2018

Software Quality & Testing Assignment

GitHub https://github.com/s00151977/TestingPractice

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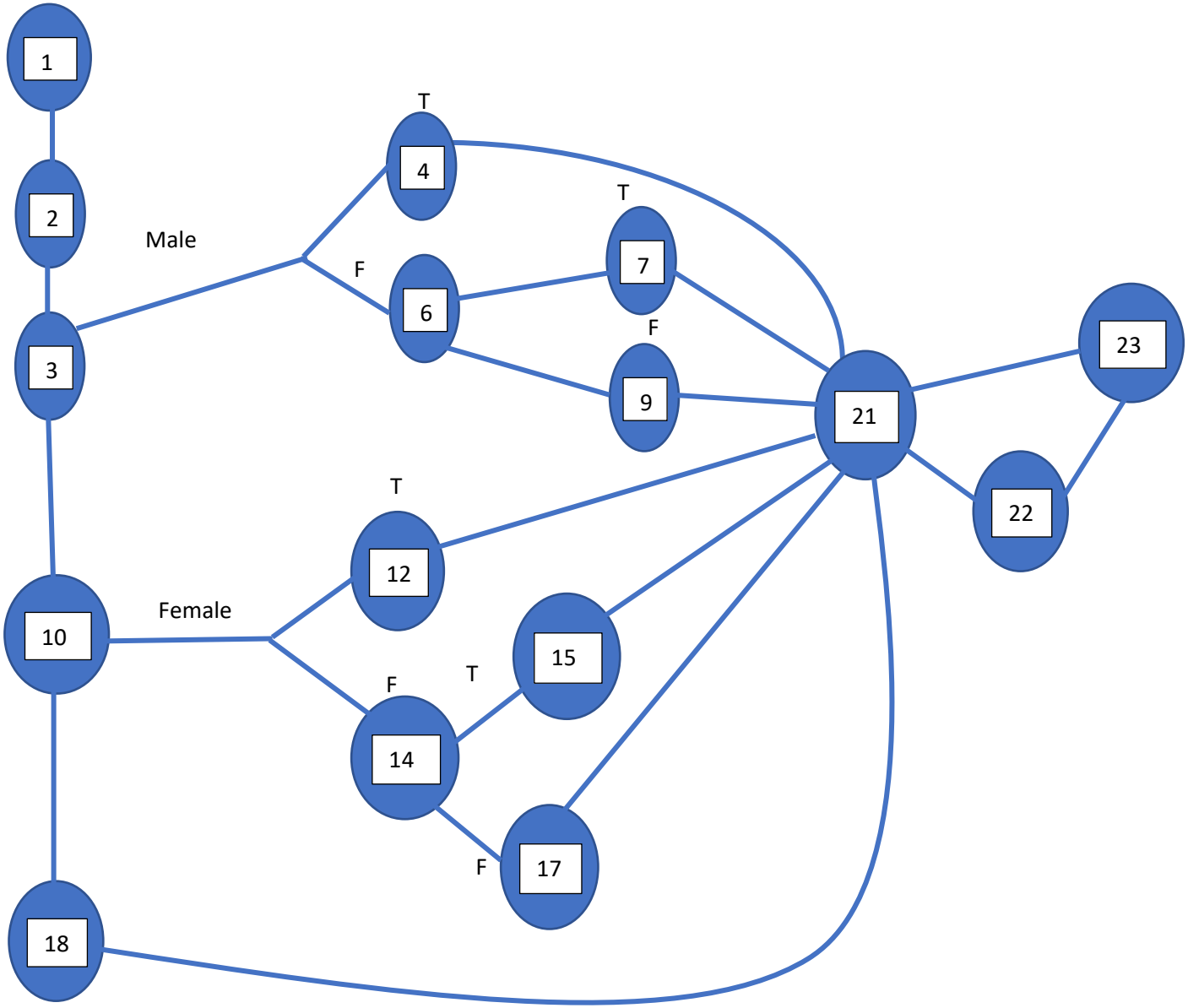
Contents

