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Automation Testing Interview Guide

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Agenda

- General
- Java
- Selenium
- TestNG
- Maven
- Cucumber
- WebService
- Java Programs
- Functional Testing
- Agile
- Managerial

General:

- Tell me about yourself.
- What are your Roles and Responsibilities?
- What is the architecture of your current application?
- What are your Roles & Responsibilities in your current Assignment?
- Which Automation framework you are using in your organization
can you tell me the folder structure and flow of your framework?

Java:

- Why String is immutable in Java?
- What is static in Java?
- What is final in Java?
- What is this word in Java?
- What is finally and where do we use it?
- What is Autoboxing and unboxing?
- What is serialisation and deserialisation?
- What is an abstract modifier?
- What is call by reference and call by value?
- Primitives and Non-Primitives datatypes in Java? String is primitive or non-primitive?

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- What is the method of overloading?
- Why is it important to override `HashCode()` when you override `equals()`?
- What is the difference between a checked and unchecked exceptions?
- Difference between `final`, `finally`, `finalize`?
- Difference between abstract and interface?
- Difference between `String Builder` and `String Buffer`?
- Difference between `Array` and `ArrayList`?
- Difference between `ArrayList` and `LinkedList`
- How to define dynamic array?
- Can we create the object for the abstract classes?
- Can we create the object for an interface?
- Can we create constructor of abstract class?
- Can constructor be overloaded. Explain why?
- Can main method be overloaded?
- Can main method be overridden?
- Can we override static method?
- Can we overload static method?
- Can we write non-abstract methods in Interface?
- Can we execute a java program without main method?
- Can we call a non-static variable in static method?
- Can I execute multiple catch blocks without try will it give me compile time error?
- How to achieve serialization and deserialization?
- If we declare the main method as private what will happen?
- How to check whether the array is empty and null?
- What are the classes available in a list interface?
- What is the use of constructor in java?
- What is Hashmap? Can we store objects in Hashmap and how to retrieve them?
- Difference between Hash Map and Hash Set?
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- Where did you use HashMap in your project and also oops concepts in your Automation Framework? Access modifiers in java and its scope? What is meant by Thread? What is singleton class in java? What is the difference between static binding and dynamic binding? Is Hashmap thread safe? What is static, How to set value of static variable Can we overload private methods? Is it possible to extend Final Class? Is it possible to override Static method?
- Is it possible to overload main method?
- Is it possible to initialize a variable present in an Interface?
- What would happen, if multiple inheritance is possible, in Java?
- Explain Exceptions hierarchy in java?
- Explain Set and Map in Java?
- Explain about Inheritance.
- Difference between overloading and overriding?
- Difference Encapsulation and Abstraction ?
- Difference between throw and throws?
- What is polymorphism?
- How and when to use interface?
- Can we instantiate an interface?
- Can we over load main method in Java?
- Can we override constructor?
- Where do you use polymorphism in java?
- What is the system.out.println? and use of it?
- Why do we use finally and how it differs from the final keyword?
- Can we use multiple catches? When can we use multiple catches?
- Different between POI and JXL?

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- How to prevent the override method in Java? Why is the main method static? What is the use of static variables? What is the difference between list and set? How will you access default and protected class? Why Object creation not possible in Abstract classes? Design pattern in JAVA. What All of the classes in the Java Collection Framework have? Situations when we use abstraction and Interface -
- explanation about loosely coupled and tightly coupled
- Will Java provide default constructor by own ? Difference between ArrayList and Linked List,In which situation they are used ?
- Difference between

List<String> list = new ArrayList<String>() and
ArrayList<String> list = new ArrayList<String>();

- Difference between HashMap and MultiMap?
- In which situation the method should be static and when non static?
- How does HashMap is implemented using key value pair?
- Suppose you have class and abstract class in class there is a user defined constructor and main method which one will get executed first?
- What do you mean by POJO why we use POJO?
- class A have 3 method, class B have 2 method, class B inherited class A, how do you call method of class A by creating object of class B?



