**4th April**
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**What is wait in selenium ?**
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- The wait commands are essential when it comes to executing Selenium tests.
- They help to observe and troubleshoot issues that may occur due to variation in time lag.
- While running Selenium tests, it is common for testers to get the message "Element Not Visible Exception".
- This appears when a particular web element with which WebDriver has to interact, is delayed in its loading.
- To prevent this Exception, Selenium Wait Commands must be used.

**Different types of waits in selenium**
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1. **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".
- Once we set the time, the web driver will wait for the element for that time before throwing an exception.

Syntax >    *driver*.manage().timeouts().~~implicitlyWait~~(10, TimeUnit.***SECONDS***);

- Implicit wait will accept 2 parameters, the first parameter will accept the time as an integer value.
- The second parameter will accept the time measurement in terms of SECONDS, MINUTES, MILISECOND, MICROSECONDS, NANOSECONDS, DAYS, HOURS, etc.

2. **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 an "ElementNotVisibleException" exception.
- It is an intelligent kind of wait, but it can be applied only for specified elements.
- It gives better options than implicit wait as it waits for dynamically loaded Ajax elements.

Syntax >    WebDriverWait wait = **new** ~~WebDriverWait~~(*driver*,10);
            wait.until(ExpectedConditions.*visibilityOf*(webelement_reference));

- Explicit wait will accept 2 parameters, the first parameter will accept the time as an integer value.
- The second parameter will accept the expected condition.

E.x

```java
package testJava;

import java.io.IOException;
import java.util.concurrent.TimeUnit;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;

public class aclass {

    static WebDriver driver;

    @SuppressWarnings("deprecation")
    public static void main(String[] args) throws InterruptedException, IOException {

System.setProperty("webdriver.chrome.driver",
"/Users/amitparate/Downloads/chromedriver");

driver = new ChromeDriver();

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

Thread.sleep(10000);          // java wait

driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS); // used for all elements

WebElement yes = driver.findElement(By.xpath("//input[@id='yes']"));
yes.click();

WebDriverWait wait = new WebDriverWait(driver, 10); // used for specific element
wait.until(ExpectedConditions.visibilityOf(yes));

yes.click();
    }
}
```