

**1. W.a.framework program for data driven framework -to get value from the excel and check into your website
<https://demo.automationtesting.in/SignIn.html> Direct check with login which emailid through login successful or not.**

i. DataProviderUtil.java :-

```
package com.tops.Assignment.datadriven.Utils;

import java.io.File;
import java.io.FileInputStream;
import java.util.Iterator;
import org.apache.poi.ss.usermodel.Row;
import org.apache.poi.xssf.usermodel.XSSFSheet;
import org.apache.poi.xssf.usermodel.XSSFWorkbook;
import org.testng.annotations.DataProvider;

public class DataProviderUtil {

    @DataProvider(name = "loginData")
    public Object[][] getData() throws Exception {
        FileInputStream fis = new FileInputStream(new File("Test Data/Data
Provider.xlsx"));
        XSSFWorkbook workbook = new XSSFWorkbook(fis);
        XSSFSheet sheet = workbook.getSheetAt(0);

        int rowCount = sheet.getPhysicalNumberOfRows();
        //int colCount = sheet.getRow(0).getPhysicalNumberOfCells();

        Object[][] data = new Object[rowCount - 1][2]; // skip header row

        Iterator<Row> rowIterator = sheet.iterator();
        rowIterator.next(); // skip header row
```

```

        int i = 0;

        while (rowIterator.hasNext()) {
            Row row = rowIterator.next();
            data[i][0] = row.getCell(0).getStringCellValue();
            data[i][1] = row.getCell(1).getStringCellValue();
            i++;
        }

        workbook.close();
        fis.close();
        return data;
    }
}

```

ii. LoginTest.java :-

```

package com.tops.Assignment.datadriven.test;

import java.time.Duration;
import org.apache.logging.log4j.LogManager;
import org.apache.logging.log4j.Logger;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;
import com.tops.Assignment.datadriven.Utils.DataProviderUtil;

public class LoginTest {

```

```

WebDriver driver;

private static final Logger logger = LogManager.getLogger(LoginTest.class);

@Test(dataProvider = "loginData", dataProviderClass = DataProviderUtil.class)

public void testLogin(String Email, String Password) {

    System.out.println("Testing start");

    logger.info("Testing started");

    logger.info("Chrome Browser launched");

    driver.get("https://demo.automationtesting.in/SignIn.html");

    //Replace with your selectors

    driver.findElement(By.xpath("//html/body/div/div/div[2]/input")).sendKeys(Email);

    driver.findElement(By.xpath("//html/body/div/div/div[3]/input")).sendKeys(Password)
    ;

    driver.findElement(By.id("enterbtn")).click();

    logger.info("Login tested " + Email + " " + Password);

}

@BeforeMethod

public void beforeMethod() {

    System.out.println("Before Method");

    driver = new ChromeDriver();

    driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(10));

}

@AfterMethod

public void afterMethod() {

    System.out.println("After Method");

    //driver.quit();
}

```

```
    }  
}
```

iii. Data Provider.xlsx :-

Email	Password
<u>rahul.sanghavi.mca@gmail.com</u>	rahul12345
<u>rahul@gmail.com</u>	rahul12345

2. W.a.framework program for keyword driven framework given below keyword which you get from the Excel and check into youwebsite <https://demo.automationtesting.in/SignIn.html>.

i. ActionKeywords.java :-

```
package com.tops.Assignment.keyworddriven.keywords;  
  
import java.time.Duration;  
import org.openqa.selenium.By;  
import org.openqa.selenium.JavascriptExecutor;  
import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.WebElement;  
import org.openqa.selenium.chrome.ChromeDriver;  
import org.openqa.selenium.support.ui.WebDriverWait;  
import org.openqa.selenium.support.ui.ExpectedConditions;  
  
public class ActionKeywords {  
    public static WebDriver driver;  
  
    public static void openBrowser() {  
        driver = new ChromeDriver();  
        driver.manage().window().maximize();
```

```

    }

    public static void navigate(String url) {
        driver.get(url);
    }

    public static void enterText(String locatorType, String locatorValue, String data) {
        WebElement element = getElement(locatorType, locatorValue);
        element.clear();
        element.sendKeys(data);
    }

    public static void click(String locatorType, String locatorValue) {
        WebElement element = getElement(locatorType, locatorValue);
        try {
            element.click(); // normal click
        } catch (Exception e) {
            // fallback: scroll & JS click
            ((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView(true);",
                element);
            ((JavascriptExecutor) driver).executeScript("arguments[0].click()", element);
        }
    }

    public static void closeBrowser() {
        driver.quit();
    }

    private static WebElement getElement(String type, String value) {
        WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
        switch (type.toLowerCase()) {
            case "id":
                return wait.until(ExpectedConditions.elementToBeClickable(By.id(value)));
            case "name":
                return wait.until(ExpectedConditions.elementToBeClickable(By.name(value)));
            case "xpath":

