Agile / Automation Testing Interview Questions and Answers

What is Agile Testing and how is it different to the traditional waterfall or the V model?

Agile Testing is testing practice that follows the principles of agile software development. Agile testing involves all members of an agile team with special skills and expertise to ensure business value is delivered at frequent intervals.

The big difference is that in an agile environment, testing is not a phase, it is an activity parallel to development.

In an agile environment, small features of the software are delivered frequently, so testing activity should be parallel to development activity. Testing time is short as we are only testing small features.

In the waterfall model, there is a testing phase at the end of the development so, testing is a big effort done after the whole application is developed. Testing time is long as we have to test the whole application.

What is your approach when requirements change continuously?

This question can be asked if you are interviewed for an agile QA position where requirements are likely to change frequently during development. Although a complete change in requirement is possible, most of the time, it is the technical details that are subject to change. e.g. the intent of the requirement or behavior of the feature is the same but implementation details can change

Some possible answers can be:

- Write generic test plans and test cases which focus on the intent of the requirement rather than its exact details
- Work very closely with the product owners or business analysts to understand the scope of change so testing can be updated
- Make sure the team understands the risks involved in changing requirements especially towards the end of the sprint
- If you're going to automate this feature, it is best to wait until the feature is stable and requirements are finalized
- Negotiate to see if the changes can be kept to a minimum and/or implement the changes in next sprint

What are good characteristics of an Agile Tester / QA?

When attending an Agile Testing Interview, questions can be asked to find out what you really understand from an Agile Tester or Agile QA role and how you will fit with the rest of the team.

Some good characteristics of an Agile Tester are:

- Good communicator – In agile teams, there is an increased level of communication with the Devs, QAs, and BAs
- Priorities change frequently in agile projects, so the Agile QA should be able to prioritize the tasks accordingly
- Should not be afraid of change
- Ideally, Agile Testers should be multi-skilled and technical or at least understand the technical terminology so that they don't feel alienated from the rest of the team when developers talk in technical terms
- Should understand Agile concepts and principles
- Participate in daily sprint planning, stand-ups, retrospectives. Note the word Participate, meaning to actually talk and take part in discussions rather than just attending the meetings

What are the two key factors when working as a QA in an Agile team?

QAs can add a lot of value to an agile team because of the different mindset. Testers can and should think about the different possible scenarios to test a story. However, the most important asset that they can bring is:

- To prevent defect. QA should advocate best practices along the way to prevent defects from entering the system in the first place.
- To provide fast feedback. It is important for developers to know if the new functionality works as expected and if regression tests pass, and they need that feedback quite quickly. QA should provide the results of the tests to developers as soon as possible.

What are the three main roles in Scrum?

The Scrum team consists of three main roles:

- **Product Owner:** Manages the product backlog. PO is the voice of the business and creates new features to be developed for the application.
- **Scrum Master:** Responsible for managing the sprint, remove any impediments and keeps track of the progress of the project.
- **Scrum Team itself:** Composed of developers, designers, and QA. This forms the team which is responsible for delivering high-quality software.

Test Automation Interview Questions and Answers

This section focuses on Test Automation Interview Questions and Answers. Rather than being tool specific, e.g. QTP or Selenium, WebDriver, the questions are more about the approach to test automation.

What criteria do you consider for automating a test?

I would consider the following points to help me decide if a test should be automated:

- How often does the test need to be executed? i.e. is that going to be a regression test? Sometimes the test will need to be executed once, but with a large set of data.
- How much time does automating this test will save me so that I can use my time in exploratory testing.
- How important is the test to the business; i.e. is the test scenario a typical user journey through the application.
- How complex is it to automate the test and how likely is it that the complexity doesn’t cause many false positives which increases results analysis time?
- How likely is it that this test catches a defect?
- How likely is it that a feature or functionality will break and what is the impact of it on the business? If it is high impact, then it should be automated to ensure it passes from release to release

What kind of tests should NOT be automated?

