

# Podstawy testów użytkowych i automatycznych

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Kamil Wyżgoł, grupa ISI3

## Automatyzacja testowania z Selenium Web Driver

- Informacje

- ❖ [Screencast](#)

- ❖ [Repozytorium w serwisie GitHub](#)

- ❖ [Bezpośredni link do kodu \(GitHub\)](#)

- ❖ [Bezpośredni link do kodu \(pastebin\)](#)

- ❖ **Język: C#** (Selenium Web Driver, NUnit, przeglądarka Google Chrome)

- ❖ **IDE: Visual Studio 2019**

- Wynik testów

Test Explorer				Search Test Explorer
Test	Duration	Traits	Error Message	
PTUIA - Selenium Web Driver (22)	1,4 min			<b>Group Summary</b>
PTUIA (22)	1,4 min			PTUIA - Selenium Web Driver
SeleniumTests (22)	1,4 min			Tests in group: 22
Test00_AgeBelow	3,4 sec			Total Duration: 1,4 min
Test01_LowerMlodzik	3,8 sec		Expected string length 7 but was 6. Strings differ at index 0. Expected: "Mlodzik" But was: "Skrzat" -----^	Outcomes
Test02_UpperMlodzik	4,6 sec			17 Passed
Test03_LowerJunior	4,1 sec			5 Failed
Test04_UpperJunior	3,8 sec			
Test05_LowerDorosly	3,7 sec			
Test06_UpperDorosly	3,7 sec			
Test07_LowerSenior	3,7 sec			
Test08_LowerParentalConsent	3,7 sec			
Test09_UpperParentalConsent	3,9 sec			
Test10_LowerUnderageMedical	3,8 sec			
Test11_UpperUnderageMedical	4,5 sec			
Test12_LowerSeniorMedical	3,7 sec			
Test13_AgeRounding	4,7 sec		Expected string length 7 but was 17. Strings differ at index 0. Expected: "Mlodzik" But was: "Brak kwalifikacji" -----^	
Test14_DataValidationDateText	3,7 sec			
Test15_DataValidationJavaScript	3,7 sec		Expected: False But was: True	
Test16_DataValidationHTML	4,4 sec		Expected: False But was: True	
Test17_DataValidationEmptyFName	4,3 sec			
Test18_DataValidationEmptyLName	3,7 sec			
Test19_DataValidationEmptyDate	3,6 sec			
Test20_DataValidationDateNegativeNumberMedical	3,8 sec		Expected string length 11 but was 6. Strings differ at index 0. Expected: "Blad danych" But was: "Senior" -----^	
Test21_DataValidationDateNegativeNumber	3,7 sec			

## ❖ Testy pomysłne

Test	Duration	Traits	Error Message
PTUIA - Selenium Web Driver (17)	1,1 min		
PTUIA (17)	1,1 min		
SeleniumTests (17)	1,1 min		
Test00_AgeBelow	3,4 sec		
Test02_UpperMlodzik	4,6 sec		
Test03_LowerJunior	4,1 sec		
Test04_UpperJunior	3,8 sec		
Test05_LowerDorosly	3,7 sec		
Test06_UpperDorosly	3,7 sec		
Test07_LowerSenior	3,7 sec		
Test08_LowerParentalConsent	3,7 sec		
Test09_UpperParentalConsent	3,9 sec		
Test10_LowerUnderageMedical	3,8 sec		
Test11_UpperUnderageMedical	4,5 sec		
Test12_LowerSeniorMedical	3,7 sec		
Test14_DataValidationDateText	3,7 sec		
Test17_DataValidationEmptyFName	4,3 sec		
Test18_DataValidationEmptyLName	3,7 sec		
Test19_DataValidationEmptyDate	3,6 sec		
Test21_DataValidationDateNegativeNumber	3,7 sec		