```

```

        return wait.until(ExpectedConditions.elementToBeClickable(By.xpath(value)));
    case "css":
        return
    wait.until(ExpectedConditions.elementToBeClickable(By.cssSelector(value)));
    default:
        throw new IllegalArgumentException("Invalid locator type: " + type);
    }
}
}
}

```

ii. ExcelUtils.java :-

```

package com.tops.Assignment.keyworddriven.Utils;

import java.io.FileInputStream;
import org.apache.poi.ss.usermodel.Cell;
import org.apache.poi.ss.usermodel.DataFormatter;
import org.apache.poi.ss.usermodel.Row;
import org.apache.poi.xssf.usermodel.XSSFSheet;
import org.apache.poi.xssf.usermodel.XSSFWorkbook;

public class ExcelUtils {

    XSSFWorkbook workbook;
    XSSFSheet sheet;

    DataFormatter formatter = new DataFormatter() // safe for blank/numeric/string

    public ExcelUtils(String excelPath) throws Exception {
        FileInputStream fis = new FileInputStream(excelPath);
        workbook = new XSSFWorkbook(fis);
        sheet = workbook.getSheetAt(0);
    }
}

```

```

public int getRowCount() {
    return sheet.getPhysicalNumberOfRows();
}

public String getCellData(int row, int col) {
    Row r = sheet.getRow(row);
    if (r == null) return ""; // blank row
    Cell c = r.getCell(col);
    if (c == null) return ""; // blank cell
    return formatter.formatCellValue(c).trim();
}

```

iii. KeywordTest.java :-

```

package com.tops.Assignment.keyworddriven.tests;

import org.testng.annotations.Test;
import com.tops.Assignment.keyworddriven.Utils.ExcelUtils;
import com.tops.Assignment.keyworddriven.keywords.ActionKeywords;

public class KeywordTest {
    @Test
    public void runTest() throws Exception {
        ExcelUtils excel = new ExcelUtils("Test Data/Keywords.xlsx");

        for (int i = 1; i < excel.getRowCount(); i++) {
            String step = excel.getCellData(i, 0);
            String keyword = excel.getCellData(i, 1);
            String locatorType = excel.getCellData(i, 2);
            String locatorValue = excel.getCellData(i, 3);
        }
    }
}

```

```
String data = excel.getCellData(i, 4);

System.out.println("Step " + step + ": " + keyword);

switch (keyword) {

    case "openBrowser":

        ActionKeywords.openBrowser();

        break;

    case "navigate":

        ActionKeywords.navigate(data);

        break;

    case "enterText":

        ActionKeywords.enterText(locatorType, locatorValue, data);

        break;

    case "click":

        Thread.sleep(1000);

        ActionKeywords.click(locatorType, locatorValue);

        break;

    case "closeBrowser":

        ActionKeywords.closeBrowser();

        break;

    default:

        System.out.println("Unknown keyword: " + keyword);

    }

}

}

}
```

iv. Keywords.xlsx :-

Step	Keyword	LocatorType	LocatorValue	Data
1	openBrowser			
2	navigate			https://qabrainz.com/practice-site
3	click	xpath	//*[@id="navbar-nav"]/div[2]/button/span[2]	
4	enterText	name	email	Admin24@gmail.com
5	enterText	name	password	Test@1234
6	click	xpath	//*[@id="authForm"]/form/div[7]/button/span[2]	
7	click	xpath	//*[@id="user-profile-page"]/div/div[2]/div[1]/aside/div/div[1]/nav/button[5]	
8	click	xpath	//*[@id="alert-modal"]/div/div/button[2]	
9	closeBrowser			

3. Write a framework program for hybrid driven framework given below keyword and Data both which you get from the Excel and check into your website <https://demo.automationtesting.in/SignIn.html>.

i. BaseTest.java :-

```
package com.tops.Assignment.Hybridedriven.base;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;

public class BaseTest {
    public static WebDriver driver;

    @BeforeMethod
    public void setUp() {
        // Initialize WebDriver, open browser, navigate to URL, etc.
        driver = new ChromeDriver();
        driver.manage().timeouts().implicitlyWait(java.time.Duration.ofSeconds(10));
        driver.manage().window().maximize();
        //driver.get("https://qabrainz.com/practice-site"); // Replace with your
        application's URL
    }
}
```

```

@AfterMethod
public void tearDown() {
    // Close browser and clean up
    //driver.quit();
}

