Harika

1. Sorting of character array program
2. What is equals method.
3. What Collections you know
4. What is Hashmap
5. Why to override equals method
6. How do you start testing technically
7. Singleton design pattern
8. Select class
9. Selenium waits
10. Exception handling
11. Handling windows
12. Maven profiles
13. Agile process
14. get and post methods
15. How you do DB testing
16. Explain API testing
17. What you validate in API response
18. How do you test JSON/XML response
19. Testing pyramid
20. Given html code. Identify webelement
21. Page Object Model

Anand

Question) Explain your project, framework in detail

My suggestion = be prepared to explain the framework and all third party libraries in detail, how test code is written, how they get executed, how they are organized etc

Question) Explain java collections framework

My suggestion = You may explain all interfaces, abstract classes, implementations such as hashmap, treemap, hashset, treeset, linkedhashmap, concurrenthashmap,

Question) diff between arraylist and linkedlist

Question) write program to find repeated characters in a string "hellowlwel"

My suggestion =  you can search in net to find the solutions to this and similar problems, may use hashmap, but if interviewer says do not use hashmap the use byte array

Question) explain api testing, api test automation, how to test large json response

My suggestion =  prepare for basic concepts of api testing,  json parsers such as jackson, pojo concepts, http methods

Question) java - exception handling

difference between finally, finalize, final

Question) maven -> how do you pass properties using pom.xml as well as command line option

My suggestion =  prepare for dependencies, plugins(surefire, compiler etc), maven commands, maven builds life cycle, maven dependency scope

Question) testng -> explain how to execute tests in parallel

Question) Selenium webdriver -> page object model, pagefactory

Question) Design Patterns -> what design patterns you know

My suggestion = if you say any design pattern such as singleton, factory then be prepared to answer questions on that design pattern

Harika

1. Tell about experience.
2. Blackbox and whitebox testing.
3. different types of testing like system testing, integration and system integration testing.
4. importance of testcase and why do we write it.
5. Basic selenium questions.
6. Defect life cycle.
7. How do we log a defect.
8. RTM.
9. Test coverage.
10. How do we execute a scenario with different sets of data in JBehave.

11. Consider a ecommerce application and below questions

1. What is a critical end to end testcase

2. Do we test third party applications in our scope

      12. Continiuos Integartion process

      13.Methods of REST services

      14. DIfferent status codes

      15. Why we use webservices

Manoj Immadi

TE

Master Card Questions:

1. Tell About your Primary skills
2. Pipe lines in Jenkins
3. Who creates jobs in Jenkins in the current project
4. Difference Between Implicit Wait and Explicit Wait
5. Difference between get method and post method
6. How do you handle Iframes in selenium
7. How do you handle popups in selenium
8. Difference between Array List and Linked List
9. How the elements are stored in Linked List
10. Difference between Equals and Hash code method
11. Is the necessary for override hashcode method when equals method overriding
12. What do you know about Strings in Java
13. Why string is immutable in java
14. Explain your framework folder structure
15. Where do you keep assertions in your framework folder
16. What is Run Time Polymorphism and where you used in current project
17. How do you locate an elements? Why xpath?
18. Difference between List and Hash Map
19. How hash map store values ( He is expecting internal implementation of hash map)
20. Difference between final/finally/finalize

**Project:**

1. Explain the project framework and your responsibilities?

**JAVA and OOPS**

1. Tell me about yourself
2. How do you rate yourself in Java
3. Explain runtime polymorphism real time scenario.
4. Difference between abstract class and interface. (Don’t give me book definition) )How do you decide what to use when?
5. How do you read excel file?
6. How you will store all excel sheets, rows and cells in single object?
7. String operation: Generic program to convert all Lowercase to Uppercase and vice versa?
8. When you use WebDriver wd = new FirefoxDriver () which OOPS principal has been applied here?

**Testing:**

      1) How will locate the element where you don’t have DOM structure, not label, text or any property, you will be given 4 buttons on screen?’

      2) Difference between Thread. Sleep and implicit wait?  Tell me where have you use in your project?

**Cucumber**

1. How the code is mapped with steps
2. Can we specify two different packages for glue classes
3. How do you manage feature library avoiding duplicate gherkin steps?
4. What are all entities that runner class in Junit contains?
5. Listeners in cucumber?

**Test Management tool integration**

1. How you upload the test in QC/ALM –
2. Tell me the detail steps to upload tests in QC using RESTAPI. We had details discussion there were some counter questions?

