

Bordeaux, 22-24 October 2019



HOW PATTERN OBJECT MODEL SAVED MY LIFE

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AGENDA

- Challenges
- Design Patterns
- Improved Pattern Objects
- Similar solutions

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CHALLENGES



You are fired!!

PEOPLE CHALLENGES

- People don't know programming!
- People don't have time to learn programming!
- People don't have technical skills!
- Clients do not allow less experienced people to work on automation.

TOOLS CHALLENGES

- Human Readable Tests
- Easy Knowledge Transfer
- Troubleshooting Easiness
- Boost Test Reliability
- Accelerate Test Execution
- Extend the Framework to Fit Your Needs

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DESIGN PATTERNS

MOST COMMON DESIGN PATTERNS

- Page Object Model
- Page Factory

POM ADVANTAGES

- Code Reuse
- Maintainability
- Readability

PAGE FACTORY

- Improved code
- Shorter code

Case1

```
public void page_object_click() {  
    driver.findElement(By.xpath("//xpath")).click();  
}
```


Case2

```
public void page_object() {  
    WebElement element;  
    element = driver.findElement(By.xpath("//xpath"));  
    element.click();  
}
```

Case3

```
WebElement element;  
WebElement element2;  
public void page_object() {  
    element = driver.findElement(By.xpath("//xpath"));  
    element.click();  
}  
public void page_object2() {  
    element2.findElement(By.xpath("//xpath")).click();  
}
```

Case4

```
public void page_object() {  
    WebDriverWait wait = new WebDriverWait(driver, timeoutInSeconds: 20);  
    wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//xpath/element"))).click();  
}
```

Case5

```
public void page_object(){
    WebElement element;
    WebDriverWait wait = new WebDriverWait(driver,  timeOutInSeconds: 20);
    element = wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//xpath/element")));
    element.click();
}

public void page_object2(){
    WebElement element;
    WebDriverWait wait = new WebDriverWait(driver,  timeOutInSeconds: 20);
    wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//xpath/element")));
    element = driver.findElement(By.xpath("//xpath"));
    element.click();
}
```


Case6

```
public void login(){  
    WebDriverWait wait = new WebDriverWait(driver, timeOutInSeconds: 20);  
    wait.until(ExpectedConditions.visibilityOfElementLocated(By.id("username"))).sendKeys( ...charSequences: "test.user");  
    driver.findElement(By.id("password")).sendKeys( ...charSequences: "P@$$w0rd");  
}
```

Case7

```
WebDriverWait wait = new WebDriverWait(driver, timeOutInSeconds: 20);  
public void register(){  
    try {  
        Thread.sleep( millis: 5000);  
    }catch (Exception e){  
        System.out.println(e);  
    }  
    wait.until(ExpectedConditions.visibilityOfElementLocated(By.id("email"))).  
        sendKeys( ...charSequences: "test.user@gmail.com");  
    try {  
        Thread.sleep( millis: 2000);  
    }catch (Exception e){  
        System.out.println(e);  
    }  
    driver.findElement(By.id("password")).sendKeys( ...charSequences: "P@$$w0rd");  
    try {  
        Thread.sleep( millis: 1000);  
    }catch (Exception e){  
        System.out.println(e);  
    }  
}
```

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IMPROVED PATTERN OBJECT



User Conference on Advanced Automated Testing



User Conference on Advanced Automated Testing

ELEMENTS AND ACTIONS

- Driver/Browsers - Initialize
- Buttons & Links – Click
- Input Fields – Type Text
- Alerts – Do something with alerts
- Dropdowns/Combobox – Select
- Texts – Retrieve Text/Attribute Value

▼ elements

- Ⓢ Alerts
- Ⓢ Button
- Ⓢ Dropdown
- Ⓢ Files
- Ⓢ Gestures
- Ⓢ Input
- Ⓢ Key
- Ⓢ Misc

📄 package-info.java

▼ actions

- Ⓢ Database
- Ⓢ DataSources
- Ⓢ Extract
- Ⓢ Navigate
- Ⓢ Validate
- Ⓢ Wait

```
/**...*/
```

```
public WebElement getElement(final By by) {  
    try {  
        return waitElement.until(ExpectedConditions.visibilityOfElementLocated(by));  
    } catch (NoSuchElementException e) {  
        e.printStackTrace();  
        return null;  
    }  
}
```

```
/**...*/
```

```
public List<WebElement> getAllElements(final By by) {  
    try {  
        return waitElement.until(ExpectedConditions.visibilityOfAllElementsLocatedBy((by)));  
    } catch (NoSuchElementException e) {  
        e.printStackTrace();  
        return null;  
    }  
}
```



```
/** Click on particular button or link. ...*/
```

```
public void click(final By by) {  
    try {  
        getElement(by).click();  
    } catch (Exception e) {  
    }  
}
```

```
/** Click on particular button or link. ...*/
```

```
public void click(final By by, final int index) {  
    try {  
        getAllElements(by).get(index).click();  
    } catch (NoSuchElementException e) {  
        e.printStackTrace();  
    }  
}
```

```
import com.taw.common.globals.ElementActions;
import org.openqa.selenium.By;

public class LoginPage extends ElementActions {

    By username = By.id("username");
    By password = By.id("password");
    By login = By.id("login");

    public void type_username(String user) {
        input.type(username, user);
    }

    public void type_password(String pass) {
        input.type(password, pass);
    }

    public void login_button() {
        button.click(login);
    }
}
```

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SIMILAR SOLUTIONS