

# Initialize Browser Drivers

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Browser	Syntax
Chrome	<code>WebDriver driver = new ChromeDriver();</code>
Edge	<code>WebDriver driver = new EdgeDriver();</code>
Firefox	<code>WebDriver driver = new FirefoxDriver();</code>
Safari	<code>WebDriver driver = new SafariDriver();</code>

# Selenium Locators

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Locator	Syntax
className	<code>driver.findElement(By.className ("value"))</code>
cssSelector	<code>driver.findElement(By.cssSelector("value"))</code>
id	<code>driver.findElement(By.id("value"))</code>
linkText	<code>driver.findElement(By.linkText("value"))</code>
name	<code>driver.findElement(By.name("value"))</code>
partialLinkText	<code>driver.findElement(By.partialLinkText("value"))</code>
tagName	<code>driver.findElement(By.tagName ("value"))</code>
xpath	<code>driver.findElement(By.xpath("value"))</code>

# Switch Method Types For Frames

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Method	Description
<code>frame(WebElement element)</code>	Selects a frame by WebElement
<code>frame(String nameOrId)</code>	Selects a frame by its name or ID
<code>frame(int index)</code>	Selects a frame by its (zero-based) index
<code>defaultContent()</code>	Selects either first frame or main document
<code>parentFrame()</code>	Change focus to the parent context

# Frame Example

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```
@Test
public void switchToFrames_WebElement()
{
    driver.get("https://paytm.com");

    WebDriverWait wait = new WebDriverWait (driver, 5);
    wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//div[@id=\"app\"]/d

    driver.findElement(By.xpath("//div[contains(text(),'Log In/Sign Up')]")).click();

    WebElement login = driver.findElement(By.xpath("//iframe[contains(@src,'login')]"));
    driver.switchTo().frame(login);
}
```



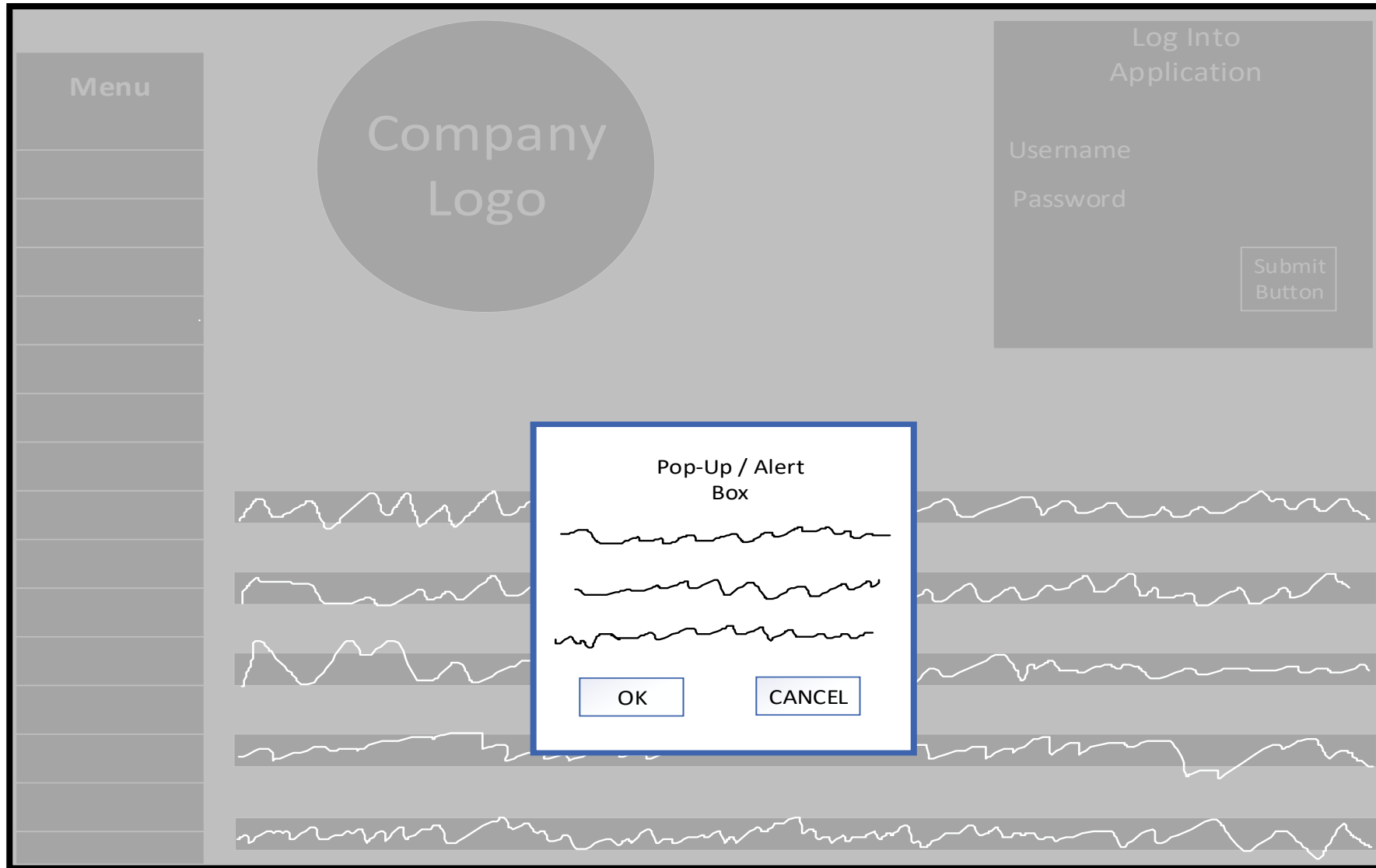
# Alerts/Pop-Ups

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Method	Description
accept()	Accepts the alert
dismiss()	Dismisses / cancels the alert
getText()	Gets text from the alert
sendKeys()	Types text into the alert

# Alert Example

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# Switch Method Types For Windows

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Method	Description
<code>getWindowHandle()</code>	Gets the window handle of the current window
<code>getWindowHandles()</code>	Gets the window handle of all current windows
<code>switchTo().window()</code>	Switch focus between windows

# Switch Windows Example

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```
Set<String> allHandles = driver.getWindowHandles();
System.out.println("Windows Open After Click: " + allHandles.size());

for (String windowHandle : allHandles) {
    if(mainHandle.equals(windowHandle)) {
        System.out.println("\t Window ID 1: \t" + windowHandle +
            "\n \t URL: \t \t" + driver.getCurrentUrl() +
            "\n \t Title: \t \t" + driver.getTitle());
    } else {
        driver.switchTo().window(windowHandle);

        System.out.println("\t Window ID 2: \t" + windowHandle +
            "\n \t URL: \t \t" + driver.getCurrentUrl() +
            "\n \t Title: \t \t" + driver.getTitle());
    }
}
```