Flow graph & cyclomatic complexity of the program



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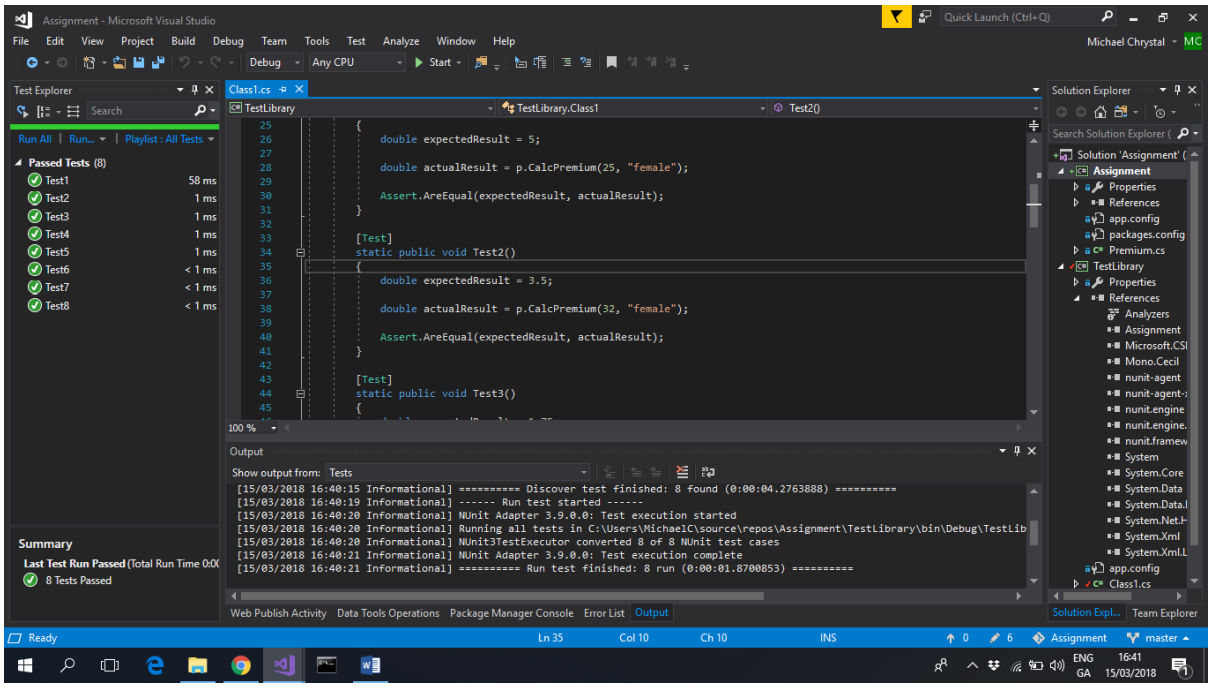
Cyclomatic Complexity= Edges-Nodes + 2

23-16+2=8

Test cases 100% branch coverage.

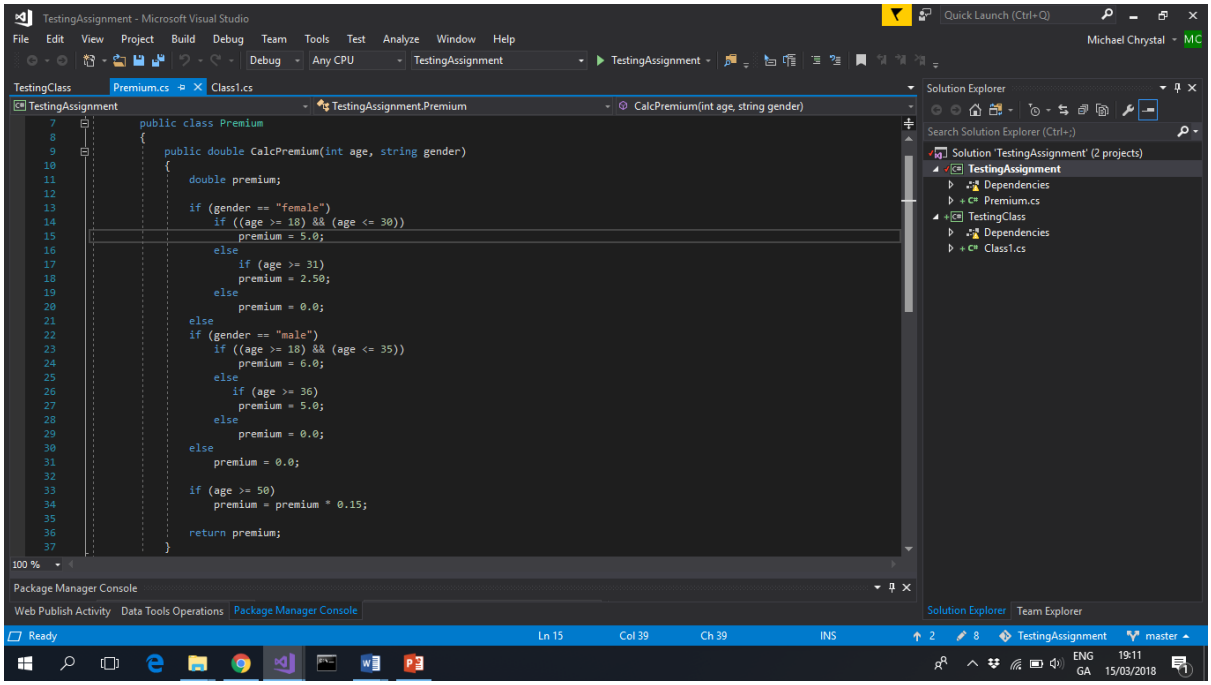
Gender	Age	Actual Result	Expected Result
Female	25	5	5
Female	32	3.5	3.5
Female	55	1.75	1.75
Female	15	0	0
Male	25	6	6
Male	37	5	5
Male	55	2.5	2.5
Male	15	0	0
Pizza	30	0	0

