

RAJAT VERMA

SOFTWARE TESTING

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TUTORIAL | DESIGN PATTERN |
PAGE OBJECT MODEL

PART-01

WHAT|WHY|HOW?



<https://github.com/rajatt95>

<https://www.youtube.com/@rajatt95>



What is Page Object Model?

1. It is a **Design Pattern**.
 - a. It is not a framework.
2. Also, known as POM.
 - a. This is not related to pom.xml file which we get with the Maven project.



What is Page Object Model? (2)

1. Selenium documentation

- a. Page Object is a Design Pattern that has become popular in test automation for
 - i. Enhancing Test Maintenance
 - ii. Reducing code duplication.



Note: Always prefer official documentation first.



What is Web Page?

1. A **web page** or **webpage** is a document, commonly written in HTML, that is viewed in an Internet browser.
2. It can be accessed by entering a URL address into a browser's address bar.



Web Page contains?

1. A Web Page can have n no. of components

- a. Header
- b. Footer
- c. Side Panel
- d. Menu Section
- e. Banner

2. Example

- a. [Selenium Documentation](https://www.selenium.dev/documentation/)



Component contains?

1. Components can have n no. of Web Elements

- a. Textbox
- b. Button
- c. Link
- d. Dropdown
- e. Radio Button
- f. Checkbox
- g. Image



Different Operations on Web Elements

1. Click
2. Double Click
3. Right Click
4. Mouse Hover
5. Send Keys (Fill value in textbox/text area)
6. Drag and Drop, etc



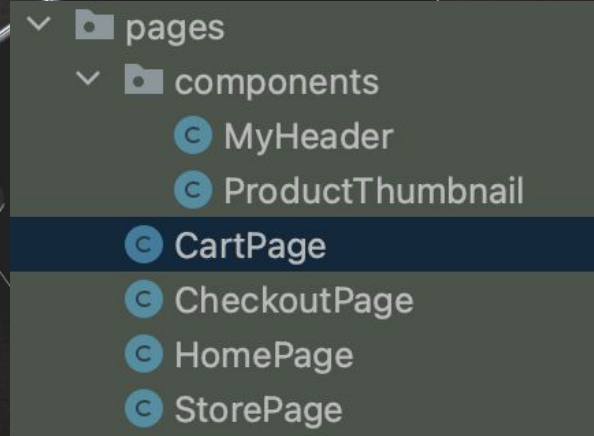
Why use Page Object Model?

1. Easy Maintenance
2. Code Re-Usability
3. Readability and Reliability of Scripts
4. Object repository is independent of test cases
5. It can be used in any kind of framework such as modular, data-driven, keyword-driven, hybrid framework, etc



How to implement Page Object Model?

1. Each Page is represented by a class
 - a. It contains the
 - i. **UI element definitions**
 - ii. **Methods for User actions.**



How to implement Page Object Model?

..... (2)

```
// Data Members
// Properties
// Variables
1 usage
private final By textBox_Email = By.id("email");
1 usage
private final By textBox_Password = By.id("password");
1 usage
private final By button_SignIn = By.xpath(xpathExpression: "//button[normalize-space()='Sign In']");

// Methods
// Tasks
// Behavior
// Functionality
no usages new *
public SignInPage fill_Textbox_Email(String email){...}
no usages new *
public SignInPage fill_Textbox_Password(String password){...}
no usages new *
public SignInPage click_Button_SignIn(){...}
```



```
no usages * "rajatt95" *
@Test
public void test_Login_Functionality() {

    SignInPage signInPage = new SignInPage(getDriver());
    signInPage
        .fill_Textbox_Email("user-email")
        .fill_Textbox_Password("user-password")
        .click_Button_SignIn();
}
```



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