

Version:

Java: 7, JDK:1.7 or 1.8

Appium tool CLI: 1.7.1

Appium tool GUI :1.2.7 uses 1.7.1 “cli”

Appium jar : 5.0.4 api

Selenium:3.5.3

## **Introduction:**

I worked as manual and automation tester for 8+ years. I have worked on testing both web based and Mobile applications. I have 5 years of agile experience.

I used Selenium with java, in my applications. I worked with TestNg, along with Page Object Model and cucumber for BDD.

I also worked on keyword driven and data driven testing.

I have successfully tested web services both REST and SOAP services using Rest assured framework and SOAPUI tool. I have experience in writing sql queries, views, triggers and stored procedures.

I have been involved in my projects as a contributor for the framework development with Java.

In mobile testing, I worked with appium for native, hybrid application testing on both iOS android. we used saucelabs and real devices.

I have used jmeter for load and performance testing.

I have used Jira, HP ALM in my projects to execute and record defects, track stories, maintain requirement?

I have used Jenkins to run my test suites on daily bases.

## **What I did in the SOA testing?**

In terms of SOA testing, I have tested both the customer facing services, API's as well as the back end components a required for the service to perform the request and response actions. On the back end part, I have used Mock as mocking service on the interfaces, contract layers and the routing classes. By using the assertions available in both JUnit for the Java spring based applications and NUnit on a ASP .NET applications, I have validated the services. I also wrote validation on the classes that perform the ORM queries on the database, based on the transaction calls. I also ensured that the database is not properly locked so that the calls can be processed in the order of the queues. When I talk about the Queues, I have worked with JMS and i rabbitMQ as well. I have successfully tested web services both REST and SOAP services using Rest assured framework and SOAPUI. With SOAPUI, I used groovy scripting for the SOAP web services automation. I used data driven approach with excel

sheet(poi jars) and JDBC connection. I have experience in Writing SQL queries for Oracle and MS SQL Server.

**Other:**

In this project, I worked on a CRM based application. Here the application portal is responsible for delegating the different customer related issues with our biometric verification product. It includes creating a query log with the verification system, bypassing the authentication through secure One-time release, prepare the customer new identity for the incoming system parameters that enable multi-level verification, create logs and report based on the access credentials and sectors associated. It is available on the .com based application for the employee's side and a native application on the customer side. I worked in testing the UI of application. We followed BDD with cucumber in java platform with cucumber JSON reports for UI testing. HP ALM for test management and linking entities with the requirements. Git as our repository and Jenkins for pipelines. The application was developed using Angularjs version 1.x

These reading are accessed in real time along with the the comparison with the past consumption. We have a web application where we are able to pull all these records and tracking the minimum and maximum gradient of usage. It will provide a multi dimensional visualization of these reading on a D3.js display panel. Analysis of the sectors in the client side which usage ranges is processed by collecting the data through API. This will provide a conclusive definition on how the utility API will be processing and sending data to the clients with different reports generated everyday. Apart from this I also worked on testing the payment, audit and utility API using SOAPUI Pro tool, where I created test steps with OAuth protocol for authentication and validating the request and response patterns with the data stored in the database. As a part of my activities, I also work with developer in developing unit test cases. Testing middleware was also part of my responsibilities as I worked with setting up and creating the structure for protractor framework.

**HealthCare:**

In the application we worked on, the front end was developed using Angularjs and Bootstrap while the backend was with PHP and node JS as middleware using Hazel Cast and Kafka message queues.

This application each customer when registered will have all his medical records pulled along with the physician preceding over that. On every case, the diagnostics information, in house medications and treatment methods provided. The summary section also contains the last recorded vitals reading. Also this application is attached with the real time data from the current patient profile, as any changes made will be populated as notification flags ready to be updated to the patient records.

Connecting to the insurance portal, pulling the patient history through insurance ID,

**Financial:**

The application is a web portal that I was working on. The application we are testing involves a file upload functionality where the file is filled with SSN numbers of the customers. Once the file is uploaded, it will provide notification of being saved in the database. After the file is processed, the customers whose accounts are connected to the SSN will be listed by customer ID and Name. When a particular customer is viewed, then the customer's history, types of accounts related to the account and the payment history for the services are available. If the customer does not have any mortgage history, then a Sent Eligibility for different types available for the customer. If a customer has a late payments history, then that account can be flagged for further checks, which is handled by other departments. There are transaction retraction system for electronic payments through the payment gateway batch query.

