**Selenium Test Process:**

1. Test planning
2. Generating basic tests
3. Enhancing tests
4. Running and debugging tests
5. Analyze test results and reporting defects.

Software test process/STLC(Software test life cycle)

* Requirements Analysis
* Test Planning
* Test Design
* Test environment Setup
* Test execution
* Test Cycle Closure

**Software test process phases in details..**

1. Requirements Analysis

* Risk Analysis
* Segregate Requirements
* Create RTM Documents

1. Test Planning

* Test Strategy Implementation
* Test Estimations(Scope, Resources, Time, Budget)
* Team formation
* Test Plan Documentation
* Configuration Management planning
* Define Test Environment Setup

1. Test Design

* Understanding Requirements
* Derive Test Scenario
* Documents Test Cases
* Update RTM
* Collect test data ETC.

1. Test Environment Setup

* Prepare Test Environment Checklist and Test Data
* Test environment Setup
* Verify Test environment
* Conduct Smoke Tests

1. Test Execution

* Creating Test Batches
* Comprehensive Testing
* Reporting Defects
* Tracking Defects
* Select Test cases for Changes Relates testing(Re &Regression) Cycle 1
* Sanity testing (Verify the modify testing is acceptable or not)
* Execute Regression test cases
* Reporting Defects
* Tracking Defects

1. Test Cycle Closure

* Evaluate Exit Criteria
* Collect all artifacts
* Prepare Test summary
* Send test Deliverable to customer(what software are use and what command we use)
* Improvements Suggestion for future projects

**Steps of Selenium Test Process in details:**

* **Test planning**
* Get Environments details (UI design and Database) from Development team
* Analyze the AUT(Application Under Test) in terms of Objects identification

In UFT: Using “Object Spy”

In selenium using these elements:

Mozilla Firefox -Build in features “Page Inspector”

Google Chrome-Build in Developer Tools(F12)

MS Edge – Build in Developer Tools (F12)

* Select Test Cases for Automation

Test cases that’s can be execute on initial build and every modified build(Smoke and Sanity..)

Test cases that can be executed on every modified build(Regression test)

Test cases that can be executed using multiple test data(Data driven test)

* Select Selenium Tools and others components for automated testing and configure

(Eclipse IDE, Java, Selenium WebDriver, TestNG, Maven, Jenkins ETC.)

* Process of install selenium tools
* Download Eclipse IDE and extract the Zip file
* Download java software and install
* Set environment variable path in the operating system properties.
* Download selenium WebDriver for example Java language(seleniumhq.org) and WebDriver .jar files to java project(Eclipse IDE)
* Download and install TestNG testing framework from Eclipse IDE
* Download Browsers(Firefox, Chrome, MS Edge etc.)
* **Generating basic tests / Enhancing tests cases**
* These are same test process in test cases. Creating plain navigation.
* In UFT: In UFT 2 ways for test cases [**We do not use]**

1. Object Repository based test design

Recording

Keyword Driven Methodology

1. Descriptive Programming

Static Programming

Dynamic Programming

* In Selenium WebDriver: Using elements locators and WebDriver API commands

Selenium IDE: Recording or using elements locators and selenium commands

Enhance Test cases:

* Inserting Verification
* In UFT: Using Checkpoints(UFT tools features)

Using VBScript flow statements

* In Selenium IDE:

Using “Verify” or “Assert” command.

* IN Selenium WebDriver:

Using WebDriver Verification commands (limited use)

Using Programming control flow statements

Using TestNG framework “assert” methods.

* Parameterization
* Replacing constant valuers with parameters is called parameterization.
* Passing single value or multiple values

[NOTE: WE use parameterization in Data driven testing]

* Synchronization
* Add comments
* Error handling
* Define test results