

## Algorithm- Automate a Web Application (Test Ng)

1. Import necessary libraries and classes: The code starts by importing required classes and packages, such as WebDriver and TestNG annotations.
2. Set up WebDriver: The `@BeforeMethod` annotation marks the `beforeMethod()` method, which is responsible for setting up the WebDriver instance. It sets the path for the ChromeDriver executable, initializes the WebDriver, and maximizes the browser window.
3. Test Method - `addToCartTest()`: The first test method is `addToCartTest()`. It opens the website "https://cupsofmagik.com/", maximizes the browser window, finds the "Add to Cart" button by its ID, and clicks it.
4. Test Method - `googleSearchTest()`: The second test method is `googleSearchTest()`. It opens "https://google.com", maximizes the browser window, finds the search text field by its name, enters "What is Testing?" into the text field, finds the search button by its name, and clicks the search button.
5. Test Method - `loginTest()`: The third test method is `loginTest()`. It opens the website "https://www.saucedemo.com/", finds the username input field by its name, enters "standard\_user" as the username, finds the password input field by its ID, enters "secret\_sauce" as the password, and clicks the login button.
6. Test Method - `registrationTest()`: The fourth test method is `registrationTest()`. It opens the website "https://nxtgenaiacademy.com/demo-site/", finds various input fields and dropdowns in a registration form, fills in the necessary information like name, address, email, date, phone, checkboxes, and additional information, and then submits the form by clicking the "Submit" button.
7. Clean up and Close WebDriver: The `@AfterMethod` annotation marks the `afterMethod()` method, which is responsible for cleaning up and closing the WebDriver instance after each test method is executed. It closes the browser window using the `wd.close()` method.
8. Overall, this code executes four test methods: `addToCartTest()`, `googleSearchTest()`, `loginTest()`, and `registrationTest()`. Each test method performs specific actions on different web pages and tests different functionalities of the web application. The WebDriver is set up and closed for each test method, ensuring a fresh browser instance for each test and avoiding interference between tests.