1. Exception Handling
2. Synchronization in Selenium
3. Maven commands
4. Basics of framework design

* Synchronization in selenium: Synchronization in selenium is achieved through the implementation of waits in the selenium
* There are 2 kinds of waits in selenium
  + Implicit Waits
  + Explicit Waits
* The IMPLICIT WAIT IN SELENIUM will tell the web driver to wait for a certain amount of time before it throws a "No Such Element Exception". The default setting is 0. Once we set the time, web driver will wait for that time before throwing an exception.

**Explicit Waits:**

* An explicit wait is a code that you define to wait for a certain condition to occur before proceeding further in the code. WebDriverWait by default calls the ExpectedCondition every 500 milliseconds until it returns successfully.

**Example** :

WebDriver driver = new ChromeDriver();

driver.get("http://somedomain/someurl");

WebElement dynamicElement = (new WebDriverWait(driver, 10))

.until(ExpectedConditions.presenceOfElementLocated(By.id("dynamicElement")));

We would normally use explicit wait if an element takes a long time to load. We also used explicit wait to check CSS property of an element (presence, clickability. etc) which can change in Ajax applications.

**Fluent Waits**

* Using FluentWait we can define the maximum amount of time to wait for a condition, as well as the frequency with which to check for the condition.And also the user can configure to ignore specific types of exceptions such as "NoSuchElementExceptions" when searching for an element. NoSuchElement exception is thrown by findElement(By) and findElements(By). When ever it try to find any element it returns the first matching element on the current page else it throws NoSuchElementException - when no matching elements are **found.**

Maven Commands

<https://www.vogella.com/tutorials/ApacheMaven/article.html>

<http://tutorials.jenkov.com/maven/maven-commands.html#:~:text=%20Maven%20Commands%20%201%20Maven%20Command%20Structure.,more%20arguments%20to%20it.%20%20..%20More%20>

<https://www.educba.com/maven-commands/>

<https://www.tutorialspoint.com/maven/maven_quick_guide.htm>