Automation can be done through tools or frameworks.

**Why to Automate:**

To save time and resources.

**When/What things in application need to Automate:**

All the regression and smoke test cases

DataDriven Testing- Same teststeps should be repeated with different inputs of data.

Things that are complex to test manually-

eg: test for broken links in given page, test html attributes for given elements

Performance Testing

ConfigurationTesting- multiple browsers and operating systems

Scenario or flow test

**When not to automate:**

Scenarios w.r.to look and feel- Usabilty

eg: image clarity, video and audio is playing with clarity, captcha images, OTP's, confirmation mails in a workflow

When deadlines are short

when the requirment is static or freezed

When the UI is going to change completely in next release or if the UI is stable without any changes in mere future.

Exploratory and adhoc testing

**Popular Automation tools :**

UI - Selenium WebDriver,Casper JS,NightWatch.js,

QTP,Selenium IDE

API - Chakram, HttpClient, RestAssured

SoapUI,Postman,RestClient

Mobile- Appium,Calabash, Perfecto

Performance- JMeter,BlazeMeter,LoadRunner

**AutomationFramework:** Avoid repeated logic and make code easy to maintain.

SeleniumWebdriver to write automation scripts.

We use patterns like PageObject, DataDriven, UIMapping etc.

We use test frameworks like TestNG,JUnit to assert the results.

We use build and integration tools like Maven, Jenkins.

We avoid repeated logic using DSL features like Java, Python, Ruby etc.

**TestStrategy**: It is static document, What to Test

Created by ProjectManager/ScrumMaster/ProductOwner

UnitTesting

SmokeTesting

Functional Testing

UsabilityTesting

RegressionTesting

Risks

**TestPlan**: It is dynamic document, How to Test

Created by TestLead/QA Manager

Scope

Objective

Resources

tools

environment

Entry Criteria

ExitCriteria

UnitTesting : entry criteria: 60% of development should be done

exit criteria: All unit test cases are passed

SmokeTesting : EntryCriteria: UnitTesting is 90% done

ExitCriteria: All the priority(p1) test cases are successfull

Functional Testing: EntryCriteria: SmokeTesting is completed

ExitCriteria:70% of priority test cases are done and also the defects are fixed.

UsabilityTesting:

RegressionTesting

TestCase:

RTM :

10 requirements

1- 10

2- 15

3- 5

4

....

10

11-

12

13

14

15

**Defect Life Cycle:**

Open

Assigned

InProgress

Fixed/Completed

(Tester Retest the defect)

Verified

ReOpen

Close

QE/Tester will have to to all these details in defect tracking tools:

**Defect Details:**

DefectID

Description : Search functionality not working in Recordings Page

ReplicationSteps:

Go to qa.whiteboxqa.com

click on recorings

enter search text as mock

You should see the results

Priority - high

Severity - high

Expected: When I Search for mock - mock sessions should be displayed

Actual: Its not loading search results page

Screenshots

logs- client log/api/server log

environment, version, build, expected fix date, AssignedTo, ReleaseVersion

Priority - which impacts the business directly

Severity - which blocks the further testing like if its a showstopper

p1,p2,p3,p4

Critical/Showstopper,High,Medium,Low,

http://whiteboxqa.com

http://192.168.15.2:8080

http://192.168.14.2

How a web request is processed:

Client-DNS server- {google.com - 192.168.15.2}- firewall- loadbalancers- webserver-appserver-db server

{paypal.com - 192.168.16.2}

App Server- IBM Websphere

Oracle Weblogic

Jboss

WebServer: Apache

Microsoft IIS

Tomcat

Assignment: To test gmail app

Write a TestPlan and TestStartegy

Write test cases for gmail login

Testcases for gmail functionality

Sample Test Plan:

http://sce.uhcl.edu/helm/RUP\_course\_example/courseregistrationproject/artifacts/test/plans/test\_plan\_arch.htm

submit to training@whitebox-learning.com

