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PRAMOD DUTTA

Most Asked Interview Questions

50 SELENIUM INTERVIEW QUESTIONS...

Super Important

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Q1. What is Selenium?

Selenium is an open-source automation testing tool for web applications across different browsers and platforms.

Q2. What are the different components of Selenium?

Selenium has four main components:

- Selenium IDE
- Selenium RC (deprecated)
- Selenium WebDriver
- Selenium Grid

Q3. What are the advantages of Selenium?

- Open-source and free
- Supports multiple browsers and platforms
- Supports various programming languages (Java, Python, C#, etc.)
- Strong community support
- Integration with other tools like TestNG, JUnit, Maven, etc.

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Q4. What are the limitations of Selenium?

Cannot test desktop applications

- No built-in reporting
- Limited support for handling CAPTCHA and images
- Requires external tools for handling mobile testing

Q5. What is Selenium WebDriver?

Selenium WebDriver is a web automation framework that allows you to execute cross-browse tests.

Q6. What is the difference between Selenium IDE and WebDriver?

- Selenium IDE is a record-and-playback tool that's simpler but limited.
- WebDriver allows advanced scripting and supports multiple browsers, programming languages, & frameworks.

Q7. What browsers does Selenium support?

Selenium supports major browsers like Chrome, Firefox, Safari, Edge, and Internet Explorer.

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Q8. What is the difference between findElement() and findElements()?

- **findElement():** Returns a single WebElement.
- **findElements():** Returns a list of WebElements or an empty list if no elements are found.

Q9. Can Selenium be used for mobile testing?

Selenium itself cannot test mobile apps directly, but tools like Appium extend Selenium WebDriver functionality to mobile platforms.

Q10. What is Selenium Grid?

Selenium Grid allows parallel test execution on multiple machines and browsers to speed up the testing process.

Q11. What is the difference between implicit and explicit waits?

- **Implicit Wait:** Applies to all elements and sets a default wait time if an element is not found immediately.
- **Explicit Wait:** Applies to specific conditions or elements.

Q12. What is Fluent Wait in Selenium?
Fluent Wait is a type of explicit wait where you can set the polling frequency and conditions for waiting, allowing customization beyond default waits.

Q13. What is a headless browser?
A headless browser performs the same functionality as a standard browser but without the graphical user interface (GUI). Common examples include Chrome headless and PhantomJS.

Q14. Can Selenium handle windows-based popups?
Selenium cannot directly handle windows-based popups because it's a web-based automation tool. Third-party tools like AutoIt or Robot class are needed.

Q15. How can you handle JavaScript pop-ups in Selenium?
JavaScript alerts, prompts, and confirmation boxes can be handled using Selenium's switchTo().alert() method.

Q16. What is the difference between a window handle and a window title?

- **Window Handle:** A unique identifier assigned to each window opened by the browser.
- **Window Title:** The name displayed in the title bar of the browser window.

Q17. What is the Page Object Model (POM)?
POM is a design pattern that creates an object repository for web elements, allowing tests to be more maintainable and readable.

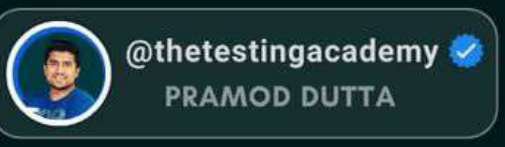
Q18. What is Page Factory in Selenium?
Page Factory is an implementation of the POM, providing annotations like @FindBy to initialize web elements easily.

Q19. How do you take a screenshot in Selenium?
Selenium WebDriver provides the TakesScreenshot interface for capturing screenshots.

Q20. What are some common exceptions in Selenium?
- NoSuchElement Exception
- Timeout Exception
- Element Not Visible Exception
- WebDriver Exception
- Stale Element Reference Exception

Q21. What is the purpose of driver.quit() and driver.close()?
- **driver.quit():** Closes all browser windows opened by the WebDriver.
- **driver.close():** Closes the current browser window.

Q22. How can you switch between different browser windows or tabs?
- Use the **getWindowHandles**() method to get all the window handles and then switch using **switchTo**().**window**(handle).



Q23. What is the difference between is Displayed(), isEnabled(), and isSelected()?

- **isDisplayed():** Checks if the element is visible on the page.
- **isEnabled():** Checks if the element is enabled for interaction.
- **isSelected():** Checks if a checkbox or radio button is selected.

Q24. How do you handle frames in Selenium?

Use the switchTo().frame() method to handle frames and move between them.

Q25. What is an iframe, and how do you handle it?

An iframe is an inline frame used to embed another document within the current HTML document. Handle iframes using switchTo().frame().