**Insurance Client template:**

In my application, we had the portal where the customers records can be pulled using requests on their customer ID and fetch their details like personal information, providers for the insurance, past claims processed and pending claims also any other optional providers for the customers in the location. If the customer has any transactions that are pending, then it will be flagged individually and also in the claims for all the customers.

Here new customer is entered and a mail is sent for enrollment eligibility and after a payment is made within the minimum payment period of 90 days, they are available to use the services.

If the transaction provides any flags, then a notification must be sent to the payments sections.

Other than that this portal also allows to change the personal details of the customer based on the login authorization made by the employee where manager can add or delete SSN and normal employee can change address or add members to the plan.

**Team Structure:**

4 developers - 3 backend, 1 front end UI and UX.

2 testers - I performed both manual and automations.

1 product owner

1 scrum master  
1 team lead  
1 BA  
Total 10 people

### **Daily Roles and Responsibilities:**

We operate on (n-1) sprints user stories.for automation

Our sprint is 2 week long.

For every sprint i get the user story, I need to perform the manual testing for 2 days and then based on that I have to write automation scripts. The scripts I developed were using Java, Selenium. where I write the Gherkin feature file and step definition code for implementation. We followed BDD.

we have daily stand up meeting to discuss the progress and issues.

In sprint grooming meetings, we discuss requirements for the sprint and along with the users stories that need to be implemented.

in the Sprint Retro Meeting, if we have any sprint backlogs that are not completed, we look at the issues and plan to move to next sprint.

### **Cucumber with JAVA**

In cucumber we have 2 kinds of files, one is feature file which contains scenarios written in gherkin language, here we use keywords like given , when, then to describe steps in a scenario, And the other is step definition file, here we write the functionality using selenium and java for the steps defined in the feature file. Then we have cucumber runner class to execute feature files which contains location for feature files and their respective step definitions,

We also can generate html reports using cucumber options, plugin={prretty,html, target location}.

### **SpecFlow with c#**

in Specflow, we have feature file where we will provide scenarios and scenario outline along with example for the data table.

Then hooks to execute before and after feature scenarios to the step definition.

c# method that can contain locating the webdriver context, web app locators, assertions.

Using the given, when, then methods to create the test steps were in the feature file, in “given “ we have the prereqs,

**Difficult Challenge:**

One of the task in my current project is to show the current payment trend of the user and to predict the future payments. For this, we need to validate the trend curve that is developed on a SVG graph. Since we are using java and selenium, it was a rather difficult challenge to validate the markers on the dynamic graphs. To overcome the challenge, Me and team created a comparison algorithm for comparing the markers. Then we created a mock graph using the data and compared the markers using the marker properties from both graphs.

**How to automate many task in less amount of time?**

I will prioritize the task or user stories based on the functional and nonfunctional requirements. Once I have prioritized, I will create the test cases based on the critical business logic and transaction based modules to satisfy the basic and fundamental operation of the application.

**Explain your Framework?**

Reporting, exception handling, logging, data reading, and writing components are the main aspects. I also used Page Object model to have object repository and single code base.

I developed the framework in level, so that different components can be used in automating multiple application. For this purpose, I designed the Reporting component using the ITestListeners and ISuiteListeners of the TestNg. For logging and debugging purposes used the Log4J library. Apart from that a exception class was developed and used for handling the different types of exception that may occur in browser and mobile based application.

I created a session sharing and switching component so that test cases can be loaded to both mobile and desktop browsers by changing the context. Data providers were used for Data driven testing using TestNg Data providers. A runner class that binds the data and the test cases to run priority based testing. Used Maven and POM.xml to load the dependencies of the project.

**Protractor?**

In our projects, we had a single page application that was built using AngularJS 1.4.2. We use protractor framework to automate the test cases. I wrote the spec file test cases using

JavaScript. Here I used jasmine test, where I will write the test cases using Describe() and it() functions. The assertions were provided using the Jasmine expect library. As a part of configuration, I set up the html reporting using jasmine Reporters.