# Explicit Wait Example

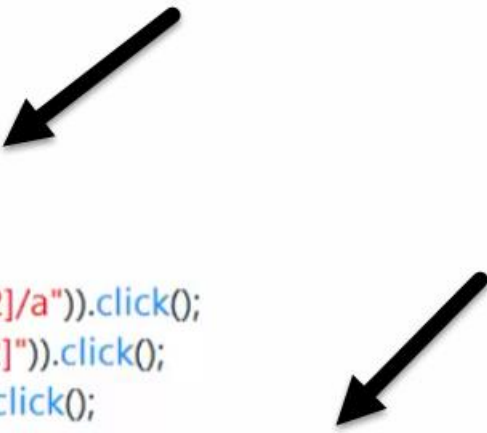
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```
@Test
public void demoExplicitWait ()
{
    driver.get("http://the-internet.herokuapp.com/");

    WebDriverWait wait = new WebDriverWait(driver, 5);

    driver.findElement(By.xpath("//*[@id=\"content\"]/ul/li[12]/a")).click();
    driver.findElement(By.xpath("//*[@id=\"content\"]/div/a[2]")).click();
    driver.findElement(By.xpath("//*[@id=\"start\"]/button")).click();

    wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//*[@id=\"finish\"]/h4")));
}
```



# Selenium Waits

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Selenium Wait	Description
Thread.sleep()	<u>(Not a Selenium Wait Method)</u> Causes execution to sleep for a certain number of milliseconds
Page Load Timeout	Sets the wait time for a page to load before throwing an error
Script Timeout	Sets the wait time for JavaScript to execute before throwing an error
Implicit Wait	Determines the wait time to search for an element before throwing an exception
Explicit Wait	Pauses execution until time has expired or an expected condition is met via WebDriverWait class
Fluent Wait	A specialization of Explicit Wait that's extended by the WebDriverWait class

# Explicit Wait Expected Conditions

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1. alertIsPresent()	9. textToBePresentInElementLocated()
2. elementSelectionModeToBe()	10. textToBePresentInElementValue()
3. elementToBeClickable()	11. titleIs()
4. invisibilityOfTheElementLocated()	12. titleContains()
5. invisibilityOfElementWithText()	13. visibilityOf()
6. presenceOfAllElementsLocatedBy()	14. visibilityOfAllElements()
7. presenceOfElementLocated()	15. visibilityOfAllElementsLocatedBy()
8. textToBePresentInElement()	16. visibilityOfElementLocated()

# Select From Drop Down Code Snippet

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```
@Test
public void selectFromDropDown ()
{
    WebElement findJobTitle = driver.findElement(By.id("empsearch_job_title"));
    Select selectJobTitle = new Select (findJobTitle);
    selectJobTitle.selectByIndex(1);

    Select selectSubUnit = new Select (driver.findElement(By.id("empsearch_sub_unit")));
    selectSubUnit.selectByValue("6");

    Select selectInclude = new Select (driver.findElement(By.id("empsearch_termination")));
    selectInclude.selectByVisibleText("Past Employees Only");
}
```