
SELENIUM WEBDRIVER API	2 WEEKS
TESTNG FRAMEWORK	1 WEEK
SELENIUM IDE,GRID	1 WEEK

Core Java

- ## Overview & History
- ## Environment Setup
  - Install Java
  - Setup Eclipse
- ## Data Types
- ## Class Members
  - Static
  - Non-Static
- ## Object Oriented Concepts
  - Object
  - Class
  - Encapsulation
  - Inheritance
    - Single Inheritance
    - Multi Level Inheritance
  - Polymorphism
  - Abstract Classes
  - Interfaces
- ## Loop Control
  - for
  - while
- ## String Classes
  - StringBuffer
  - StringBuilder
  - String
- ## Arrays
- ## Access Modifiers
  - Public
  - Private
  - Default
  - Protected
- ## Wrapper Classes
- ## Files & I/O

- o Reading Text Files
- o Writing Text Files
- ➢ **Exceptions**
  - o Checked
  - o Un-Checked
- ➢ **Collections**
  - o LinkedList
  - o HashSet
  - o TreeSet
  - o LinkedHashSet
  - o HashMap
  - o HashTable

Selenium WebDriver

- ➢ **Introduction**
  - o A Brief Overview of Selenium
- ➢ **Selenium Components**
  - o RC
  - o IDE
  - o Grid
- ➢ **Pre-requisites**
  - o Installation of Firebug plug-in
  - o Installation of Fire path plug-in
  - o Downloading Selenium jars
  - o Configure Eclipse with WebDriver
- ➢ **Locating Elements**
  - o ID
  - o Xpath
  - o CssSelector
  - o TagName
  - o Name
  - o ClassName
  - o LinkText
  - o PartialLinkText
- ➢ **Frames and Windows**

- WebDriver methods explained
- Frames Examples
- Windows Example
- Manipulating the browser window

➢ Dealing with Alerts
- Alert methods explored
- Exercises

➢ Synchronization Strategies
- Why we need synchronization
- Implicit vs Explicit Wait
- WebDriverWait
- Expected Conditions

➢ Actions
- Keyboard Actions
- Mouse Actions

➢ TestNG FrameWork
- Install TestNG
- First Test Case with TestNG
- TestNG Test Suite
- Annotations, Groups & DependOn
- Test Cases Prioritizing & Sequencing
- TestNG Reporters & Asserts
- TestNG Parameters & Data Provider
- TestNG DataProvider with Excel
- Parallel Testing
- TestNG Listeners

➢ Annotations Supported by TestNG
- @BeforeSuite, @AfterSuite, @BeforeClass, @AfterClass, @BeforeTest, @AfterTest, @BeforeGroups
- @AfterGroups, @BeforeMethod, @AfterMethod, @DataProvider, @Listeners, @Parameters, @Test

➢ Page Object Model & Page Factory
- Introduction
- Advantages

o   Sample project using Page Object & Page Factory

- ➢ **Data Driven with Excel**
    - o   Download JXL
    - o   Adding JXL jars
    - o   Test Case with JXL Example
- ➢ **Selenium Grid**
    - o   Architecture
    - o   Demo- (Grid and Hub with 2 nodes)
- ➢ **Selenium IDE**
    - o   Record & Playback
    - o   Store Commands
    - o   Assert & Verify
    - o   Export Test case