### **Implicit vs explicit?**

Implicit- wait is given for life of driver, it is applicable for every action made by driver. Explicit - wait is given for a particular condition like element to be clickable, will throw exception if condition fails.

Fluent - when it takes more time, we use fluent with condition and it will poll for every interval, we can ignore exception.

### **How do you execute protractor scripts?**

We use grunt to execute protractor scripts, we create grunt tasks and while triggering we use grunt command to trigger the scripts.

### **Jenkins/continuous integration?**

We use Jenkins to create jobs and schedule them to run on a specified time. First create a new task and provide our source repository (like github) url link and details, then we use build tools like maven to build our code and then we do post build task like deploying our code on containers or servers, on success of all the above events we run our test scripts using commands like "mvn clean test" and any parameters, we can also configure email notification to send the status of our test schedules. Sometimes we also have to configure slave jobs to run the regression parallel to reduce the time. We configured pipelines to trigger when a new build is released.

### **What you will automate and what you will manual test?**

Critical business functionality, main business requirements, the components that require API driven or data driven functional, Those I will automate.

The features that are independent of other components and have no dependency, that I will perform manual testing.

### **If the defect is not created by you, how will you retest ?**

I will look at the test case and understand the original defect and try to see how the bug was fixed by the developer, then see the tester notes when the defect was recorded.

Based on that I will first run tests based on the data set and environment conditions that originally resulted in the bug. If the bug is resolved for those conditions, I will iterate other test data sets.

### **How will you decide test cases for a new features ?**

First understand the feature, look at the FRD docs, try to come up with different scenarios both + and -ve, boundary value and decision table. Accessing the data, look at the test coverage and how distinct the test cases are.

### **How will you write test cases if there is no documentation ?**

Then I will work with Business and dev's to get the end user acceptance criteria and how the feature is developed with different components and dependencies involved. What are the different UI techniques used like locators, event handlers and ajax requests.

### **What is your strong suit or skill?**

Adapt to different types of teams and with good time and velocity management without any problems.

### **What is the difference between Soft Assertion and Hard Assertion?**

Hard assertions are used to terminate test case when it fails a certain condition, we use assert class methods

Soft assertion are used to continue execution even though the condition fails, we create softAssert class object use this obj.assert methods to validate conditions.

At the end of test case we use object.assertall() method to collect all the exceptions thrown and fail the test case if needed.

### **What is parameterization in TestNg ? What are the different ways to achieve that ?**

1) We can achieve by using @parameter tag before @test annotation and pass arguments to method

eg: @parameter("key"="value",)

2) we can give parameter in testng.xml file like suite level and class level parameters

3) we use data provider to pass data to a test method

In dataprovider we can send data as 2D array or iterator object of List(List)

### **When will you prefer TestNG over JUnit ?**

TestNg is like advance version of JUnit, testNG include more annotations like before test, before class, i prefer testNG as it supports dependency on other methods, group execution, parameterized object.

## What are the limitations of selenium ?

- Selenium supports only web based applications.
- Doesn't support image based testing,
- No direct tool integration for test management(with ALM or Jira).
- No built in reporting facility.
- Lot of challenges with IE browser

## Challenges with IE Browser?

We find exceptions like

1)*SessionNotFoundException: Unexpected error launching Internet Explorer. This exception may raise when Protected Mode settings are not the same for all zones (like internet,local internet, trusted sites,restricted sites. To handle this change settings to enable or disable)*

2)If Browser zoom level is other than 100% it will raise session not found exception. resolve by setting it to 100%.

3)Sendkeys method works very slow in IEDriverServer 64bit , to resolve use 32 bit version

4)we get ssl certificate popups.

Sol1.

```
driver.get(URL for which certificate error is coming);  
driver.navigate().to("javascript:document.getElementById('overridelink').click()");  
sol2.DesiredCapabilities capabilities = DesiredCapabilities.internetExplorer();  
capabilities.setCapability(CapabilityType.ACCEPT_SSL_CERTS, true);
```

## How to integrate Test Management suite with automation ?

In automation we need to include the interfaces for the test management tools like HP ALM. For example in the Reporting component, we can extend the class and add the result along with the screenshot and the data sets that can be supplied to the defect creation process. Since the reporting component will determine the pass or failure of the test cases, we can attach it with the test case requirement in the Test Lab module.

