**Locating Elements through CSS and XPath.**

* How to locate elements in the Web page.

This lab has mainly three subsections, namely:

1.3.1 To find the element present on the page by using CSS Selector.

1.3.2 To find the element present on the page by using XPath.

1.3.3 Pushing the code to your GitHub repositories

**Step 1.3.1:** To find the element present on the page using CSS Selector.

* Using CSS Selectors in Selenium. As we all know, CSS stands for Cascading Style Sheets. By using CSS selectors, we can find or select HTML elements on the basis of their id, class or other attributes. CSS is faster and simpler than XPath particularly in case of IE Browser where Path works very slowly.
* Open Eclipse
* Use Path as a CSS Selector
* CSS Selector have many formats, namely

1. **Tag and ID**
   * Syntax: “css = tag#id”
   * Example: driver.findElement(By.cssSelector(“input#email”));
2. **Tag and Class**
   * Syntax: “css = tag.class”
   * Example: driver.findElement(By.cssSelector(”input.inputtext”));
3. **Tag and Attribute**
   * Syntax: “css = tag[attribute=value]”
   * Example: driver.findElement(By.cssSelector(“input[name=lastName]”));
4. **Tag, Class and Attribute**
   * Syntax: “tag.class[attribute=value]”
   * Example:

driver. findElement(By.cssSelector(“input.inputtext[tabindex=1]”));

1. **Inner text**
   * Syntax: “css = tag.contains(“innertext”)”
   * Example: driver.findElement(By.cssSelector(font:contains(“Boston”)));

**Step 1.3.2:** To find the element present on the page using Path.

* In Selenium automation, if the elements are not found by the general locators like id, class, name, etc. then XPath is used to find an element on the web page.
* XPath contains the path of the element situated at the web page. Standard syntax for creating XPath is:

XPath=//tagname[@attribute='value']

* **//:** Select current node.
* **Tagname:**Tagname of the particular node.
* **@:** Select attribute.
* **Attribute:** Attribute name of the node.
* **Value:** Value of the attribute.
* Types of XPath:

There are two types of XPath:

1. **Absolute XPath**

* It is direct way to find the element, but the disadvantage of the absolute XPath is that if there are any changes made in the path of the element then that XPath gets failed.
* The key characteristic of XPath is that it begins with the single forward slash (/), which means you can select the element from the root node.
* Syntax for absolute Path: html/body/div[1]/div[1]/div/h4[1]/b
* Example: driver.findElement(By.xpath(“html/body/div[1]/div[1]/div/h4[1]/b”));
* Writing absolute XPath on the elements which are present in the webpage will be very lengthy. To reduce the length, we use relative XPath.

1. **Relative XPath**

* For relative XPath the path starts from the middle of the HTML DOM structure. It starts with the double forward slash (//), which means it can search the element anywhere at the webpage.
* You can start from the middle of the HTML DOM structure and no need to write long XPath.
* Syntax for relativeXPath: //\*[@class=’relativexapath’]
* Example: driver.findElement(By.xpath(“//\*[@class=’relativexapath’]”))