**Why do you need Find Element/s command?**

Interaction with a web page requires a user to locate the web element. Find Element command is used to uniquely identify a (one) web element within the web page. Whereas, Find Elements command is used to uniquely identify the list of web elements within the web page. There are multiple ways to uniquely identify a web element within the web page such as ID, Name, Class Name, Link Text, Partial Link Text, Tag Name and XPATH.

**FindElement command syntax:**

Selenium Find Element command takes in the By object as the parameter and returns an object of type list WebElement in Selenium. By object in turn can be used with various locator strategies such as find element by ID Selenium, Name, Class Name, XPATH etc. Below is the syntax of FindElement command in Selenium web driver.

WebElement elementName = driver.findElement(By.LocatorStrategy("LocatorValue"));

Locator Strategy can be any of the following values.

* ID
* Selenium find element by Name
* Class Name
* Tag Name
* Link Text
* Partial Link Text
* XPATH

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Locator Value is the unique value using which a web element can be identified. It is the responsibility of developers and testers to make sure that web elements are uniquely identifiable using certain properties such as ID or name.

**Example:**

WebElement loginLink = driver.findElement(By.linkText("Login"));

**FindElements command syntax:**

FindElements in Selenium command takes in By object as the parameter and returns a list of web elements. It returns an empty list if there are no elements found using the given locator strategy and locator value. Below is the syntax of find elements command.

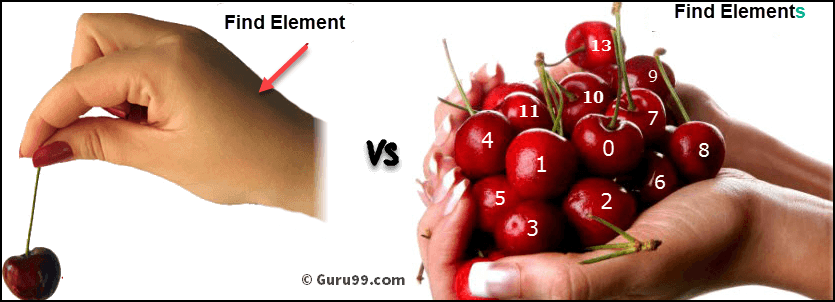
List<WebElement> elementName = driver.findElements(By.LocatorStrategy("LocatorValue"));

**Example:**

List<WebElement> listOfElements = driver.findElements(By.xpath("//div"));

**Find element Vs Find elements**

Below are the major differences between find element and find elements commands.

Find element Vs Find elements in Selenium

|  |  |
| --- | --- |
| **Find Element** | **Find Elements** |
| Returns the first most web element if there are multiple web elements found with the same locator | Returns a list of web elements |
| Throws exception NoSuchElementException if there are no elements matching the locator strategy | Returns an empty list if there are no web elements matching the locator strategy |
| Find element by XPath will only find one web element | It will find a collection of elements whose match the locator strategy. |
| Not Applicable | Each Web element is indexed with a number starting from 0 just like an array |

**Example: How to use Find Element command**

The following application is used for demo purpose

http://demo.guru99.com/test/ajax.html

**Scenario:**

1. Open the AUT

2. Find and click radio button

package com.sample.stepdefinitions;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

public class NameDemo {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.setProperty("webdriver.chrome.driver", "D:\\3rdparty\\chrome\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.manage().window().maximize();

driver.get("http://demo.guru99.com/test/ajax.html");

// Find the radio button for “No” using its ID and click on it

driver.findElement(By.id("no")).click();

//Click on Check Button

driver.findElement(By.id("buttoncheck")).click();

}

}

**Example: How to use Find Elements command**

**Scenario:**

1. Open the URL for Application Under Test

2. Find the text of radio buttons and print it onto the output console

package com.sample.stepdefinitions;

import java.util.List;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

public class NameDemo {

public static void main(String[] args) {

System.setProperty("webdriver.chrome.driver", "X://chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://demo.guru99.com/test/ajax.html");

List<WebElement> elements = driver.findElements(By.name("name"));

System.out.println("Number of elements:" +elements.size());

for (int i=0; i<elements.size();i++){

System.out.println("Radio button text:" + elements.get(i).getAttribute("value"));

}

}

}