Selenium:

- What are the challenges you have faced during testing?
- What strategies you followed while building a selenium framework from scratch?
- Where do you perform the singleton design pattern? If you don't use it, then do you have an idea about this?
- Difference between Implicit, Explicit and Fluent waits in Selenium?
- Pros and cons of Implicit wait and Explicit wait.
- Why we prefer explicit wait instead of fluent wait? What are the disadvantages of fluent wait?
Without implicit wait selenium script will work or not?
- What is default polling time in explicit wait and in implicit wait?
- Explain about synchronization in selenium?
- Which concept they have implemented in explicit and fluent wait?
- Explain abstraction and interface respect of selenium with some example
- Difference between Factory design and Singleton framework?
- What is page object and page factory model?
- Have you used interface in your framework other than selenium interfaces?
- How do you achieve inheritance in your framework?
- What is Webdriver, Name methods which do not have the implementation?
- What are the methods present in the webdriver interface?
- What's the fastest locator in Selenium?
- What does :: (doubles colon) in sibling xpaths represent?
- Explain. "Driver.manage.window.maximize" (talk about option interface here)
- What is difference between get() and navigate().to()
- in Selenium

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- How would you check the broken links, in the webpage?
- Difference between submit() and click() in Selenium?
- Difference between absolute XPath (/) and relative XPath (//)
- Difference between findelement and findelements?
- Difference between frames and iframes?
- Return type of findelement and findelements?
- What error will be thrown when no element found for findelement and findelements?
- State some exception which you have faced in your framework? (Don't mention only selenium explain. Explain java exception also)
- Types of Exceptions and how to handle stale element exception?
- What are the interface used in selenium?
- Where do you used inheritance in selenium?
- How do you initialize web elements in POM? What error or exception will come if not initiated?
- If both wait method that is implicit and explicit is mentioned in the script, then which one is work? is it good practice to mention both in good?
- What is the difference between close and quit in selenium?
- How do you handle Alert in Selenium?
- In a web page, there are several Pop-up, but we don't when the pop-up will appear, in this case how we will handle the Pop-up using Selenium WebDriver (Java)
- How to handle file upload when type attribute does not file for upload web element.
- How to cover character keyboard operation from the context menu utilizing user-defined keyword?

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- Consider this snippet:
`Web driver driver=new chromedriver();`
what does the above code snippet mean?
- Where can “Dynamic Polymorphism” in Selenium WebDriver be observed?
- What is the difference between “/” and “//” in XPath?
- If proper Xpath, CssSelector and ID are not available, how do you identify an object?
- Attributes of CSS Selector?
- Which is most faster xpath or css?
- How to get n-th element using XPath and CSS?
- Consider you are only allowed to use css locator, how will you find the parent/grandparent of a web element?
- Will driver.findElements() throw an exception?
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- What is returned by driver().manage()?
- In selenium, if you want to access the element that has the text “This element has an ID that changes every time the page is loaded” in it, then which of the following will you use?
- On page Object Model Framework (POM), how do you initialize the elements of a page to be used in the runner class?
(name of the PageObjects class is “”SignupPage.java”” and the dirver object name is “”driver””).
- Get the values from the dropdown and print them in Ascending order
- Using TreeSet to find elements command
- Does takes screenshot is interface or class
- Selenium uses lots of third parties jars for scripting. Then why do we still go for selenium?
- Why do we have to use build() and perform() with the action object?

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- Can we use perform() along in scripting without build()
- What is difference between build() and perform() in selenium?
- Return type of getwindowhandle() and getwindowhandles()?
- Window Handling in Selenium -Switching from another window to Parent window
- If the button is disabled? how to check -using getattribute()
- Explain method overloading with selenium and some example
- How do you read excel in the script? (very careful while answering. the counter-question will come as per your answer)
- Do you use the property file in your framework? If yes, then which java concept gets utilize here? (Java Collection)
- On a web page, there are several Pop-up, but we don't when the pop-up will appear, in this case how we will handle the Pop- up using Selenium WebDriver (Java)
- Started automation test suite execution and few test cases are failed in a test run. How can you execute only failed test cases at once (with one click) what design pattern do we use when we trigger different browsers?
- What are approached to handle dynamic WebElement?
- Click last option in the dropdown (Last drop-down changes dynamically)
- How to calculate links on a page? (Answer with HTML tag)
- Write the code to read the value from the excel sheet.
- What is Page Factory in POM Design Pattern?
- Suppose you have 10 pages in your application then how to achieve POM. What you will do?
- Annotation used in Page Object Model?
- Ways to find broken links in Selenium?
- How to handle frame in Selenium?

