

## Driver Instantiation

### Firefox Browser

```
WebDriver driver = new FirefoxDriver();
```

### Google Chrome Browser

```
WebDriver driver = new ChromeDriver();
```

### Safari Web Browser

```
WebDriver driver = new SafariDriver();
```

### Internet Explorer Browser

```
WebDriver driver = new InternetExplorerDriver();
```

### Android Driver

```
WebDriver driver = new AndroidDriver();
```

### iPhone Driver

```
WebDriver driver = new IPhoneDriver();
```

### HTML Unit Driver

```
WebDriver driver = new HtmlUnitDriver();
```

## setProperty()

### Google Chrome Browser

```
System.setProperty("webdriver.chrome.driver",  
"<path to executable file>");
```

### Firefox Browser

```
System.setProperty("webdriver.gecko.driver",  
"<path to executable file>");
```

### Internet Explorer Browser

```
System.setProperty("webdriver.ie.driver",  
"<path to executable file>");
```

## navigate()

### Navigate to specific URL

```
driver.navigate().to("<url>");
```

### Navigate to Next Page in Browser History

```
driver.navigate().forward();
```

### Navigate to Next Page in Browser History

```
driver.navigate().back();
```

## Selenium Locators

### Locating By Id

```
driver.findElement(By.id("<element_id>"));
```

### Locating By Name

```
driver.findElement(By.name("<element_name>"));
```

### Locating By Xpath

```
driver.findElement(By.xpath("<element_xpath>"));
```

### Locating Hyperlinks by Link Text

```
driver.findElement(By.LinkText("<link_text>"));
```

### Locating By Dom

```
dom =document.getElementById('<element_id>')
```

### Locating By CSS

```
driver.FindElement(By.CssSelector("#<selector>"));
```

### Locating By Class Name

```
driver.findElement(By.className("<class_name>"));
```

### Locating By Tag Name

```
driver.findElement(By.tagName("<tags_name>"));
```

### Locating By Link Text

```
driver.findElement(By.linkText("<link_text>"));
```

### Locating By Partial Link Text

```
driver.findElement(By.partialLinkText("<text>"));
```

## Test NG Available Annotations

- ☐ @BeforeSuite
- ☐ @AfterSuite
- ☐ @BeforeTest
- ☐ @AfterTest
- ☐ @BeforeGroups
- ☐ @AfterGroups
- ☐ @BeforeClass
- ☐ @AfterClass
- ☐ @BeforeMethod
- ☐ @AfterMethod

## Refresh Page

### Refresh currently loaded webpage

```
driver.navigate().refresh();
```



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## Windows Handling

### Handle Multiple Windows

```
String handle=driver.getWindowHandle();
Set<String> handles = getWindowHandles();
driver.switchTo().window(handle);
```

### Switch to Newly Created Window

```
String curWindow=driver.getWindowHandle()
```

### Get All Window Handles

```
Set<String> handles = getWindowHandles();
for(string handle: handles)
{
    if (!handle.equals(curWindow))
    {
        driver.switchTo().window(handle);
    }
}
```

## Handling Frames

### Using Frame Index

```
driver.switchTo().frame(1);
```

### Using Name of Frame

```
driver.switchTo().frame("name");
```

### Using Web Element Object

```
driver.switchTo().frame(element);
```

### Get Back to Main Document

```
driver.switchTo().defaultContent();
```

## JUnit Available Annotations

- ☐ @After
- ☐ @AfterClass
- ☐ @Before
- ☐ @BeforeClass
- ☐ @Ignore
- ☐ @Test

## UI Actions

### Launch Web Page

```
driver.get(<url_of_web_page>);
```

### Click a button on Web Page

```
WebElement.click();
```

### Handling Alerts

```
Alert alertPopup = driver.switchTo().alert();
```

### Enter Text to Field

```
WebElement.sendKeys('Text to Enter');
```

### Select A Value from Dropdown

```
Select drpOptions = new
    Select(driver.findElement(By.id("options")));
drpOptions.selectByVisibleText("Option 1");
drpOptions.selectByIndex(1);
```

### Drag & Drop

```
Actions builder = new Actions(driver);
WebElement from =
    driver.findElement(By.id("draggable"));
WebElement to =
    driver.findElement(By.id("droppable"));
builder.dragAndDrop(from, to).perform();
```

### Finding Number of Rows in Web Table

```
List<WebElement> rowsNumber =
    driver.findElements(By.xpath("xpath"));
int rowCount = rowsNumber.size();
System.out.println("No of rows in this table : " +
    rowCount);
```

### Finding Number of Columns in Web Table

```
List<WebElement> columnsNumber =
    driver.findElements(By.xpath("xpath"));
int columnCount = columnsNumber.size();
System.out.println("No of columns in this table : " +
    columnCount);
```

### Highlight Elements in Selenium

```
JavascriptExecutor jsExecutor = (JavascriptExecutor)
driver;
jsExecutor.executeScript("arguments[0].style.border
='2px solid red'", WebElement);
```



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## Screenshots

### Capturing Screenshot & Saving as File

```
TakesScreenshot scrShot  
= ((TakesScreenshot)webdriver);  
  
File SrcFile =  
    scrShot.getScreenshotAs(OutputType.FILE);  
File DestFile = new File(fileWithPath);  
FileUtils.copyFile(SrcFile, DestFile);
```

## Waits

### Implicit Wait

```
driver.manage().timeouts().implicitlyWait(10,  
    TimeUnit.SECONDS);
```

### Explicit Wait

```
WebDriverWait wait = new WebDriverWait(  
    driver, 20);
```

### Sleep

```
try {  
    Thread.sleep(5000);  
}  
catch (InterruptedException e) {  
    e.printStackTrace();  
}
```

## Selenium Grid

### Start Hub

```
java -jar selenium-server-standalone-x.xx.x.jar --role  
hub
```

### Start Node

```
java -jar selenium-server-standalone-x.xx.x.jar --role  
node-hub
```

### Console URL

```
http://localhost:4444/grid/console
```

## Handling Alerts

### Get Alert Text

```
driver.switchTo().alert().getText();
```

### Accept the Alert

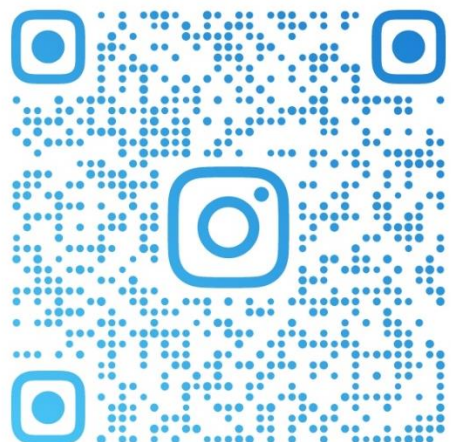
```
driver.switchTo().alert().accept();
```

### Dismiss the Alert

```
driver.switchTo().alert().dismiss();
```

### Enter Text into Alert Prompt

```
driver.switchTo().alert().sendKeys("Text");
```



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