**My Observations:**

Most of the questions were dependent on your answer to the previous questions. They drill down bit in details

Firstly the questions which were asked not framed in sentence. Interviewer himself was in confusion?

Question were real time and could be look for multiple approaches to solve it.

**SET:** Below is the outline of my discussion with Rupesh Shinde

1. Brief me on your career?
2. Why did you move to testing with development background?
3. What are the languages you are comfortable coding with?
4. What would be your testing strategy with a development team that follows agile, rest services?
5. Why should we go for continuous integration?
   1. What are the CI tools you have working experience with?
6. How do you define Smoke Test, Critical Smoke and regression tests for your project?
7. How do you define entry criteria for testing ?
8. What are the build tools you have used?
   1. What is difference in maven and ant?
   2. How do you generate build for different environments?
9. What is the biggest technical challenge you solved in automation projects?
10. What is Singleton pattern?
    1. How to implement in java
    2. How to make Singleton lazily loaded?
    3. How to make Singleton thread safe?
11. What is the difference in StringBuilder and StringBuffer?
12. What are the patterns you used in test automation?
    1. Where did you use them?
13. What are the kinds of framework you developed previously?
14. What is the difference in BDD and TDD?
    1. How to write tests in BDD?
15. What is the difference in Protractor and Selenium?
    1. When do you suggest protractor?
    2. What is the difference you found in locator strategies between protractor and selenium?
    3. If needed to handle angular application through selenium, what is the approach you would take?
16. How the test automation reports generated in your previous projects?
17. How do you measure the effectiveness of unit testing?
    1. Code coverage – is it sufficient metric?
18. Do you have experience in API testing?
19. How do you do code reviews?
20. If your product owner asks you to run all the regression within the next 4 hours and you know it is next to impossible to do so. What would be your response?

**TE: Akash Chopra**

1.what are wait commands in selenium?

2.what are desired capabilities ?

3.how to select a value from dropdown, which as ,more than 1000 items ?

4.what is selenium grid?

5.what is page Object model ?

6.difference between comparable and comparator ?

7.what is hash map ?

8. do you know anything on new java 8 features ?

9. do you worked on mobile testing ?

10 do you worked on database testing ?

11.what is Defect life cycle ?

12.what is Sprint planning and sprint retrospective?

13.how we do database testing using selenium ?

14.how do we execute automation scripts ? means locally/ global about CI process

15.Do you worked on API testing?

16.Have ever developed Framework?

**TE:** Prasad Abhimanyu

- General Questions:

                1) Tell me about yourself, your current project, roles, day-to-day activities.

                2) Explain the current tools using on automation, explain current framework.

                3) What are the different applications & related technologies that are in your project, how you are selecting the correct automation tool ?

- Selenium Web driver:

                1) Can you tell me the different waits provided by Selenium Web driver API and explain with syntax.

                2) Did you ever handle any applications having frames using Web driver, how did you do that, how can you navigate between different frames ?

                3) What are the different locator identification strategies provided by Selenium ?

                4) Which locations strategies you have used in your project? Which is preferable of all those and explain why?

- Test NG:

                1) Have you used TestNG in your project ?

                2) What are the different annotations that TestNG provide? Can you tell me the order of execution ?

                3) Can you run your tests in parallel mode using TestNG, how can you do it ?

- CI:

                1) How the test suite is being invoked in your project ?

                2) Explain how the CI is configured in you project ?

                3) On how many environments your automation scripts are running ?

                4) Which tool is used for CI, is it nightly build or manual triggering ?

                5) Are you passing any parameters to your job via Jenkins, any idea about relevant plugins for that ?

                6) How are you scheduling it? any idea on related plugins ?

- SQL:

                1) How do you use/connect SQL from your program ? explain the steps you need to do it considering Oracle DB as an example Significance of Selenium in this process ?

                2) Some questions on Primary key, Unique key - difference between both of them ?

                3) What is Right Outer Join, what would be the result set if we use it ?

- API testing:

                1) What is the difference between SOAP and REST services ? Which is preferable and why ?

                2) Explain about API test automation you did ? (I have explained about Postman, REST Assured Java API & SOAP UI)

                3) Then some questions about Postman(tell me about collections ?), SOAP(where did you use this in your project ?).

                4) Some questions on REST assured like - how you write a test method, what API's used for assertions(Hamcrest& REST Assured)

- Agile & Scrum

                1) What is in-sprint automation ?

                2) Tools used for project management ?