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- Different types of Navigation Commands?
- How to handle Alerts in Selenium?
- Difference between assert and verify?
- How to download a file using Selenium?
- How do you manage a set of Data Tables in Selenium?
- How do you automate localization testing -diff language in UI?
- How to avoid NoSuchElementException without using try/catch block and with try/catch block?
- How to handle web tables whose values change dynamically?
- How to check whether web element is enabled or Disabled without using isEnabled method?
- Why is CSS locator faster than Xpath?
- Even though CSS is faster than Xpath ,why do 95% of the companies use XPath ?
- Error is throwing as Element not found but when I go and check that element is available in the web page? The element is not hidden so no need to use Java script executor? How do you solve this?
- How do you execute using headless mode?
- In Selenium, how to get text value from text-box if getText() is not working?
- If we are using correct locator but still getting element not found error then how you will resolve this error?
- In Page object model once you create loginpage.java class what is the first thing you start with writing initially. How are you initiating writing something into a page class?
- What if Windows popup occurs during test execution and due to that can't execute automated tests, how u will resolve this error?
- Different ways to handle hidden elements?
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- What is the difference between click() function in webelement interface and click() function in Actions class?
- Is it possible to change the behaviour of a test at runtime?
- Describe how to handle the below items using selenium
 - iframe -windows -table -Alerts
- How to click right click of mouse?
- How to scroll down a page?
- What will driver.getWindowHandels() return?
- How will you automate Windows based application?

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TestNG:

- What is the importance of the testng framework?
- Why we use TestNG in your framework
- What is the purpose of testing XML
- Explain the purpose of listeners? is it the selenium concept of TestNG?
- Case Scenario: How to run the same method 100 times in TestNG with the same data?
- What is the reporting tool in your framework? and why?
- Some questions in TestNG XML?
- What are different testng annotations?
- How can you configure tests in testng?
- What is @dataprovider?
- Difference between @Factory and @DataProvider?
- @Factory explain with real time example?
- Test Order in TestNG?
- How to add/remove test cases in Testng.xml?
- Explain the difference between beforemethod, beforetest, and beforeclass
- List out the testng annotation hierarchy order?
- How you achieve parallel execution using testng?
- Out of 50 testcases, how you will run only the failed testcases?
- How can you take the screenshot for the failed testcases?
- How can you run the same tests for 10 times?
- Types of Listeners?
- TestNG: Parallel executions, Grouping?
- Difference between after suite and before suite?
- What is the use of testng.xml?

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- How many suits can be there in testNG , what if I run all the suits?
- Syntax to perform parallel testing in TestNG and what do you write in <suite tag> also what do you mention in double quotes like parallel = “ ”
- In testNG, do we have multiple suite in one XML file and what If I want to run all suits?
- What is invocationcount in testng?
- Cucumber tags and annotations?
- What is background in Cucumber?
- Difference between Scenario and Scenario Outline?
- Write skeleton of test runner?
- Explain retry analyzer?
- Cucumber tags? And how to run different combinations of tags when multiple tags are present
- Difference between hooks and tags?

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Maven:

- Lifecycle of Maven
- Use of Maven surefire plugin. If yes, where and why?
- What is the use of pom.xml?
- CI / CD tools
- What is Jenkins?
- How will you handle dependencies in Maven at run time?
- Today we have executed some tests using maven, but tomorrow when you see that someone deleted all dependencies from .pom file then in that case will you be able to execute tests or not.
- Consider you have to write test/suite for different environments(qa, preproduction, production) and pass different set of data for each environment. How will you do it using maven file(Pom.xml)? Can you give some basic
- commands used in maven project? How will you configure
- Jenkins job? What are two components Jenkins is integrated with?
- How you will schedule the deployments?
- What is the purpose of version control tool?
- What are the git commands you have used?
- What is difference between group id and artifact id?
- How and when is Jenkins is used in your Automation?

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Cucumber:

- What is Cucumber, and why is it used in BDD?
- What are Gherkin keywords, and can you name some of them? (e.g., Given, When, Then, And, But)
- How do you structure feature files in Cucumber?
- What is the difference between Scenario and Scenario Outline ?
- How are step definitions mapped to feature file steps?
- How do you parameterize steps in Cucumber?
(Explain usage of regular expressions or <placeholders> in steps.)
- What happens if multiple step definitions match the same step?
- What are tags in Cucumber, and how are they used?
- Explain the different types of hooks (@Before , @After , etc.) in Cucumber.
- Can you run specific scenarios based on tags? How?
- How do you handle test data in Cucumber scenarios?
- What is the difference between DataTable and Examples ?
- How do you convert a DataTable to a list or map in step definitions?
- How do you integrate Cucumber with Selenium WebDriver?
- Can you run Cucumber tests in parallel? How?
- What is the role of the Runner class in Cucumber?
- How do you handle dynamic locators in Cucumber steps?
- What are some common challenges in writing Cucumber tests, and how do you solve them?
- How do you manage reusable step definitions across multiple feature files?
- How do you ensure Cucumber scenarios remain readable and maintainable?
- What does your Cucumber framework structure look like?
- How do you handle reports in Cucumber (e.g., Allure or ExtentReports)?
- Explain the significance of the cucumber.properties or cucumber.yml file.
- How do you ensure collaboration between developers, testers, and business stakeholders in BDD?
- Can you share an example of how you wrote a complex scenario in Cucumber?
- How do you decide whether a scenario should be automated or not?

