

Selenium & Browser Configurations

In this session, I will explain the different Browser Configurations which can be done by Selenium on the below browsers:

- Firefox
- Chrome
- Internet Explorer

The following are the different configurations, which will be explained for each and every browser listed above:

- Browser Logs
- Path to Browser exe files
- Page load strategy
- Profiling
- Notifications
- Certificate
- Proxy Settings

Selenium Firefox Configurations

- Make sure that you have latest firefox browser installed before proceeding
- Demonstrate how the logs are displayed in the output console - [Demonstrate here](#)
- Demonstrate disabling the logs displayed in the output console - [Demonstrate here](#)
 - `System.setProperty(FirefoxDriver.SystemProperty.BROWSER_LOGFILE,"null");`
- Tracking the logs in a separate log file - [Demonstrate here](#)
 - Create Logs folder and Firefox.log file under it
 - `System.setProperty (FirefoxDriver.SystemProperty.BROWSER_LOGFILE,System.getProperty("user.dir")+"\\Logs\\Firefox.log");`
- When Selenium is unable to find the exe file of Firefox in your machine - [Demonstrate here](#)
 - `FirefoxOptions options = new FirefoxOptions();`
 - `options.setBinary("C:\\Program Files (x86)\\Mozilla Firefox\\firefox.exe");`
 - `WebDriver driver = new FirefoxDriver(options);`
- When you have to change the default page load strategy
 - When this option is not set, Selenium will wait for the complete page to load before performing any actions on the page
 - `options.setPageLoadStrategy(PageLoadStrategy.EAGER);` - [Demonstrate](#)
 - Selenium performs actions while the page is still loading
- When we want Selenium to open a specific Firefox Profile
 - Default Firefox Profile
 - Install Selenium IDE in default Firefox profile and launch it to understand the default profile
 - Based on our needs we can create multiple profiles in Firefox Browser
 - Each and every Firefox profile we create, will have its own add-ons, settings, customization and other personalized settings
 - Pin the Firefox Browser to Taskbar, Right click on it and select 'Properties' > Target > Shortcut field > Add -p at the end of the firefox.exe path and Apply
 - Now try to launch the Firefox Browser from Taskbar and observe that 'Firefox - Choose User Profile' dialog will be displayed
 - Create a new profile, name it as Profile2 and click on Finish button and start the browser
 - A brand new profile named as 'Profile2' will be launched
 - Install a Weather Firefox Plugin in Profile 2
 - Similarly you can create multiple profiles having different Addons installed, customizations done.
 - Default profile is having Selenium IDE addon installed
 - Profile 2 is having Weather Plugin installed
 - Selenium while launching the browser, will launch a brand new profile every time - [Demonstrate here](#)
 - Now using Selenium we can launch a specific Profile say 'Profile2' needed instead of launching a brand new profile every time - [Demonstrate here](#)
 - Create an object for ProfilesIni which represents all the profiles in our Firefox Browser
 - `ProfilesIni allProfiles = new ProfilesIni();`
 - Using `getProfile()` of ProfilesIni Class, retrieve the profile we want to launch using Selenium

- FirefoxProfile profile2 = allProfiles.getProfile("Profile2");
- Create an object for FirefoxOptions and using its object set the firefox profile
 - FirefoxOptions options = new FirefoxOptions();
 - options.setProfile(profile2);
- Pass this options to the constructor of FirefoxDriver
 - WebDriver driver = new FirefoxDriver(options);
- Disable the web notifications
 - Demonstrate how the web notifications display in <https://www.jabong.com/>
 - Disable the web notifications - [Demonstrate here](#)
 - profile2.setPreference("dom.webnotifications.enabled",false);
- Handling Certificates
 - What are certificates?
 - SSL Certificates when installed on Web Servers will create a secured connection between Browser and Web Server
 - SSL Certificates are for securing the data that is in transit between the Client Browser and Web Server
 - The data via the secured connected will be transferred in an encrypted format, so that only the Web Server can understand
 - Websites having SSL Certificates installed, can be accessed over HTTPS protocol (Example: <https://www.seleniumhq.org>, <https://www.hdfcbank.com>)
 - Demonstrate opening the application which is not SSL Certified using HTTP protocol - Demonstrate via Manually Browsing <http://www.cacert.org/> here
 - Demonstrate opening the application which is not SSL Certified using HTTPS protocol - Demonstrate via Manually Browsing <https://www.cacert.org/> here
 - If you see the same problem anywhere while browsing in the Firefox Browser, you can handle it using the below Selenium Code - [Demonstrate here](#)
 - profile2.setAcceptUntrustedCertificates(true);
 - profile2.setAssumeUntrustedCertificateIssuer(false);
 - This will add an exception to proceed with HTTPS protocol
- Proxy Settings
 - There may be some situations where the Browser is not allowed to directly communicate with the actual web server for security reasons.
 - Instead the Browser has to connect to a proxy server which acts as a mediator between your browser and actual web server
 - In such situations, we have to manually set the proxy settings in the Browser
 - Have to select the 'Manual proxy configuration'
 - Have to provide the IP address of the proxy server into HTTP Proxy (Dummy IP address say 192.168.30.3)
 - Have to enter the port number of the proxy server into Port (Dummy port say 9193)
 - Once we set the above proxy settings manually, then our browser will be able to communicate with the actual web server via proxy server
 - To set the proxy setting from the Selenium program, we have to implement the below steps in Selenium - [Demonstrate here](#)
 - profile2.setPreference("network.proxy.type", 1);
 - profile2.setPreference("network.proxy.http", "192.168.30.3");
 - profile2.setPreference("network.proxy.http_port", 9193);
 - After running this selenium code, go to the Firefox proxy settings and observe that the proxy settings are automatically set by Selenium
- Delete the newly created profiles carefully
 - Delete the Profile2
 - Don't delete the default profile
 - Remove -p from the Firefox.exe path