

# Week 8: Synchronisation in Selenium

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# Synchronisation in Selenium

In Selenium, synchronisation is the process of ensuring that the test code and the web application under test are in sync, so that commands execute successfully without errors or delays. Web applications often include dynamic elements that load or change at different times, such as *AJAX* calls, animations, or content loading asynchronously. Without synchronisation, a test might attempt to interact with an element before it has fully loaded, leading to errors or test flakiness.

# Types of Synchronisation

## **Implicit Wait**

An implicit wait instructs the Web Driver to patiently search the DOM for a specified duration when attempting to locate an element or elements if they're not readily accessible. By default, this duration is set to 0.

## **Explicit Wait**

An explicit wait provides greater flexibility by enabling to pause test execution until a particular condition is satisfied. This condition, such as the existence or non-existence of an element, can be defined using the ExpectedConditions class. If the condition isn't met within the designated timeframe, an exception will be raised.

## **Fluent Wait**

A flexible form of explicit wait that polls for a condition at specified intervals and can ignore specific exceptions while waiting.