Task 1: Building your first test on google search engines based on Selenium webdriver.

Automation Testing : Using software tools to execute test cases, less time, money, effort needed than manual testing.

Following steps are followed in an Automation Process

Step 1) Test Tool Selection

Step 2) Define scope of Automation

Step 3) Planning, Design and Development

Step 4) Test Execution

Step 5) Maintenance

Selenium : Open source Automation testing tool , it works with multiple programming languages(java,python,c#...) , multiple web browsers(firefox,chrome,safari…) , multiple operating systems(linux,windows,android,ios…) , multiple frameworks and can be integrated with automation test tools such as Maven, Jenkins, & Docker .

Selenium WebDriver: was first introduced as a part of Selenium v2.0.

There are four basic components of WebDriver Architecture:

- Selenium Language Bindings(Libraries in order to support multiple languages.)
- JSON Wire Protocol(Protocol provides a transport mechanism to transfer data between a server and a client)
- Browser Drivers
- Real Browsers

When we execute a test script using WebDriver, the following operations are performed internally.

- HTTP request is generated and sent to the browser driver for each Selenium command.
- The driver receives the HTTP request through HTTP server.
- HTTP Server decides all the steps to perform instructions which are executed on browser.
- Execution status is sent back to HTTP Server which is subsequently sent back to automation script.

Building a test case on google search engines based on Selenium webdriver.

Under this test, we will automate the following scenarios:

- Invoke Google Chrome browser.
- Open URL: www.google.com
- Click on the Google Search text box.
- Type the value "qa"
- Click on the Search button.

Task 2: Searching about selenium on google.com, then choosing selenium.dev

I solved it by this command line

```
driver.findElement(By.partialLinkText("selenium.dev")).click();
```