**Selenium Web Driver Waits**

Selenium WebDriver provides three types of waits to perform tests.

1. Implicit Wait
2. Explicit Wait
3. Fluent Wait

Thread.sleep(4000); // static wait //wait for a specific time.

Wait or Synchronization // dynamic wait

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**Implicit wait :**

The **Implicit Wait in Selenium** is used to tell the web driver to wait for a certain amount of time before it throws a "No Such Element Exception".

**Syntax :**

**driver.manage().timeouts().implicitlyWait(TimeOut,TimeUnit.SECONDS );**

**Explicit wait :**

The **Explicit Wait in Selenium** is used to tell the Web Driver to wait for certain conditions (Expected Conditions) or maximum time exceeded before throwing "**ElementNotVisibleException**" exception.

it can be applied only for specified elements.

**Syntax** :

WebDriverWait wait = new WebDriverWait (driver,30);

wait.until(ExpectedConditions.visibilityOf(element));

The following are the Expected Conditions that can be used in Selenium Explicit Wait

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

**Fluent wait:**

Once we declare explicit wait, we have to use "**ExpectedConditions**" or we can configure how frequently we want to check the condition using **Fluent Wait**.

**Frequency:**Setting up a repeat cycle with the time frame to verify/check the condition at the regular interval of time

**Syntax :**

Wait wait1 = new FluentWait(driver)

.withtimeout(30, Timeunit.SECONDS)

.pollingEvery(10, Timeunit.SECONDS)

.ignoring(Exception.class);

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| **Implicit Wait** | **Explicit Wait** |
| * Implicit Wait time is applied to all the elements in the script | * Explicit Wait time is applied only to those elements which are intended by us |
| * In Implicit Wait, we need **not** specify "ExpectedConditions" on the element to be located | * In Explicit Wait, we need to specify "ExpectedConditions" on the element to be located |
| * It is recommended to use when the elements are located with the time frame specified in Selenium implicit wait | * It is recommended to use when the elements are taking long time to load and also for verifying the property of the element like(visibilityOfElementLocated, elementToBeClickable,elementToBeSelected) |