This interview question is similar to the previous question but focuses on which tests Not to be automated and left for manual testing. Possible answers can be:

- Usability Testing – at times this can be an impossible task to perform by automation as the computer cannot efficiently judge if the system is of any use to its users.
- Tests that only need to be executed once – unless the same test needs to be executed for a large dataset then it makes sense to automate.
- Tests without predictable results – test automation should give us confidence in the results of the tests. If there are intermittent failures then the tests cannot be reliable and cannot be dependent on.
- Tests that need to be verified visually.

- Tests that need to be executed quickly. At first, writing an automated test takes longer. If we want a quick check, we should test manually, however, if that test is a good one which should be run regularly, then it should be automated in time

What are Pros and Cons of automating tests at UI layer?

Pros:

- UI automated tests execute in a way that simulates a user interacting with the system. So it is very good for validating user journeys and flows
- Can cover end-to-end flows that communicate with 3rd party systems
- Because tests are run against the system, they can be shown to the customer who can understand what tests are run
- Can catch high severity or showstopper bugs
- Can check UI functionality where it is not possible to test otherwise

Cons:

- UI automated tests can be very brittle (i.e. fail due to UI changes even though functionality hasn't changed).
- Slow feedback to the team. Execution is slow as you have to wait for the system to launch and connections with 3rd party system can take a long time.
- Limitation on what can be checked from the UI. There is some information that is not present from the UI.
- Because tests are slow from UI, we can't have a lot of tests running against the UI.
- Can be time-consuming to construct automated test scripts for the UI.
- Usually, have to depend on a 3rd party tool or vendor for UI testing

Why would you want to automate a test? Is it to:

- Increase test coverage?
- Improve quality?
- Save time for exploratory testing?

- Find more bugs?
- Replace manual testers?

Web Testing Interview Questions

In this section, we discuss some common Web Testing Interview Questions and Answers. These questions are specific to **web testing**.

How do you test the login feature of a web application?

This is a very common software testing interview question and the aim is to see how broad you can think about the feature. Most interviewees start with the obvious answer of checking input fields with positive and negative values, invalid email, valid email but incorrect password, SQL injection, etc. But most of these tests can be done and should be done by the developers as part of integration testing.

Here the focus is on testing at the system level, tests which cannot be done without a fully integrated system.

Possible answers to this testing interview question can be:

- Sign in with valid login, Close browser and reopen and see whether you are still logged in or not.
- Session management is important – how do we keep track of logged in users, is it via cookies or web sessions?
- Sign in, then log out and then go back to the login page to see if you are truly logged out.
- Log in, then go back to the same page, do you see the login screen again?
- Sign in with one browser, then open another browser to see if you need to sign in again?
- Log in, change the password, and then log out, then see if you can log in again with the old password.

Explain the difference between Authorization and Authentication in Web testing.

The difference between Authorization and Authentication is explained in below table:

	Authentication	Authorization
1	Authentication is the process with which the system identifies who the user is?	Authorization is the process with which system identifies what user is authorized to do?
2	Authentication determines the identity of the user.	Authorization decides the privileges given to the user i.e. whether the user can access or manipulate features of certain program.
3	There are different types of authentications, like password based, device based, etc.	There are two types of authorizations, like read only and read write both.
4	For example: Within an organization, each and every employee can login into an intranet application.	For example: Only account manager or person in accounts department can access account section.

What are the types of Web testing security problems?

Few web security problems include:

- Denial of Service (DOS) attack
- Buffer overflow
- Directly passing internal URL through browser address
- Viewing other stats

What are the common problems faced in Web testing?

Some of the common problems faced in web testing are enlisted below:

- Server Problem, which includes server down and server under maintenance problems.
- Database connection problem.
- Hardware and browser compatibility problems.
- Security related problems.
- Performance and load related problems.
- GUI (graphical user interface) related problems.