- *My observations:*

*1) Questions will be purely based on the points that we mention in the profile which is available with Client.*

*2) And the discussion will be prolonged on the answers that we give.*

TE: Pankaj

* Roles and responsibilities in current project
* Rate yourself on Advanced Java
* Rate yourself on Core Java
* What is threadsafe and when/why do we use it?
* Abstract Class vs Interface
* When do we go for Abstract Class over Interface and vice versa?
* Features of Selenium 2.0
* New features introduced in Selenium 3.0
* Dependency Injections and different way of injecting dependencies
* What is bean and what ease it provide over objects?

Below are some of the focus areas that we need to focus and ensure the team as per the roles is prepped.

SET:

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Introduction and what kind of work was done

How do you implement CI in the project

What is the difference between GIT Commit and Push

What is difference between overloading or overriding

Difference between interfaces and abstract class

Can my Abstract class have 0 abstract methods

What are collections in Java

Static Class object and Singleton class object

Total overall experience in Selenium

How do you handle AJAX Applications

Did you work with DB

To connect to DB from Java what will you do

What is difference between View and Joints

Did you use TestNG or JUnit

How can you execute parallel tests in TestNG

How do you execute the test cases using Maven

Apart from execution what does Maven do

How do you execute Parallel tests using JBehave or Cucumber

Different parameters that can be passed to Scope of POM.XML

TE

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Introduction and what kind of work was done

Have you done unit testing

Code Coverage tool being used

Tell something about Jasmine

Did you use Selenium Grid using Master, Slave and Docker

Can you explain more about docker

Difference between Image and container in docker

What is Super POM in Maven

How do you exclude transitive dependency

Can you create object of abstract class

Give example of Java Reflection

Integrated Maven and Jenkins

Explain multi-threading execution

Automation of API Testing

What Parsers have you used for API

TE

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Introduction and what kind of work was done

How can you achieve parallel execution using JBehave or Cucumber

How to configure Selenium Grid for Hub and node

Best Practices of unit testing, code coverage

How did you automate the responses of REST API

How can you create SSL authentication of RESTAPI

Can you create object of abstract class

In firefox we need some proxy settings to be done on the browser and get handle of the window and execute. How do you get the proxy value using selenium

What is reflection in Java

Entry and Exit Criteria for Integration Testing

Any idea on performance testing

              What is Little's Law?http://www.testautomationguru.com/jmeter-performance-testing-application-of-littles-law-to-workload-models/

Different attributes and Scope of POM.XML

Any onsite experience about presentation to client

About Agile and how do you measure the sprint velocity

How do you do double click using selenium webdriver

SET

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Introduction and what kind of work was done

Checked around the project technology stack like MVC and explain the role of MVC in the project architecture

Any Idea on the Spring Framework

About Dependency Injection

In Maven how do you specify the scope of the JAR - where do you specify - Ignore this question

Difference between POM and Super POM

What is the role of Super POM in Maven

Difference between Bamboo and Jenkins

What is transitive Dependency (I think this is more focused on Maven)

What is new in Java 8

How can we do parallel execution in Cucumber or JBehave

Have you used any cloud instances for parallel execution

What are the typical goals we look at in Unit Testing

Do you have any idea of Cyclomatic Complexity

Open ended question:

              There are multiple windows opened in Internet Explorer (specific to Selenium Webdriver) when we need to move from one window to another the script while executing is not able to select the new windows - different ways to get handle of the windows. ( he was hinting about some changes to registry (<https://github.com/seleniumhq/selenium-google-code-issue-archive/issues/6544>)  HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Microsoft\Internet explorer\Main\FeatureControl\FEATURE\_BFCACHE

In firefox we need some proxy settings to be done on the browser and get handle of the window and execute. How do you get the proxy value using selenium

How do you automate REST API response testing

What kind of parsers have you used for the REST API

SET

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Introduction and what kind of work was done

Asked about any experience in Performance Testing

Calculate workload model in Performance testing - any idea

Any experience in API Testing

What are all the other parsers you have used other than JSON parser

jackson parser?

What is shift left approach - what is the checklist parameter that you would use. What is the focus area of unit test

Any idea on AOP?