## ❖ Testy niepomyślne

Test	Duration	T.	Error Message
PTUIA - Selenium Web Driver (5)	20,5 sec		
PTUIA (5)	20,5 sec		
SeleniumTests (5)	20,5 sec		
Test01_LowerMlodzik	3,8 sec		Expected string length 7 but was 6. Strings differ at index 0. Expected: "Mlodzik" But was: "Skrzat"
Test13_AgeRounding	4,7 sec		Expected string length 7 but was 17. Strings differ at index 0. Expected: "Mlodzik" But was: "Brak kwalifikacji"
Test15_DataValidationJavaScript	3,7 sec		Expected: False But was: True
Test16_DataValidationHTML	4,4 sec		Expected: False But was: True
Test20_DataValidationDateNegativeNumberMedical	3,8 sec		Expected string length 11 but was 6. Strings differ at index 0. Expected: "Bład danych" But was: "Senior"

- Szczegółowe informacje o testach niepomyślnych

#### Test Detail Summary

✖ Test01\_LowerMlodzik

📄 Source: [SeleniumTests.cs](#) line 70

🕒 Duration: 3,8 sec

##### Message:

Expected string length 7 but was 6. Strings differ at index 0.

Expected: "Mlodzik"

But was: "Skrzat"

-----^

##### Stack Trace:

[SeleniumTests.Test01\\_LowerMlodzik\(\)](#) line 91

#### Test Detail Summary

✖ Test13\_AgeRounding

📄 Source: [SeleniumTests.cs](#) line 359

🕒 Duration: 4,7 sec

##### Message:

Expected string length 7 but was 17. Strings differ at index 0.

Expected: "Mlodzik"

But was: "Brak kwalifikacji"

-----^

##### Stack Trace:

[SeleniumTests.Test13\\_AgeRounding\(\)](#) line 380

#### Test Detail Summary

✖ Test15\_DataValidationJavaScript

📄 Source: [SeleniumTests.cs](#) line 407

🕒 Duration: 3,7 sec

##### Message:

Expected: False

But was: True

##### Stack Trace:

[SeleniumTests.Test15\\_DataValidationJavaScript\(\)](#) line 438

#### Test Detail Summary

✖ Test16\_DataValidationHTML

📄 Source: [SeleniumTests.cs](#) line 442

🕒 Duration: 4,4 sec

##### Message:

Expected: False

But was: True

##### Stack Trace:

[SeleniumTests.Test16\\_DataValidationHTML\(\)](#) line 473

## Test Detail Summary

### ✖ Test20\_DataValidationDateNegativeNumberMedical

📄 Source: [SeleniumTests.cs](#) line 531

🕒 Duration: 3,8 sec

#### Message:

Expected string length 11 but was 6. Strings differ at index 0.

Expected: "Bład danych"

But was: "Senior"

-----^

#### Stack Trace:

[SeleniumTests.Test20\\_DataValidationDateNegativeNumberMedical\(\)](#) line 551

The screenshot displays the Visual Studio IDE with the following components:

- Test Explorer:** Located on the left, it shows a tree of tests. The test `Test20_DataValidationDateNegativeNumberMedical` is highlighted in red, indicating a failure. The duration of the test is 3,8 sec.
- Code Editor:** The main area on the right shows the source code of `SeleniumTests.cs`. The test method `Test20_DataValidationDateNegativeNumberMedical` is selected, showing the failure at line 551. The code includes a `Setup` method, a `Clean` method, and the `Test` method itself.
- Group Summary:** A summary of the test group is shown at the bottom left, indicating that 17 tests passed and 5 failed.

```
public void Setup() //Wybranie przeglądarki Google Chrome
{
    driver = new ChromeDriver();
}

[TearDown]
public void Clean() //zamknięcie przeglądarki
{
    try
    {
        driver.Quit();
    }
    catch (Exception) {}
}

private string GetAlertText() //pobranie tekstu alertu i jego zamknięcie
{
    IAlert alert = driver.SwitchTo().Alert();
    string alertText = alert.Text;
    alert.Accept();
    return alertText;
}

[Test]
public void Test00_AgeBelow() //Sprawdzenie wartości brzegowej, która uniemożliwia udział w zawodach
{
    //załadowanie strony internetowej o podanym adresie URL
    driver.Navigate().GoToUrl("https://lamp.ii.us.edu.pl/~mtdyd/zawody/");

    //wypełnienie formularza
    driver.FindElement(By.Id("inputEmail3")).Clear();
    driver.FindElement(By.Id("inputEmail3")).SendKeys("Jan");
    driver.FindElement(By.Id("inputPassword3")).Clear();
    driver.FindElement(By.Id("inputPassword3")).SendKeys("Kowalski");
    driver.FindElement(By.Id("dataU")).Clear();
    driver.FindElement(By.Id("dataU")).SendKeys("01.01.2011");
}
```