```

ii. ActionKeywords.java :-

```

package com.tops.Assignment.Hybridedriven.keywords;

import java.time.Duration;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;

public class ActionKeywords {
    WebDriver driver;

    public ActionKeywords(WebDriver driver) {
        this.driver = driver;
    }

    public void click(By locator) {
        try {
            WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
            WebElement element =
wait.until(ExpectedConditions.elementToBeClickable(locator));
        }
    }
}

```

```

        // Scroll into view
        ((JavascriptExecutor)
driver).executeScript("arguments[0].scrollIntoView(true);", element);

        // Click using JavaScript
        ((JavascriptExecutor) driver).executeScript("arguments[0].click()", element);

        System.out.println("Clicked on element: " + locator.toString());
    } catch (Exception e) {
        System.out.println("Unable to click on element: " + locator.toString());
        e.printStackTrace();
    }
}

public void type(By locator, String data) {
    driver.findElement(locator).sendKeys(data);
}

public String getText(By locator) {
    return driver.findElement(locator).getText();
}

```

iii. LoginPage.java :-

```

package com.tops.Assignment.Hybridedriven.pages;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;

```

```

public class LoginPage {
    WebDriver driver;

    By username = By.name("email");
    By password = By.name("password");
    By loginBtn = By.xpath("//*[@id=\"authForm\"]/form/div[7]/button/span[2]");

    public LoginPage(WebDriver driver) {
        this.driver = driver;
    }

    public void login(String user, String pass) {
        new WebDriverWait(driver, java.time.Duration.ofSeconds(10))
            .until(ExpectedConditions.visibilityOfElementLocated(By.name("email")));

        driver.findElement(username).clear();
        driver.findElement(username).sendKeys(user);
        driver.findElement(password).clear();
        driver.findElement(password).sendKeys(pass);
        driver.findElement(loginBtn).click();
    }
}

```

iv. LoginTest.java :-

```

package com.tops.Assignment.HybridDriven.tests;

import org.openqa.selenium.By;
import org.testng.annotations.Test;
//import com.tops.Assignment.HybridDriven.pages.LoginPage;

```

```

import com.tops.Assignment.Hybridedriven.Utils.ExcelReader;
import com.tops.Assignment.Hybridedriven.base.BaseTest;
import com.tops.Assignment.Hybridedriven.keywords.ActionKeywords;

public class LoginTest extends BaseTest {

    @Test
    public void runTest() throws Exception {
        String filePath = "Test data/Data Keywords.xlsx";
        String sheetName = "Login";
        int rowCount = ExcelReader.getRowCount(filePath, sheetName);

        ActionKeywords action = new ActionKeywords(driver);

        for (int i = 1; i <= rowCount; i++) {
            String keyword = ExcelReader.getData(filePath, sheetName, i, 1);
            String locatorType = ExcelReader.getData(filePath, sheetName, i, 2);
            String locatorValue = ExcelReader.getData(filePath, sheetName, i, 3);
            String data = ExcelReader.getData(filePath, sheetName, i, 4);

            By locator = null;
            if (locatorType.equalsIgnoreCase("xpath")) {
                locator = By.xpath(locatorValue);
            } else if (locatorType.equalsIgnoreCase("name")) {
                locator = By.name(locatorValue);
            }

            switch (keyword) {
                case "openBrowser":
                    // already handled in BaseTest

```

```
        break;

    case "navigate":
        driver.get(data);
        break;

    case "click":
        action.click(locator);
        break;

    case "enterText":
        action.type(locator, data);
        break;

    case "closeBrowser":
        //driver.quit();
        break;
    }
}
}
}
```

v. ExcelReader.java :-

```
package com.tops.Assignment.Hybridedriven.Utils;
```

```
import java.awt.Robot;
import java.io.File;
import java.io.FileInputStream;
import org.apache.poi.ss.usermodel.Cell;
import org.apache.poi.ss.usermodel.Row;
```

```
import org.apache.poi.xssf.usermodel.XSSFSheet;
import org.apache.poi.xssf.usermodel.XSSFWorkbook;

public class ExcelReader {

    public static String getData(String filePath, String sheetName, int row, int col) throws
Exception {
        FileInputStream file = new FileInputStream(new File(filePath));
        XSSSSFWorkbook workbook = new XSSSSFWorkbook(file);
        XSSFSheet sheet = workbook.getSheet(sheetName);

        //  Null-safe check
        Row r = sheet.getRow(row);
        if (r == null) {
            workbook.close();
            file.close();
            return ""; // empty row
        }

        Cell cell = r.getCell(col);
        if (cell == null) {
            workbook.close();
            file.close();
            return ""; // empty cell
        }

        String data = cell.toString().trim();

        workbook.close(); // important
        file.close(); // important
        return data;
    }
}
```

```
}
```

```
public static int getRowCount(String filePath, String sheetName) throws Exception {  
    FileInputStream file = new FileInputStream(new File(filePath));  
    XSSFWorkbook workbook = new XSSFWorkbook(file);  
    XSSFSheet sheet = workbook.getSheet(sheetName);  
    int rowCount = sheet.getLastRowNum();  
    workbook.close();  
    file.close();  
    return rowCount;  
}  
}
```

