Automate the Web Application.

DESCRIPTION

Project objective:

Use the website link given to you and automate different functionalities for the same. Create a new project and include all the dependencies in the class path. Create a Java class that will contain your automation and test scripts. Run the project using TestNG.

You must use the following:

- Eclipse as the IDE
- TestNG
- Selenium WebDriver

Web Automation approaches

When it comes to web automation, there are several common approaches, depending on the task, the resource you need to automate and your coding skills (or lack thereof). In this post, we will focus on the codeless automation capabilities, which don't require any programming skills and are available for business users who want to automate their web tasks.

Mimicking user actions

One of the ways to automate tasks performed by a person on a web page is to mimic the actions they do, e.g. hover over menu elements, click on buttons, etc. In this case, a bot would repeat a person's behavior exactly, action by action.

Interacting with elements in the background

Using the special pre-built actions, you can program your bot to perform some tasks that you do online, but faster and more efficiently, by having the interactions with web elements occur through special locators: XPaths. In this case, the actions the bot takes can differ from the actions a person would do in this situation.

Let's see how these two approaches can be used in a web automation script, based on Example 2 from the post "How a Bot Thinks," published recently.

Task: Fill in and submit an online form

Person's actions:

Open the browser
Type in the URL and press ENTER
Click on the field that needs to be filled in
Type the required information
Repeat actions 3 and 4 for each field, scrolling if required
Click the Submit button

You can program your bot to perform the same actions as a person would do in this situation. However, let's see what the best way to automate a web form would be.

Bot's actions:

Launch the required URL in the required browser
Paste the required information in the field using XPaths
Repeat action 2 for each field
Click the Submit button

You can see there are similarities and differences in the person's and the bot's actions. There is no need for the web automation bot to launch the browser first and then type in the URL of the page it needs to navigate to. It can be done in a single action. Also, there is no need to click on the field and then type the data as the bot can insert the data in the required field (or another web element) by using special Web actions and XPath locators. There is also no need to scroll the page as the bot can find elements outside the visible part of the webpage. At the same time, the bot clicks on the Submit button just as a human does (mimics the human behavior), although it finds it on the page by XPath, too.

From the workflow above, it is obvious that understanding the differences between human and bot behavior will allow you to not only automate actions on the web but also optimize them to make more efficient. So, before automating your process, break it down in actions, and analyze which of them needs the bot to mimic the human behavior, and which can be performed more efficiently using special web automation capabilities of the tool. It will help you automate better.