What is Cookie testing?

Cookie is said to be a personalized user's identity or information which is required to communicate between different web pages as well as track user's navigation through the website pages. Whenever we access any website on any web browser, their respective cookie is written on the hard disk.
Cookies are used to track user sessions, displays ads, remember user's choice while accessing any website, remember and retrieve user's shopping cart, track the unique number of visitors, etc.

Suppose an e-commerce site is accessible in many countries like US, Canada, Australia and their testing is done in India. In that case, while testing the e-commerce site for different countries in India, at first respective countries cookies is set so that actual data like time zone etc., are accessed of that particular country.

What Types of Testing is Specifically Important for Web Testing?

This is also an important Software Testing interview question for web application testing roles. Note, this question is asking about the ***types*** of testing.

Although you would do functional testing, usability testing, accessibility testing, etc, these are all also applicable to desktop application testing. The question is asking specifically for web testing.

Two types of testing which are very important for testing web applications are Performance Testing and Security Testing. The difference between a web application and desktop application is that web applications are open to the world, with potentially many users accessing the application simultaneously at various times, so load testing and stress testing are important.

How do You Verify the Results of Your Search on Search Results Page?

This is another common Software Testing Interview Question for **e-commerce testing** roles. This question refers to verifying the results are what we expect to see.

Suppose you search for a product on Amazon.com website. On the search results page, you will see a list of items related to your search. How can you verify that the results that you see are really the ones that you are supposed to see?

The answer to this question is rather simple. At first instance, we need to know where the data is coming from. Are they coming from a database? Or some XML files from 3rd party websites?

Once we have this information, we can start comparing the results we see on the result page with the results from the source, e.g. database.

How is Web Application Testing different to Desktop Application Testing?

Web Applications are typically hosted on a server which we can access via a web browser, whereas desktop applications are installed on the client’s machine.

This setup opens a lot of new testing challenges: Performance and Security testing become important as the application is open to a wide audience. Good design and usability are also important.

Other important factors that come to play are testing on multiple browsers, multiple devices, redirection, and responsiveness.

Also, we should not forget about Javascript, CSS, Cookies, W3C standards, traffic monitoring, third-party tags testing, all of which are important in Web Application Testing.

API Testing Interview Questions and Answers

Many of the new modern web applications are built using web-services, micro-services, and APIs. As testers, we should be knowledgeable and experienced in testing APIs and Web Services.

Here are some fundamental API Testing Interview Questions mainly aimed at software testers.

What is the difference between API Testing and Unit Testing?

API testing and unit testing are not the same things, although they are similar. Unit testing is done by the development team to make sure that a particular unit of software functions as required; since it is not black-box testing, it can't accurately reflect the use of that software in the field.

To put it bluntly, developers know their software too well, so they're likely to miss something which may be blindingly obvious to a tester who is not acquainted with the software's internal workings.

The job of the API tester is to test the software knowing only what a user is likely to know. API testing also tests the unit as part of a system, while unit testing typically tests the unit in relative isolation from the rest of the system.

Real web API testing requires an internet connection since communication to the Web API is done over the web. Unit testing is done on a local machine and requires no internet connection.

Unit Testing

- Developers perform it
- Small units are tested in isolation
- The developer can access the source code
- Aims to find programmer errors and code coverage
- Limited in scope
- Usually ran before check-in

API Testing

- Testers perform it
- Are a means of end-to-end testing
- Testers treat API as black-box

- Multiple functionalities can be checked
- Performance testing can also be done
- All functional issues are tested
- Broader in scope
- Ran after build is created

What’s the difference between UI level testing and API level testing?

With API testing, we can hit the API endpoint directly and have control of what data we send to the API for testing purposes. e.g. invalid data, malformed requests, etc.

In UI level testing, we don’t have that level of flexibility because we are bound by the constraints of the UI.