vi. Data Keywords.xlsx :-

Step	Keyword	LocatorType	LocatorValue	Data
1	openBrowser			
2	navigate			https://qabrainz.com/practice-site
3	click	xpath	//*[@id="navbar-nav"]/div[2]/button/span[2]	
4	enterText	name	email	Admin24@gmail.com
5	enterText	name	password	Test@1234
6	click	xpath	//*[@id="authForm"]/form/div[7]/button/span[2]	
7	click	xpath	//*[@id="user-profile-page"]/div/div[2]/div[1]/aside/div/div[1]/nav/button[5]	
8	click	xpath	//*[@id="alert-modal"]/div/div/div/button[2]	
9	closeBrowser			

4. W.a.maven program to create simple WebDriver Program.

```
package com.tops.Assignments;  
  
import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.chrome.ChromeDriver;  
  
public class SimpleTest {  
  
    public static void main(String[] args) {  
        // TODO Auto-generated method stub  
  
        String path = System.getProperty("user.dir");
```

```
System.out.println(path);

String fullpath = path + "\\src\\test\\java\\WebDriver\\chromedriver.exe";

System.out.println("full path "+fullpath);

System.setProperty("webdriver.chrome.driver",fullpath);

//System.setProperty("webdriver.chrome.driver",
"C:/Users/Lenovo/Downloads/chromedriver-win64/chromedriver-win64/chromedriver.exe");



// Initialize webDriver

WebDriver driver = new ChromeDriver();


//Maximize window (optional)

driver.manage().window().maximize();


// Open the target URL

driver.get("https://www.google.com");


String url = driver.getCurrentUrl();

System.out.println(url);

String title = driver.getTitle();

System.out.println(title);

if(title.equals("Google !!!")) {

    System.out.println("Title matched");

}

else {

    System.out.println("Title not match");

}

// Close browser

//driver.quit();



}
```

5. W.a.maven program to create Junit with WebDriver Program.

```
package com.tops.Assignments;
```

```
import org.junit.After;  
import org.junit.Before;  
import org.junit.Test;  
import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.chrome.ChromeDriver;
```

```
public class JunitWebDriverTest {
```

```
    WebDriver driver;
```

```
@Before
```

```
    public void setUp() {  
        // Set ChromeDriver path (you can keep chromedriver inside project folder)  
        String path = System.getProperty("user.dir");  
        String fullPath = path + "\\src\\test\\java\\WebDriver\\chromedriver.exe";  
        System.setProperty("webdriver.chrome.driver", fullPath);
```

```
        // Initialize WebDriver
```

```
        driver = new ChromeDriver();  
        driver.manage().window().maximize();  
    }
```

```
@Test
```

```
    public void openFacebook() {  
        // Open Facebook login page  
        driver.get("https://www.facebook.com/");  
        System.out.println("Title of page: " + driver.getTitle());  
    }
```

```
@After
public void tearDown() {
    // Close browser
    //driver.quit();
}
}
```

6. W.a.maven program to create TestNG with WebDriver Program.

```
package com.tops.Assignments;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.AfterTest;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Test;

public class TestNGWebDriverTest {
    WebDriver driver;

@BeforeTest
public void setUp() {
    // Set ChromeDriver path
    String path = System.getProperty("user.dir");
    String fullPath = path + "\\src\\test\\java\\WebDriver\\chromedriver.exe";
    System.setProperty("webdriver.chrome.driver", fullPath);

    // Initialize WebDriver
    driver = new ChromeDriver();
    driver.manage().window().maximize();
}
}
```

```
@Test
public void openFacebook() {
    // Open Facebook login page
    driver.get("https://www.facebook.com/");
    System.out.println("Page Title is: " + driver.getTitle());
}
```

```
@AfterTest
public void tearDown() {
    // Close browser
    //driver.quit();
}
}
```