## Exception in selenium automation ?

**NoSuchElement** : An element could not be located on the page using the given search parameters. **NoSuchFrame** : A request to switch to a frame could not be satisfied because the frame could not be found. **StaleElementReference** : An element command failed because the referenced element is no longer attached to the DOM. **ElementNotVisible** : An element command could not be completed because the element is not visible on the page. **Timeout** : An operation did not complete before its timeout expired. **InvalidElementState** : An element command could not be completed because the element is in an invalid state.



## **Page Object Model framework(POM)?**

We use Page object model design pattern to maintain object repository, in Page Object Model, we have separate class for each web page/view and the class contains all the web elements of that page as variables, in class we use "by" class objects to store the webelement locators. And we have methods that return webelement , we call these methods to get a web element in that page.

Once we create this page object, we can create a instance of the class to access the properties and methods.

By Page object model we can change locator of an web element at a single place rather than changing in all the test cases it was used. It reduces lot of time and effort.

## **Data driven framework?**

We use data driven framework to run a test script multiple times with different sets of data, we use data as input values or to validate values in the script.

We have developed our framework with utility classes that take data from external excel sheet, flat files, and databases, to get data from excel sheet we used "apache POI" libraries, we have multiple methods to extract data in different formats based on requirement. We used "JDBC" connection to get data from database servers.

## **Soap vs Rest**

Soap support only xml format of data

Rest support json, xml, plaintext

Soap has inbuilt security

Rest uses https security

Sopa has wsdl file to share business logic

Rest has endpoints and methods get put post delete

## **Appium Prereqs?**

iOS: don't tell versions

mac os -10.12.1

java-  
appium -1.6.4/1.7.1  
appium java client -4.1.2  
ios device version -10.2  
xcode- 8.2 simulator  
nodejs  
lpa file  
designer profile  
developer provides  
DEVELOPMENT\_team= TeamID  
codesignidentity = iphone developer

Android:  
Apk file for android,

### **Mobile Desired Capabilities?**

```
DesiredCapabilities capabilities = new DesiredCapabilities();
capabilities.setCapability("browserName","Safari");
capabilities.setCapability("deviceName","iPhone");
capabilities.setCapability("platformName","iOS");
capabilities.setCapability("udid","Device ID");
capabilities.setCapability("version","7.1");
driver = new RemoteWebDriver(new URL("http://127.0.0.1:4723/wd/hub"),capabilities);
```

### **How to debug reports in iOS device?**

In IOS we use dSYM to view the log files in the xcode.

In IOS the UIKit will collect the error, close the app. We need to resolve the error into symbolic or partially symbolic error.

This DSYM is the log collector which stores binary error data that we will view using the XCODE.

### **How have you used the OOP concepts in your automation process ?**

Yes, like when creating custom exceptions we created an interface and added abstract methods to be implemented by the classes that implement.

### **Explain how HashMap works in Java ?**

Hash map stores key value pairs of data where keys are unique and non-synchronized, allows one null as key, when we add new key-value pair, first key is hashed with some hash key and use this location to store value, when we try to retrieve a value for a key, the same hash function is applied to key and then value from that location is retrieved

### **How to open Emulator?**

From command line

Windows

Emulator -list-avds // to show the list of emulators available

Emulator -avd avd\_name [ {-option [value]} ... ]

Or

emulator @avd\_name [ {-option [value]} ... ]

In MAC similar to

\$ /Users/username/Library/Android/sdk/tools/emulator -avd Nexus\_5X\_API\_23

-netdelay none -netspeed full

### **How to open Simulator?**

### **Mobile Desired Capabilities?**

### **Do you have any Questions?**

Is the env already set up ?

What type of release do you have? every sprint or every 2 months ?

Is it a data driven framework or behaviour driven development and testing ?

Are you performing Ad-hoc tests currently ? Does my role involve evaluating the correct framework for automation?

### **Abstract vs Interface ?**

Interface has all the abstract methods , we can say it as 100% abstract class, when we implement interface we need to provide functionality for abstract methods in classes, interface supports multiple inheritance.

where in abstract class it should contain at least one abstract method, we use abstract class to hide implementation and use it in child class. We can extend only one abstract class.