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WebService:

- Difference between REST and SOAPUI.
- Method in REST.
- Difference between PUT and PATCH call
- How to integrate postman to project?
- How will you handle dynamic payloads in API?
- How do you capture specific responses value and pass to other request?
- What challenges you faced in API testing?
- What is difference between Authorization and Authentication?
- What are the API status codes, you have come across?
- What is difference between OAuth1.0 and OAuth2.0 ,When and where do you use and how. Can you write a sample code?
- How you get the response from one api and send to another api?



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Java Program:

- Swap string without 3rd variable?
- Duplicates in a String?
- How to find the length of the string without using length?
- Largest Number in an Array?
- Reverse string without using reverse function
- Write code to print the Fibonacci series?
- Write code to print only the even numbers from an array.
- Write code to find special character, number, capital and small letter in a given string.
- Write code to check if a number is palindrome?
- Write a code to reverse the code, without using the built-in method.
- Write a Java code to identify, if the pair of strings are an Anagram or not?
- Write a code to get Highest number using array.

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Functional Testing:

- What is Test Plan? Explain the bug life cycle? Difference between smoke and sanity tests? Difference between regression and retesting? Difference between functional and regression testing? Difference between severity and priority?
- Difference between Test Plan and Test Strategy? Difference between boundary value analysis and equivalence partitioning? Difference between white box and black box testing? If we are having 1000 test cases, what type of testing carried for automation testing? Can we write a method that returns two or more values? If then, how?
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- Bug Life Cycle?
- Bug Triage?
- What is exploratory testing?
- What is adhoc testing?
- What is build acceptance testing?
- What is difference between Validation and Verification?
- Explain severity and priority and High severity with low priority, low severity and high priority?
- Given the test cases having priority of -1,0,1,2 tell me the sequence of execution.
- Explain inner join and outer join in SQL?
- Difference between DELETE,DROP & TRUNCATE?
- What are test design techniques?
- What is deferred bug?
- How you will decide what tests to automate?
- When you decide to stop the testing?
- If your testsuite takes 1 and half to run, what you will do to reduce the time?

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- How many test cases in your regression testsuite? How much time it will take to execute?
- How to cover character keyboard operation from the context menu utilizing user-defined keyword?
- What is most important things to define in a bug?
- Can tell about any achievements you have done in automation?
- Can you tell me the difference between bdd and tdd?
- What is a test plan and what are the steps to create a test plan?
- What are the inbound and outbound for testing?
- What is smoke, regression and sanity testing?
- What is the next step to be taken, if developer rejects the Open defect?
Explain the test metrices?
- How would you priorities Tests?
- How do you perform Automation Code Review/ Walk Through in your project?
- There are 250 manual test cases , how will you segregate (on what basis) the regression , sanity , smoke suite?
- When Regression ,Sanity , smoke test scripts are executed ?
- How will you decide that this test case is feasible or good candidate for automation ?

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Agile:

- What is an agile methodology?
- What is the scrum and who is your scrum master?
- Ceremonies followed in Agile methodology?
- Retrospective meeting?
- Describe Scrum ceremony?
- When do you automate in current sprint or next sprint?
- Explain velocity in sprint.
- In tight sprint schedule, if a new requirement is added, how will you handle this situation?
- What is backlog in Scrum methodology?
- You have 30 + sprints in your release how will you design your test scripts and run them?



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Managerial round:

- How you will be an asset to the team?
- Why you are looking for a change?
- How soon you can join?
- Suppose if we give manual testing for six months or one year what will you do?
- How interested are you in learning new technologies?
- Failures in your work life.
- As Lead, how do you define quality of product before releases?
- Suppose you are the team QA and 1 new member joins your team and at the same time you have a deadline to meet in next 2 or 3 days so how will you involve that new member in team so that you can utilise him/her to meet deadlines?
- As a QA, where do you see yourself after 3 years?
- What are your strengths and Weakness?
- What are some best practices you learnt and how much difference it made in testing career? Explain before and after situations
- After you have run a full regression test, and find new regression bugs, which bugs would you prioritize. Bugs that suggest that functionality has regressed, or bugs that appear in new features?

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