



Selenium WebDriver



- Automation Testing Fundamental Concepts
- What is selenium?
- Introducing WebDriver and WebElements
- Exploring Advanced Interactions of WebDriver
- Exploring the Features of WebDriver
- Different Available WebDrivers
- Understanding WebDriver Events
- Dealing with I/O
- Exploring RemoteWebDriver and WebDriverBackedSelenium
- Understanding Selenium Grid
- Understanding PageObject Pattern

- **What is Test Automation ?**

- ☐ Software Test Automation is the process of automating the steps of manual test cases using an automation tool Or utility to shorten the testing life cycle with respect to time...
- ☐ When application undergoes regression, some of the steps might be missed out or skipped which can be avoided in Automation...
- ☐ Automation helps to avoid human errors and also expedite the testing process...
- ☐ To implement the Test Automation detailed planning and effort is required

- ❑ Automation saves time and effort which results in reduction of the Test life cycle...

- ❑ **Benefits of Automation**

- ❑ Consistency of Test Execution
- ❑ Reducing cycle time of regression test cycles
- ❑ Data driven testing
- ❑ Repeatability
- ❑ Coverage
- ❑ Reliability
- ❑ Reusability of test wares

- ☐ Automation life cycle is a subset of the entire test life cycle...
- ☐ Automation planning can be initiated in parallel to the test planning phase...
- ☐ Factors to be considered in automation planning
 - ☐ Stability of AUT (Application under test)
 - ☐ No of regression cycles to be performed
 - ☐ Compatibility of App platform with testing tools
 - ☐ Cost benefit analysis (ROI)
 - ☐ Availability of skilled resources

- ❑ Make the testing procedures systematic, consistent and 100% reproducible
- ❑ Minimize the error-prone manual testing
- ❑ Save effort of QA Engineer: fast, in the night and short testing cycle
- ❑ Some testing is not able to be done manually



More Cost Effective!

- ☐ When Automation is applicable?
 - ☐ Regression Testing Cycles are long and iterative.
 - ☐ If the application is planned to have multiple releases / builds
 - ☐ If it's a long running application where in small enhancements / Bug Fixes keeps happening
 - ☐ Test Repeatability is required

☐ What to Automate?

☐ Following should be considered while deciding the areas to be automated within the application:

- ☐ Areas not too complex to automate, when manual efforts are too less

- ☐ Areas which are regression worthy or part of smoke test.

- ☐ Areas having a defined input/output (or feasible to calculate) and you can code

- ☐ Part of application that has to be tested on different environments

- ☐ Application's module which has scope of retesting (multiple data values for same action)

- ☐ Feature that doesn't have a finite lifetime.

- ☐ Where Precision is important. While humans are good at noticing oddities, they're bad at painstaking or precise checking of results. If bugs lurk in the 7th decimal place of precision, humans will miss it, whereas a tool might not.

☐ When Automation is **Not** applicable?

- ☐ Not too many regressions.
- ☐ Application is not stable, too much maintenance effort.
- ☐ Cost of the supporting tool doesn't justify the investment.
- ☐ There are not too many candidates for smoke testing.
- ☐ Size of application is too small vs Availability of resource.
- ☐ A process where you cannot escape from manual intervention.

☐ False Expectations for Test Automation

- ☐ Immediate Test Effort Reduction
- ☐ Immediate Schedule Reduction
- ☐ One Test Tool Fits All
- ☐ Tool Ease of Use
- ☐ 100% Test Coverage

Automation tool involves 3 main stages:

Creating Test scripts

Running Test

Analyzing Test Results



Thank You