Also in terms of the response of API, there could be a lot of information which is not presented in the UI layer, but only available when analyzing the response body.

UI level tests are inherently slow to execute, whereas API level tests are a lot quicker. As a result, API tests provide a much quicker feedback.

How to perform API Testing? What to check for?

In API Testing, we make a request to the API with known data and we then analyze the response for validation. Typically, the things which we should check for are:

- Data accuracy
- Data validations, data type, data order, data completeness
- Error codes if API returns
- Schema validation

- Authorization checks
- HTTP status codes
- Response timeout implementation
- Non-functional Testing such as Security and Performance Testing

What tools are typically used for API Testing?

Postman is a rest client that started off as a Chrome browser plugin but recently came out with native versions for both Mac and Windows.

- Can be used for both automated and exploratory testing
- Can be run on Mac, Windows, Linux &Chrome Apps
- Has a bunch of integrations like support for Swagger & RAML formats
- Has Run, Test, Document and Monitoring Features
- Doesn’t require learning a new language

SoapUI is a headless functional testing tool from SmartBear software. It comes in two flavors: Free open source version and Pro Version.

- Can easily create custom code using Groovy
- Drag and Drop Test Creating
- Can create complex scenarios
- Asynchronous Testing
- SoapUI’s Mock Service lets you mimic web services before they are implemented

Rest-Assured is an open-source Java Domain-specific language (DSL) that makes testing REST service simple. It simplifies things by eliminating the need to use boiler-plate code to test and validate complex responses. It also supports XML and JSON Request/Responses.

- Removes need to create boilerplate code required to interact with a rest service
- Support BDD Given/When/Then syntax
- Integrated seamlessly with Java projects

Selenium WebDriver Interview Questions and Answers

Here, we will cover some common selenium interview questions. Selenium WebDriver is a very popular browser automation testing tool and is used by many companies.

When you apply for a job as an automation tester, you are most likely be expected to have experience working with Selenium WebDriver, so there will be questions at the interview to assess your knowledge of the selenium tool.

Previously, we covered some **Test Automation Interview Questions** which are focused on the approach to test automation, here the main focus is on selenium tool and what questions you are likely to be asked at an interview.

What is Selenium?

Selenium is a browser-based functional test automation tool. It is basically a library which you can use in your program to test a web application. It is important to note that selenium is mainly used for browser automation. It is NOT used for unit testing or API testing.

Selenium Webdriver has many language bindings, which means you can write your tests in your favorite programming language and using the respective selenium bindings.

Help : https://www.testingexcellence.com

Enlist some important test scenarios for testing a website.

There are many parameters that should be considered while deciding the important test scenarios for testing any website. Also, the type of website to be tested and its requirement specification plays an important role here.

Enlisted below are few important test scenarios that are applicable for testing any type of website:

- Test the GUI (Graphical User Interface) of the website for checking the consistency of the design elements and page layout.
- All page links and hyperlinks are checked for their redirection to the desired page.

- In case of presence of any forms or fields on the website, testing scenarios consist of testing with valid data, invalid data, testing with existing records as well as testing with empty records.
- Functionality testing as per the requirement specification is done.
- Performance of a website is tested under heavy loads to determine the web server response time and database query time.
- Compatibility testing is done to test the behavior of an application on a different browser and OS (operating system) combinations.
- Usability testing and Database testing is also performed as a part of test scenarios.

What are the different configurations which have to be considered while testing a website?

Different configuration includes different browsers as well as an operating system on which a website is being tested. Browser plugins, text size, video resolution, color depth, browser setting option also come under consideration when we talk about configurations.
Different combinations of browsers and operating system are used to test the compatibility of the website. Usually, the latest and the last latest versions are included. Well, these versions are usually specified in the requirement documents.

Few important Browsers include:

- Internet Explorer
- Firefox
- Chrome
- Safari
- Opera

Few important Operating systems include:

- Windows
- UNIX
- LINUX
- MAC

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