Key characteristics to be considered in building a framework for enterprise level application

Re-usability aspect of the framework - explain it with an example

What is the Objective of Page Factory Model and what concepts of OOPs are being followed in this Model

Have you used Java Reflection

Explain Hashmap with an example

Understanding of NodeJS

What IDE did you use for ProtractorJS framework

How Maven will handle multi module dependency

Why do you think Maven is popular over ANT

How does Maven work little more detail

Explain in more detail about portability

TE:

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Introduction and what kind of work was done

Split of Work on Technical Vs. Management on daily basis

Why Java has been taken as the technology

How can you claim that JAVA is platform independent - technical explanation aspects of it. How does a JAVA program work on Windows vs Linux

JDK vs JRE vs JVM

What components are required for Java to execute a program

Environment for running Java program

OOPS concepts and how do these work - working example is preferred

What is an interface and why do we need it

Do we need to inherit the interface or implementation of the interface

Java Class "Public/Static/Void" why do we use static method and why

Main Method can we make it as Non-static

Who will execute the main class

Class XYZ, Method System.out.println - how will you execute the main method - is it JRE/JVM

System.out.println - what is this statement in terms of OOPS concept - what is meant by System, Out, Pritnln

Class XYZ, Object ABC of the class XYZ and Method Test - can we say XYZ.ABC.Test is it right?

Have you used Abstract class - which is more feasible Interface or Abstract  - in terms of the re-usablity which one do you prefer and why

For Interface we cannot create an object?

Parallelization/Parallel execution

How can you achive Parallel Execution in Selenium

When we execute the Parallel execution - How can we execute specific browser on a specific machine in parallel execution - what configurations do we have to pass

How does Selenium RC Work

How does Selenium WebDriver Work

Difference between Webdriver and RC

How to open the Firefox browser/driver to execute the Selenium scripts in 3.0 vs. 2.X

              Webdriver driver = new firefoxdriver (string URL)

              What is Webdriver in the above example

Class XYZ, Method ABC - how will you create an object and execute the method ABC

Is it a valid statement Webdriver driver = new webdriver

Agile - Story point estimation, velocity

How do you measure velocity against the story points

About BDD and TDD

BDD implementation working experience or knowledge on JBEHAVE OR CUCUMBER

About Agile, Sprint/Scrum

SET:

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Introduction and what kind of work was done

What all automation framework that were implemented

What all different patterns that were used

Difference between Serenity and JBEHAVE

What is the project build tool used

How do you manage the execution with dependencies like: out of 10 only 4 tests need to be executed along with dependencies

How were the reports generated in the framework

Usage of TestNG or JUnit

What is Page Object Model and how do you implement

How do we decide when to go to POM and when to not

Experience in working with Selenium RC

Challenges in working with SeleniumRC vs Webdriver

Automation approach for Windows based objects

Automation approach when the web application is having a windows based objects like file upload or download etc

What did you use for CI

Any experience in using Bamboo

You have Maven project - what steps do you follow to setup the CI

Project Management tool experience

Experience in API Testing - and the choice of tool/framework

Why do we prefer REST services over SOAP

Version controlling tools

SQL Queries

Application is AngularJS application - common issue is synchronization - Send keys work sometime and sometimes it does not - what will you do in this kind of situation

Experience in In-Sprint Automation and how do you implement

Experience in working with Multiple-Scrum teams

What do you focus in the elaboration phase

General Observation

If you answer the questions with an example - they understand the skillset of the candidate

In the introduction the candidate needs i speak about what automation tools, domain, SDLC methodology experience and various frameworks

[20 Essential design patterns for automated testing](http://at4qa.blogspot.com/2010/01/20-essential-design-patterns-for.html)

I’m follower of building automated testing by analogy with s/w development in most of practices. Some practices are being grown initially from testing or properly improved in testing as legacy development practice. Actually, I don’t like to separate professional automated testing and development. We produce the same code but having opposite purpose – to check and verify the code of developed software – it does not matter what kind of interfaces we use upon testing. Anyway we test application and by this we test s/w code itself either implicitly or explicitly.  
Design patterns have high importance for building cost-efficient products with high-degree of reusability and based on component oriented models. Design patterns provide abstraction and robust platform for reusable s/w design. My intention is to think over what existing design patterns fit to automated testing. Let’s do this!  
  
As a fan of Web 2.0 and Wikipedia, I’ll refer on definitions and articles by linking to Wikipedia pages. See full list of design patterns on [dedicated page](http://en.wikipedia.org/wiki/Design_pattern_%28computer_science%29). If you need to check details on a particular pattern, just click on appropriate link in Table listing all patterns within section “Classification and list”.

**Creational patterns**

**Abstract factory**. This is a proper mechanism of building abstraction layer for derived object types. For instance, it may be useful for implementation a framework layer responsible for working with different control types (e.g. MFC controls, pure Java controls, .Net controls,…) but operating as a single interface.  
  