Visual Studio IDE showing a Selenium WebDriver test suite. The Test Explorer on the left lists 22 tests, with 17 passed and 5 failed. The main editor displays the code for `Test10_LowerUnderageMedical()` and `Test11_UpperUnderageMedical()`, which perform actions on a web application and assert the alert text.

**Test Explorer Summary:**

Test	Duration	Status
PTUIA - Selenium Web Driver (22)	1.4 min	Failed
PTUIA (22)	1.4 min	Failed
SeleniumTests (22)	1.4 min	Failed
Test00_AgeBelow	3.4 sec	Passed
Test01_LowerMlodzik	3.8 sec	Failed
Test02_UpperMlodzik	3.8 sec	Passed
Test03_LowerJunior	3.8 sec	Passed
Test04_UpperJunior	3.7 sec	Passed
Test05_LowerDorosly	3.7 sec	Passed
Test06_UpperDorosly	3.6 sec	Passed
Test07_LowerSenior	4.4 sec	Passed
Test08_LowerParentalConsent	3.7 sec	Passed
Test09_UpperParentalConsent	3.7 sec	Passed
Test10_LowerUnderageMedical	3.7 sec	Passed
Test11_UpperUnderageMedical	3.7 sec	Passed
Test12_LowerSeniorMedical	3.7 sec	Passed
Test13_AgeRounding	3.9 sec	Failed
Test14_DataValidationDateText	3.6 sec	Passed
Test15_DataValidationJavaScript	3.7 sec	Failed
Test16_DataValidationHTML	4.3 sec	Failed
Test17_DataValidationEmptyFName	3.6 sec	Passed
Test18_DataValidationEmptyLName	3.6 sec	Passed
Test19_DataValidationEmptyDate	3.6 sec	Passed
Test20_DataValidationDateNegativeNu...	3.7 sec	Failed
Test21_DataValidationDateNegativeNu...	3.6 sec	Passed

**Group Summary:**

- PTUIA - Selenium Web Driver
- Tests in group: 22
- Total Duration: 1,4 min
- Outcomes: 17 Passed, 5 Failed

**Code Snippets:**

```
driver.FindElement(By.Id("dataU")).SendKeys("01.01.2003");
driver.FindElement(By.Id("lekarz")).Click();
driver.FindElement(By.XPath("//button[@type='button']")).Click();

//pominięcie alertu dot. różnicy
driver.SwitchTo().Alert().Accept();

string alertText = GetAlertText();

Assert.AreEqual("Bład danych", alertText);

[Test]
public void Test10_LowerUnderageMedical() //Sprawdzenie dolnej wartości brzegowej, kiedy wymagane jest zaświadczenie
{
    //załadowanie strony internetowej o podanym adresie URL
    driver.Navigate().GoToUrl("https://lamp.ii.us.edu.pl/~mtdyd/zawody/");

    //wypełnienie formularza
    driver.FindElement(By.Id("inputEmail3")).Clear();
    driver.FindElement(By.Id("inputEmail3")).SendKeys("Jan");
    driver.FindElement(By.Id("inputPassword3")).Clear();
    driver.FindElement(By.Id("inputPassword3")).SendKeys("Kowalski");
    driver.FindElement(By.Id("dataU")).Clear();
    driver.FindElement(By.Id("dataU")).SendKeys("01.01.2010");
    driver.FindElement(By.Id("rodzice")).Click();
    driver.FindElement(By.XPath("//button[@type='button']")).Click();

    //pominięcie alertu dot. różnicy
    driver.SwitchTo().Alert().Accept();

    string alertText = GetAlertText();

    Assert.AreEqual("Bład danych", alertText);
}
```