Q26. What are some Selenium alternatives for browser automation?

Alternatives include Cypress, Puppeteer, TestCafe, and Playwright.

Q27. Can Selenium be integrated with test management tools?

Yes, Selenium can be integrated with tools like TestNG, JUnit, Jenkins, and others for reporting, test case management, and CI/CD.

Q28. What is the use of Actions class in Selenium?

- The Actions class allows you to simulate keyboard and mouse events such as drag-and-drop, hover, and right-click

Q29. What is XPath?
XPath is a query language used to select nodes from an XML or HTML document.

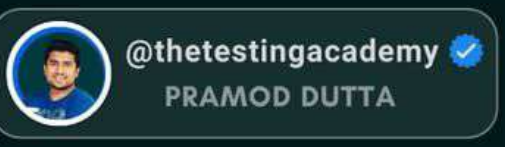
Q30. What is the difference between absolute and relative XPath?
- **Absolute XPath:** Starts from the root node and uses a full path (/html/body/div).
- **Relative XPath:** Starts from the middle of the DOM structure (//div[@id='example']).

Q31. What are the different types of waits in Selenium?
- Implicit Wait
- Explicit Wait
- Fluent Wait

Q32. How can you maximize a browser window in Selenium?
Use driver.manage().window().maximize() to maximize the browser window.

Q33. How do you run tests in multiple browsers using Selenium?
Use WebDriver's interface for different browsers (ChromeDriver. FirefoxDriver, etc.), or use tools like TestNG with browser parameters for cross-browser testing.

Q34. What are WebElements in Selenium?
- WebElements represent elements on a web page (e.g., buttons, input fields) that Selenium can interact with.



Q35. What is the use of get() and navigate().to()?

- **get():** Navigates to a specified URL and waits for the page to load completely.
- **navigate().to():** Also navigates to a URL but doesn't wait for the full page load.

Q36. How do you perform a double-click action in Selenium?

Use the Actions class and call doubleClick() on the WebElement.

Q37. What is the role of TestNG in Selenium?

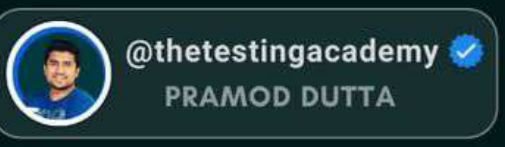
TestNG is a testing framework integrated with Selenium for managing test cases, running parallel tests, generating reports, and handling assertions.

Q38. How can you upload files in Selenium?

You can simulate file upload by using the sendKeys() method to input the file path into an upload field.

Q39. What are some common strategies to locate elements in Selenium?

- ID
- Name
- Class Name
- Tag Name
- Link Text / Partial Link Text
- CSS Selector
- XPath



Q40. What is the difference between getText() and getAttribute()?

- **getText():** Retrieves the visible inner text of a WebElement.
- **getAttribute():** Retrieves the value of a specific attribute of the WebElement.

Q41. Can Selenium handle HTTPS certification issues?

Yes, Selenium can handle these issues using browser-specific settings or DesiredCapabilities.

Q42. What is the role of JavascriptExecutor in Selenium?

JavascriptExecutor allows executing JavaScript code within the browser, which can be useful for handling dynamic elements or scrolling.

Q43. What is the importance of DesiredCapabilities in Selenium?

DesiredCapabilities is used to set browser properties like browser name, version, platform, etc., before starting the WebDriver session.

Q44. What is the difference between WebDriver and Remote WebDriver?

- **WebDriver:** Local browser automation.
- **Remote WebDriver:** Automates a browser on a remote server (used in Selenium Grid).

Q45. What is a proxy in Selenium, and how do you use it?

A proxy server can be used to route traffic through a middle layer for testing purposes. You can configure proxies using DesiredCapabilities.

Q46. What is a WebDriver Wait in Selenium?
WebDriverWait is an explicit wait applied to wait for a specific condition or element before throwing an exception.

Q47. Can you automate Captcha using Selenium?
No, Captcha is designed to prevent automation, so you cannot automate it using Selenium.

Q48. What is the difference between navigate().refresh() and driver.get(driver.getCurrentUrl())?

- **navigate().refresh():** Refreshes the browser window.
- **driver.get(driver.getCurrentUrl()):** Loads the current URL again, which also results in a page refresh.

Q49. What are Selenium's advantages over QTP/UFT?

- Open-source (free)
- Supports multiple programming languages
- Cross-platform
- Larger community support

Q50. Can Selenium automate desktop applications?

- No, Selenium can only automate web applications. Desktop automation requires tools like AutoIt or Robot Framework.
- This list will help you navigate key concepts around Selenium without touching on any coding-related aspects.