**What are tools used for code review?**

Review Assistant is a peer code review tool by Devart (Software Development Company) which supports the visual studio. ... Review Assistant is used in code reviewing for creating review requests and responding to the same. Review Assistant integrates with TFS, Subversion, Git, Perforce and Mercurial.

**Why we use protractor?**

Protractor is advanced for selenium , it has all selenium properties and additional locator methods like bind, model, and wait times is improved in protractor , for angular apps it will execute in async way so execution of a test case is quick compare to selenium.

**How to use protractor?**

We first need to have node installed and then npm(node package manager) , we use npm to install protractor. Npm install -g protractor, which installs protractor globally. It has spec files where we use “describe” and “it” method to write our test scenarios, and conf.js file to create suites and do configuration of browser and reports , we run protractor conf.js to execute our test cases.

**How to change the date format from one to another in selenium?**

```
SimpleDateFormat simpleDateFormat = new SimpleDateFormat("MMMM dd, yyyy");
SimpleDateFormat simpleDateFormat1 = new SimpleDateFormat("yyyyMMdd");
Calendar cal = Calendar.getInstance(); cal.set(2012, 8, 21); Date date = cal.getTime();
Date date1 = simpleDateFormat.parse(date); Date date2 =
simpleDateFormat.parse(date1); println date1 println date2
```

**What will be your roles in Agile Scrum process ?**

**Explain the main components of HP ALM?**

**Discuss the steps you will take when you begin a sprint ?**

**Discuss the steps you will take when you start the automation ?**

**What is Code refactoring in Agile ? What type of testing will be performed in that phase ?**

Static testing is performed at the time of code refactoring.

**What is Sprint 0 in agile ?**

What are the deliverables of QA?

## About project:

American Family Insurance is a private mutual company that focuses on car, home, life and business insurance coverages as well as [investment](#) and [retirement](#)-planning products. In the past An agent keeps track of what policies he made for tracking his performance and also for verifying what commission he gets from the company. For each premium paid by the Policy Holder, an Agent will receive commission depending on certain conditions and he need to keep track of commissions received and due, the agent should maintain all the details of policies. This is a cumbersome task for agents who are doing good business. To aid them in automating their tasks, this Product was developed. Coming to our project It is Web application. The goal of the project is to maintain all activities of Insurance System. Any customer without visiting to the office manually he can view the policy details as: Policy amounts, Policy Premium dates, Bonus details and etc. through web.

It has different modules such as insurance, claims and resources module.

Insurance is one of the key modules, using this service personals can enter the customer details for the car Insurance and a quote will be generated. Premium will be calculated based on the details provided. For accepted quotes, policy number will be generated. It has provisions for retrieving details of quotes by name and quote number. Agile testing of the application involves testing the entire build for different releases from the customer perspective and often as code becomes available and stable enough from module/unit level testing.

Also, powerful reporting was provided which helps the agents in getting clear picture of what the status of their business. And in our project we also provide some utilities are included such as intimating due dates for their customers, greeting them on their birthdays, estimating loan amounts for their customers, etc. And for security purposes, encryption and decryption was employed.

**How to sort and merge two arrays into one. This code allows duplication of values.**

```
Public int[] mergeandshortarray(int[] array1,int[] array2){
Arrays.sort(array1);
Arrays.sort(array2);
Int[] array3 = new int[array1.length+array2.length];
Int count =0,i=0,j=0;

while(i<array1.length){
    while(j<array2.length){
        if(array1[i] <array2[j]){
            Array3[count] = array1[i];
```

```

        Count++;
        I++;
        break;
    }else if(array1[i]>array2[j]){
        Array3[count] = array2[j];
        Count++;
        j++;

    }else{
        Array3[count] = array1[i];
        Count++;
        I++;
        Array3[count] = array2[j];
        Count++;
        J++;
        break;
    }
}
while(j<array2.length){
    Array3[count] = array1[i]
    Count++;
    I++;
    If(i<= array1.length) break;
}

}
if(i<= array1.length && j<array2.length){
    while(j<array2.length){
        Array3[count] = array2[j];
        J++;
        count++;
    }
}
Return array3;
}

```