Visual Studio IDE showing the continuation of the Selenium WebDriver test suite. The Test Explorer on the left shows the same 22 tests, with 17 passed and 5 failed. The main editor displays the code for `Test20_DataValidationDateNegativeNumberMedical()` and `Test21_DataValidationDateNegativeNumber()`, which perform actions on a web application and assert the alert text.

**Test Explorer Summary:**

Test	Duration	Status
PTUIA - Selenium Web Driver (22)	1.4 min	Failed
PTUIA (22)	1.4 min	Failed
SeleniumTests (22)	1.4 min	Failed
Test00_AgeBelow	3.4 sec	Passed
Test01_LowerMlodzik	3.8 sec	Failed
Test02_UpperMlodzik	3.8 sec	Passed
Test03_LowerJunior	3.8 sec	Passed
Test04_UpperJunior	3.7 sec	Passed
Test05_LowerDorosly	3.7 sec	Passed
Test06_UpperDorosly	3.6 sec	Passed
Test07_LowerSenior	4.4 sec	Passed
Test08_LowerParentalConsent	3.7 sec	Passed
Test09_UpperParentalConsent	3.7 sec	Passed
Test10_LowerUnderageMedical	3.7 sec	Passed
Test11_UpperUnderageMedical	3.7 sec	Passed
Test12_LowerSeniorMedical	3.7 sec	Passed
Test13_AgeRounding	3.9 sec	Failed
Test14_DataValidationDateText	3.6 sec	Passed
Test15_DataValidationJavaScript	3.7 sec	Failed
Test16_DataValidationHTML	4.3 sec	Failed
Test17_DataValidationEmptyFName	3.6 sec	Passed
Test18_DataValidationEmptyLName	3.6 sec	Passed
Test19_DataValidationEmptyDate	3.6 sec	Passed
Test20_DataValidationDateNegativeNu...	3.7 sec	Failed
Test21_DataValidationDateNegativeNu...	3.6 sec	Passed

**Group Summary:**

- PTUIA - Selenium Web Driver
- Tests in group: 22
- Total Duration: 1,4 min
- Outcomes: 17 Passed, 5 Failed

**Code Snippets:**

```
driver.FindElement(By.Id("inputPassword3")).Clear();
driver.FindElement(By.Id("inputPassword3")).SendKeys("Kowalski");
driver.FindElement(By.XPath("//button[@type='button']")).Click();

string alertText = GetAlertText();

Assert.AreEqual("Data urodzenia nie moze byc pusta", alertText);

[Test]
public void Test20_DataValidationDateNegativeNumberMedical() //Walidacja wprowadzonych danych (liczba ujemna w polu data)
{
    //załadowanie strony internetowej o podanym adresie URL
    driver.Navigate().GoToUrl("https://lamp.ii.us.edu.pl/~mtdyd/zawody/");

    //wypełnienie formularza
    driver.FindElement(By.Id("inputEmail3")).Clear();
    driver.FindElement(By.Id("inputEmail3")).SendKeys("Jan");
    driver.FindElement(By.Id("inputPassword3")).Clear();
    driver.FindElement(By.Id("inputPassword3")).SendKeys("Kowalski");
    driver.FindElement(By.Id("dataU")).Clear();
    driver.FindElement(By.Id("dataU")).SendKeys("-1");
    driver.FindElement(By.Id("lekarz")).Click();
    driver.FindElement(By.XPath("//button[@type='button']")).Click();

    //pominięcie alertu dot. różnicy
    driver.SwitchTo().Alert().Accept();

    string alertText = GetAlertText();

    Assert.AreEqual("Bład danych", alertText);
}
```