**Project: Handling Frames in Selenium**

**Project Objective :**

The primary objective of this project is to develop a robust and automated testing framework using Selenium WebDriver to handle and interact with frames and iframes within a web application. The framework aims to ensure seamless navigation between multiple frames, perform actions within these frames, and validate the functionality and user experience across different frames. This project intends to enhance the reliability, efficiency, and coverage of the automated test cases for web applications containing frames.

**Test Cases: Handling Frames in Selenium**

**Test Case ID**

TC\_Frame\_Handling\_001

**Test Case Name**

Verify the handling of frames in a web application using Selenium WebDriver.

**Pre-conditions**

1. Selenium WebDriver is set up and configured.
2. The target web application with frames is accessible.

**Test Steps**

1. **Navigate to the URL**
   * **Action**: Open the web browser and navigate to the target URL.
   * **Expected Result**: The web page with frames is loaded successfully.
2. **Switch to the First Frame**
   * **Action**: Switch to the first frame using driver.switchTo().frame("frame1").
   * **Expected Result**: The WebDriver should successfully switch to the first frame.
3. **Perform Action in the First Frame**
   * **Action**: Find an element within the first frame and perform an action (e.g., click a button, enter text).
   * **Expected Result**: The action is performed successfully within the first frame.
4. **Switch to the Main Content**
   * **Action**: Switch back to the main content using driver.switchTo().defaultContent().
   * **Expected Result**: The WebDriver should switch back to the main content of the page.
5. **Switch to the Second Frame**
   * **Action**: Switch to the second frame using driver.switchTo().frame("frame2").
   * **Expected Result**: The WebDriver should successfully switch to the second frame.
6. **Perform Action in the Second Frame**
   * **Action**: Find an element within the second frame and perform an action.
   * **Expected Result**: The action is performed successfully within the second frame.
7. **Switch to an Inner Frame (if nested)**
   * **Action**: Switch to an inner frame within the second frame using
   * driver.switchTo().frame("innerFrame").

* **Expected Result**: The WebDriver should successfully switch to the inner frame.

 **Perform Action in the Inner Frame**

* **Action**: Find an element within the inner frame and perform an action.
* **Expected Result**: The action is performed successfully within the inner frame.

 **Switch Back to Main Content from Inner Frame**

* **Action**: Switch back to the main content directly from the inner frame using driver.switchTo().defaultContent().
* **Expected Result**: The WebDriver should switch back to the main content of the page.

 **Verify the Final State**

* **Action**: Perform any final verification needed to ensure the test has completed successfully.
* **Expected Result**: All actions within frames and main content should be verified as successful.