

Assertions: results verification

Test automation basics with Selenium & Java



Asserts

- **compare** expected and actuals results

true



does nothing

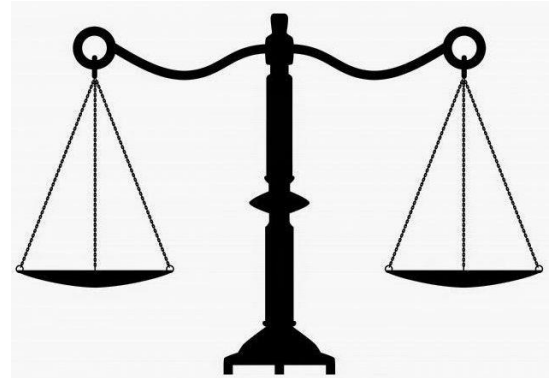
PASS

false



throws Exception

FAIL



Simple TestNG asserts

```
Assert.assertTrue(condition, message);
```

```
Assert.assertEquals(  
    actualResult, expectedResult, message);
```



Assert import VS assert method static import

```
import org.testng.Assert;
```



```
Assert.assertEquals(searchField.getText(), "test");
```

```
import static org.testng.Assert.assertEquals;
```



```
assertEquals(searchField.getText(), "test");
```



Asserts - example

```
WebDriver driver = new ChromeDriver();  
driver.navigate().to( "https://www.google.com");  
  
WebElement feelingLuckyButton =  
    driver.findElement(By.name("btnI"));  
  
assertTrue(feelingLuckyButton.isEnabled(),  
    "I'm Feeling Lucky button is disabled!");  
assertEquals(feelingLuckyButton.getAttribute( "value"),  
    "I'm Feeling Lucky",  
    "Wrong text has been displayed!");
```

Actual result

Expected result

Error message

- 1) advanced assert features (search in collections, chains of assertions, etc.)
- 2) existing solutions instead own implementation
- 3) more readable

What libraries?

- 1) AssertJ
- 2) Hamcrest matchers



AssertJ VS Hamcrest matchers

1) AssertJ

```
assertThat(pageHeader.getText())  
    .as("Page have a wrong title!")  
    .contains("Home page");
```

2) Hamcrest matchers

```
assertThat("Page have a wrong title!",  
    pageHeader.getText(),  
    contains("Home page"));
```

Chains of assertions

```
assertThat(result)
    .isEmpty()
    .contains(
        "selenium", "webdriver", "java", "automation")
    .doesNotContain("restAssured", "protractor");
```


Business assertions pattern

```
public class BusinessAssert {  
    public static void assertThatValidSearchResultIsDisplayed(WebElement result) {  
        assertThat(result.isDisplayed())  
            .as("Search result area is missing!").isTrue();  
        assertThat(result.getText())  
            .as("No expected content or unexpected content has been found!")  
            .contains("selenium", "webdriver", "java", "automation")  
            .doesNotContain("restAssured", "protractor");  
    }  
}
```

Exercise

Execute search and verify result

Steps:

- 1) Open google.com
- 2) Put text 'selenium webdriver' to the search field
- 3) Press Enter search button

Expected results:

words "selenium" and "webdriver" are present in the first result row

