Synchronization in selenium

Implicit wait

Explicit wait

Thread.Sleep

Fluent wait

77. What is Implicit wait? Explain with real time scenario

select from London to New York and you will select the date and click on Search.

So based upon your search results, it will keep on running for a few seconds and it will display the results. You want to click the first flight

After click on search page will load ( loading icon ) how you will tell selenium to wait three seconds are to wait till the speed is entirely loaded.

You need to tell to your driver so that it understands and wait until the page is entirely loaded and then it starts validating and clicking on the link.

if you right your plain code and run the script, it will definitely fail.

It will ask that element is not displayed because it still is not on that page.

You need to tell your driver to wait till the page is completely loaded. And this is called synchronization

whenever you click on something and they don't find the result,

please don't fail immediately.

Wait for, three seconds or three seconds is the ideal time to load my pages in The testcase

So at a global level, you are saying wait for at least three seconds before you throw an exception.

Like element is an error basically element not displayed.

So when you declare that globally we say it has implicit.

Advantage - you are defending it globally.

I give 5 sec for implicit wait app took two seconds to load.

it will keep on listening to your DOM in the sense of document object model, which is a test statement of the browser. If the result is displaying 2 secs it will come out of that implicit wait loop and continue with first flight.

78. What is explicit wait? Explain with real time scenario

Developer said like on retrive the data it will take 15 sec

Due to some glitch result will come at 10-13 sec – test case is pass but it is not correct

in explicit way, you can target a specific scenario and specific element.

in implicit way, whatever you write, it applies globally.

I can tell to selenium webdriver code, wait till 15 seconds for hotels, you know, for all the hotels, results are returned

 if there are any some exceptions, like 1 or 2 scenarios taking more than 50 and 20s to load and that time for those similar for those two specific situations, I would go with explicit wait and I will handle with those. So for the remaining as I am declaring globally and I will use implicit wait.

So this is how with the help of implicit wait and explicit wait will be successfully achieve synchronization in selenium Webdriver.

how to target a specific element and how to define something globally.

implicit and explicit combination of this both is an ideal solution.

 both are Combinedly used to achieve synchronization successfully in a real time projects.

So thread dot sleep. In our case you can halt execution.

Let's say it was taking five seconds to load. You can entirely pass your script for five seconds. There is no logic for Thread.sleep thread. Dot sleep is not part of selenium Webdriver. It’s part of java.

You are holding your Java test to wait for five seconds and if that results are loaded in three seconds, even in that case it will keep on waiting for five seconds because you just say pause for five and you never know about whether the results are loading or you never care about that and it will not listen to Dom also.

But in implicit wait, it will wait for five seconds, but it will keep on listening to Dom and whenever the results are written it quickly comes out of that and it won't waste time.

79. Scenario to automate and necessity of waits in the example

Instead, we will actually wrap this whole code into one method.

And we will hide it from our actual test case.

No matter if you are in same class or different class, if you want to access any method, you just cannot access directly. You first need to create object for the base class.

In implicit weight We declare this weight globally.

That means now this weight is applied to each and every line of this test.

public class AddingItemsintocartforecommerceapp {

public static void main(String[] args) throws InterruptedException {

WebDriver driver = new ChromeDriver();

driver.manage().timeouts().implicitlyWait(5, TimeUnit.SECONDS);

String[] itemsNeeded = {"Cucumber","Brocolli","Beetroot","Onion"};

driver.get("https://rahulshettyacademy.com/seleniumPractise/#/");

additems(driver,itemsNeeded);

driver.findElement(By.cssSelector("img[alt='Cart']")).click();

driver.findElement(By.xpath("//button[contains(text(),'PROCEED TO CHECKOUT')]")).click();

driver.findElement(By.cssSelector("input.promoCode")).sendKeys("rahulshettyacademy");

driver.findElement(By.cssSelector("button.promoBtn")).click();

System.out.println(driver.findElement(By.cssSelector("span.promoInfo")).getText());

}

public static void additems(WebDriver driver,String[] itemsNeeded) {

int j=0;

80. Practical examples on Implicit wait

Driver.manage.timeout.impicitywait(5,timeout.seconds);

81. explicit wait example for the greenkart app

WebDriverWait w = new WebDriverWait(driver,5);

w.until(Exceptionconditions.visibiltyofelementlocated(By.cssSelector(“span.promo”));

when you want to define explicit wait first.First way is to define Webdriver weight class. So here I'm declaring class name called Webdriver wait.

So inside this class, you have to add two arguments.One argument is that you have to send your driver object. And next argument is the how many seconds you want to wait?

Let's say five seconds. if you want to access any methods

present in this Webdriver weight class, you know that first you have to create object of the class so that you can access now the methods present inside this class with the object (w.) whole line of code is web element ex : driver.findelement.by.xpath{test()=qw}.click();

locator - by.xpath{test()=qw}

implicit – advantage – redable manner code

explicit where every you want you want to add the explicit step

implicit - it takes two seconds, 3 seconds or 5 seconds based upon the usage, then go with implicit wait. Because if you don't know in which step, your application may get slow at that time, you just cannot apply this explicit wait for each and every line.

83. What is Fluent wait? Its advantages

there is no specific difference between explicit weight and fluent weight.

Fluent weight comes under the category of explicit weight.

Okay, so it's all about two weights, implicit, explicit.

Fluent wait = 10sec,polling 2 sec. first search 2sec if it won’t found again after 2 sec it will search like that

 it checks on regular intervals of time.

Whatever you provide as part of your polling duration, in that duration, it will keep on checking.

In webdriverwait it is continuously monitor your dom.

But both will exit once the object is found, no matter how many seconds you give as a timeout, if it finds in 2 or 3 seconds, then it will come out because that's the base definition of explicit wait

84. Building Customized methods using FLuent wait

Google – fluent wait in seleniumhq

Goole – Internet.herokuapp

Click on dynamically loaded page elements

fluent wait is also one of the class Which is implementing wait interface.

Just like how chrome driver implementing Webdriver interface.

There is another explicit wait mechanism type called fluent wait

Explicit wait can be achieved in 2 ways

1. webDiverWait
2. FluentWait

How different it is from webdriver wait ?

Fluent wait finds the web element repeatedly at regular intervals of time until the timout or till the object gets found.

Unlike WebDriver Wait, we need to build customized wait methods based on condition

Both WebDriverWait and FluentWait classes implement wait interface