**Builder**pattern can be employed on test data construction and as a helper in many cases. Also you can use this approach for test suite initialization, stand preparation  
  
**Factory**pattern can be used in any context for simplification object instantiation. There are a lot of places where you can fit this pattern for auto testing (dynamic and static test data instantiation; logging, reporting, test stand objects, etc)  
  
**Lazy initialization** can be used to reduce expenses of keeping objects in memory. The best way is to combine this approach with object clean up once it no longer is being used.  
  
**Prototype**as creational pattern simplifies object instantiation and avoids sub classing like in abstraction factory model  
  
**Singleton**is a protected method of keeping only one object instance in memory. Where can be used: all objects which should follow through whole test cycle or round, for example, logging and stack trace, high-level test data, environmental data, 3rd party objects initialization to keep resources. If an object is dynamic one, you have to provide special interfaces like update(), rollback(). Also this pattern is proper way for developing high-performance models, optimization resource allocation and expenses and in environments with weak or absenting garbage collection and memory clean up.

**Structural patterns**

**Adapter or wrapper** can be used anywhere for resolving data compatibility and interface simplification. Simple and basic pattern  
  
**Composite**patterns can be used for representation complex object like current test data set in a tree model (one to many relationships). I prefer to rely this approach on XML test data presentation as structured object model  
  
**Decorator**is proper way to extending functionality without affecting original code. I suggest to use it as helper or quick adding workaround s and backdoors  
  
**Proxy**as intermediate level for access control. I’m not sure about usage context in test automation but as this is essential one, I include this to the list. Who knows, maybe this guy can be used in some specific tested applications.  
  
**Facade**pattern. I like to use this pattern for managing test data through uniform interface so that I don’t take care about used test data native. All specific code of data native processors placed somewhere inside, while decorator simply returns an object. Very handy.

**Behavioral patterns**

**Chain of responsibilit**y is a proper pattern for designing own logging and stack trace  
Command pattern. It is extremely valuable for building keyword-driven test automation frameworks where provided interface operates with macro languages. Macro is a composite state which implements completed and composite User step which is actually intermediate level between granular steps and completed workflow (like Use case). The whole workflow (e.g. Use case) is being implemented in test scenario designed from a certain macros (steps).  
Another usage of this pattern is testing transactional logic by mirroring some part of transactional model of application itself on test code.  
  
In joint use with Abstract factory, you can build a layer for typed control of mixed technologies. In my practice, I build object loader and abstracted invoking object properties and methods for supporting different COM object versions at fly. You can go ahead and implement similar abstraction for different technologies, plus empower your design by invention composite commands for batch controls processing. For example, wizards processing by invoking meta-commands (like “set up default settings”)  
  
**Interpreter**can be used to simplify working with custom string patterns. It’s really useful for substituting using predefined templates and for running code pieces using Eval() method  
Iterator is essential for handling corresponding controls, like grids, tables, custom lists. Basic ally, iterator should have first(), last(), next(), add(), remove(), isLast() methods.  
Null object is a basic and helpful approach of default value implementation. I can state – this simplifies routine test development.  
  
**Observer**pattern. I advice to be hand on with this guy especially for testing AJAX applications and other ones which are asynchronous in nature. This pattern can be used in designing event-based test auto9mation frameworks.  
  
**State**pattern. I did not use this one, though I believe it’s a basis of behavior-driven test frameworks  
  
**Strategy**pattern can serve for switching algorithms using polymorphism or reflection (btw, JS implementation is really fun). The Strategy perfectly correspond with Open/Closed principle  
 **Template method** is a generic for designing reusable code (not only object-oriented) with overriding. I’d like to try this template to implement advanced test data engine.  
  
I intentionally left TDD patterns out of this scope, since they are really specific ones, moreover I tried to highlight them (*stub, fixture, fake, mock, object mother, object registry, assertions*) in a [separate post](http://at4qa.blogspot.com/2010/01/adopting-tdd-practices-into-white-box.html). Finally, most of the mentioned patterns are implementable in all modern programming languages (both OO and scripting, like JS, VBS) .  
  
Well, enjoy designing patterns and inventing your own!

<https://en.wikipedia.org/wiki/Software_design_pattern>

<https://www.youtube.com/watch?v=jh7utASgKj4>

<https://dzone.com/articles/how-quickly-get-started-sonar>

<https://www.youtube.com/watch?v=xLO8Q_F3jIg>