Script to Test Facebook Login Using Selenium WebDriver

AIM: To automate the process of logging into a Facebook account using Selenium WebDriver in Java and validate the login success.

Tools Required:

- **Java Development Kit (JDK)**
- **Eclipse IDE or IntelliJ IDEA** (or any preferred Java IDE)
- **Selenium WebDriver** library
- **ChromeDriver** for Google Chrome browser automation

Steps in Test Case

Setting up WebDriver: The `System.setProperty()` method sets the ChromeDriver location.

Opening Facebook Login Page: The script opens Facebook's login page using `driver.get()`.

Entering Credentials: The script finds the email input field using its `id` attribute and enters the provided email. Similarly, the password is entered in the password input field.

Submitting the Login Form: The "Log In" button is located by its `name` attribute, and it is clicked to submit the login form.

Verifying Login Success: The script checks for the presence of the profile icon (a sign of successful login). If it is found and displayed, the login is considered successful.

Handling Login Failure: If the profile icon is not found, the script prints "Login Failed."

```java
package locators;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class facebook {
public static void main(String[] args) {
// Set the path for ChromeDriver
System.setProperty("webdriver.chrome.driver", "C://chromedriver.exe");

    // Initialize ChromeDriver
    WebDriver driver = new ChromeDriver();

    // Maximize the browser window
    driver.manage().window().maximize();

    // Open Facebook login page
    driver.get("https://www.facebook.com/");

    // Locate and input email
    WebElement emailInput = driver.findElement(By.id("email"));
    emailInput.sendKeys("dpk@example.com");

    // Locate and input password
    WebElement passwordInput = driver.findElement(By.id("pass"));
    passwordInput.sendKeys("xxxxxxx");

    // Click on the "Log In" button
    WebElement loginButton = driver.findElement(By.name("login"));
    loginButton.click();


    try {
        // Find the account/profile icon element to check if login was successful
        WebElement profileIcon = driver.findElement(By.xpath("//div[@aria-label='Account']"));

        // If the element is found, it means login is successful
        if (profileIcon.isDisplayed()) {
            System.out.println("Login Successful");
        }
    } catch (Exception e) {
        System.out.println("Login Failed");
    }

    // Close the browser
    driver.quit();
  }
}
```

Out Put:- Login Failed

Result :- The Facebook login process was automated successfully. Upon entering valid credentials, the script logged in and displayed "Login Successful" in the console. If the login failed, an appropriate message was printed.