NUnit automated white box tests



Devise black box Tests

Classes



representative data

Female	32	3.5	3.5
Female	55	1.75	1.75
Female	15	0	0
Male	25	6	6
Male	37	5	5
Male	55	2.5	2.5
Male	15	0	0
Pizza	30	0	0

Test Data

```
using NUnit.Framework;
using NUnit;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using SQTTAssignment;

namespace TestLibrary
{
    [TestFixture]
    static public class Class1
    {
        static Premium p;

        [SetUp]
        static public void init()
        {
            p = new Premium();
        }

        [Test]
        static public void Test1()
        {
            double expectedResult = 5;

            double actualResult = p.CalcPremium(25, "female");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
        static public void Test2()
        {
            double expectedResult = 3.5;

            double actualResult = p.CalcPremium(32, "female");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
```

```
        static public void Test3()
        {
            double expectedResult = 1.75;

            double actualResult = p.CalcPremium(55, "female");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
        static public void Test4()
        {
            double expectedResult = 0;

            double actualResult = p.CalcPremium(15, "female");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
        static public void Test5()
        {
            double expectedResult = 6;

            double actualResult = p.CalcPremium(25, "male");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
        static public void Test6()
        {
            double expectedResult = 5;

            double actualResult = p.CalcPremium(37, "male");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
        static public void Test7()
        {
            double expectedResult = 2.5;

            double actualResult = p.CalcPremium(55, "male");

            Assert.AreEqual(expectedResult, actualResult);
        }

        [Test]
        static public void Test8()
        {
            double expectedResult = 0;

            double actualResult = p.CalcPremium(15, "male");

            Assert.AreEqual(expectedResult, actualResult);
        }
    }
}
```

Fitnesse automated acceptance testing server

TheAssignment

Tests Executed OK | Test | Edit | Add | Tools

Assertions: 9 right, 0 wrong, 0 ignored, 0 exceptions (0.008 seconds)

variable defined: COMMAND_PATTERN=%m -r fitnesse.fitserver.FitServer,dotnet2\fit.dll %p
variable defined: TEST_RUNNER=dotnet2\Runner.exe
classpath: C:\Users\S00151977\Source\Repos\TestingPractice\TestingPractice2\Premium\obj\Debug\Premium.dll

Premium.Premium		
Age	Gender	CalcPremium?
18	female	5
35	female	3.5
1	female	0
18	male	6
35	male	6
1	male	0
50	female	1.75
50	male	2.5
25	vivion	0

Front Page | User Guide
root (for global !path's, *etc.*)

TheAssignment

Help text:

