

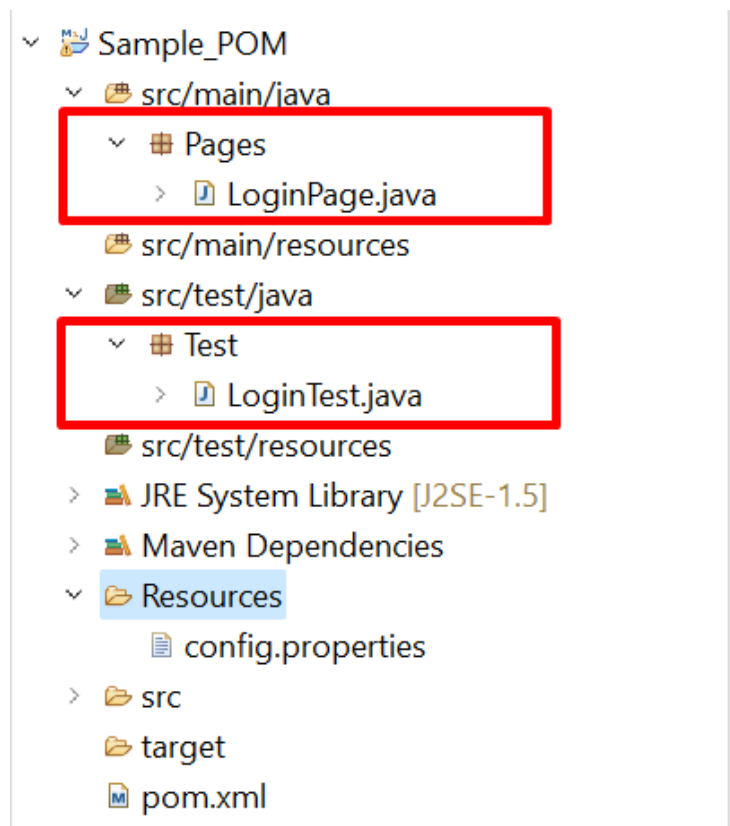
## What is Page Object Model?

**Page Object Model (POM)** is a design pattern, popularly used in test automation that creates Object Repository for web UI elements. The advantage of the model is that it reduces code duplication and improves test maintenance.

**Page Factory** is a class provided by Selenium WebDriver to support Page Object Design patterns. In Page Factory, testers use `@FindBy` annotation. The `initElements` method is used to initialize web elements. Similarly, one can use `@FindBy` with different location strategies to find web elements and perform actions on them

### Why use constructor in POM

A constructor has to be created in each of the class in the Page Layer, in order to get the driver instance from the Main class in Test Layer and also to initialize WebElements(Page Objects) declared in the page class using `PageFactory.InitElement()`.



## LoginPage

```
package Pages;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;
public class LoginPage {
    WebDriver driver;
    public LoginPage(WebDriver d)
    {
        driver =d;
        PageFactory.initElements(driver, this);
    }
    @FindBy(id = "user-name")
    WebElement username;

    @FindBy(id = "password")
    WebElement password;

    @FindBy(id = "login-button")
    WebElement loginBtn;

    public void enterUsername(String uname)
    {
        username.sendKeys(uname);
    }
    public void enterPassword(String pwd)
    {
        password.sendKeys(pwd);
    }
    public void ClickonLogonBtn()
    {
        loginBtn.click();
    }
}
```

## LoginTest

```
package Test;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.util.Properties;
```

```

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

import Pages.LoginPage;
import io.github.bonigarcia.wdm.WebDriverManager;
public class LoginTest {
    public static void main(String[] args) throws FileNotFoundException,
IOException {
        WebDriverManager.chromedriver().setup();
        WebDriver driver = new ChromeDriver();
        LoginPage p = new LoginPage(driver);
        // driver.get("https://www.saucedemo.com/");

        Properties prop=new Properties();
        prop.load(new FileInputStream("Resources\\config.properties"));
        driver.get(prop.getProperty("url"));

        p.enterUsername("standard_user");
        p.enterPassword("secret_sauce");
        p.ClickonLogonBtn();
    }
}

```

### Property File

url = <https://www.saucedemo.com/>