Tags: add a tag

Spreadsheet to FitNesse | FitNesse to Spreadsheet | Format | Insert Template | wrap | rich text | plain text

```
!define COMMAND_PATTERN {%m -r fitnesse.fitserver.FitServer,dotnet2\fit.dll %p}
!define TEST_RUNNER {dotnet2\Runner.exe}
# this is the path to the fixture code
!path C:\Users\S00151977\Source\Repos\TestingPractice\TestingPractice2\Premium\obj\Debug\Premium.dll

!| Premium.Premium|
| Age| Gender| CalcPremium? |
| 18| female| 5 |
| 35| female| 3.5|
| 1| female| 0 |
| 18| male| 6 |
| 35| male| 6|
| 1| male| 0 |
| 50| female| 1.75 |
| 50| male| 2.5 |
| 25| vivion| 0 |
```

Selenium IDE and webdriver system tests

Katalon Class from test

```
using System;
using System.Text;
using System.Text.RegularExpressions;
using System.Threading;
using NUnit.Framework;
using OpenQA.Selenium;
using OpenQA.Selenium.Firefox;
using OpenQA.Selenium.Support.UI;

namespace SeleniumTests
{
    [TestFixture]
    public class VivSTestCase
    {
        private IWebDriver driver;
        private StringBuilder verificationErrors;
        private string baseURL;
        private bool acceptNextAlert = true;

        [SetUp]
        public void SetupTest()
        {
            driver = new FirefoxDriver();
            baseURL = "https://www.katalon.com/";
            verificationErrors = new StringBuilder();
        }

        [TearDown]
        public void TeardownTest()
        {
            try
```

```
    {
        driver.Quit();
    }
    catch (Exception)
    {
        // Ignore errors if unable to close the browser
    }
    Assert.AreEqual("", verificationErrors.ToString());
}

[Test]
public void TheVivSTestCaseTest()
{
    driver.Navigate().GoToUrl("http://localhost:9156/WebForm1.aspx");
    driver.FindElement(By.Id("TextGender")).Click();
    driver.FindElement(By.Id("TextGender")).Clear();
    driver.FindElement(By.Id("TextGender")).SendKeys("male");
    driver.FindElement(By.Id("TextAge")).Click();
    driver.FindElement(By.Id("TextAge")).Clear();
    driver.FindElement(By.Id("TextAge")).SendKeys("36");
    driver.FindElement(By.Id("Button1")).Click();
}
public void TheVivSTestCaseTest1()
{
    driver.Navigate().GoToUrl("http://localhost:9156/WebForm1.aspx");
    driver.FindElement(By.Id("TextGender")).Click();
    driver.FindElement(By.Id("TextGender")).Clear();
    driver.FindElement(By.Id("TextGender")).SendKeys("male");
    driver.FindElement(By.Id("TextAge")).Click();
    driver.FindElement(By.Id("TextAge")).Clear();
    driver.FindElement(By.Id("TextAge")).SendKeys("25");
    driver.FindElement(By.Id("Button1")).Click();
}
public void TheVivSTestCaseTest2()
{
```

```
    driver.Navigate().GoToUrl("http://localhost:9156/WebForm1.aspx");
    driver.FindElement(By.Id("TextGender")).Click();
    driver.FindElement(By.Id("TextGender")).Clear();
    driver.FindElement(By.Id("TextGender")).SendKeys("male");
    driver.FindElement(By.Id("TextAge")).Click();
    driver.FindElement(By.Id("TextAge")).Clear();
    driver.FindElement(By.Id("TextAge")).SendKeys("55");
    driver.FindElement(By.Id("Button1")).Click();
}
public void TheVivSTestCaseTest3()
{
    driver.Navigate().GoToUrl("http://localhost:9156/WebForm1.aspx");
    driver.FindElement(By.Id("TextGender")).Click();
    driver.FindElement(By.Id("TextGender")).Clear();
    driver.FindElement(By.Id("TextGender")).SendKeys("female");
    driver.FindElement(By.Id("TextAge")).Click();
    driver.FindElement(By.Id("TextAge")).Clear();
    driver.FindElement(By.Id("TextAge")).SendKeys("25");
    driver.FindElement(By.Id("Button1")).Click();
}
public void TheVivSTestCaseTest4()
{
    driver.Navigate().GoToUrl("http://localhost:9156/WebForm1.aspx");
    driver.FindElement(By.Id("TextGender")).Click();
    driver.FindElement(By.Id("TextGender")).Clear();
    driver.FindElement(By.Id("TextGender")).SendKeys("female");
    driver.FindElement(By.Id("TextAge")).Click();
    driver.FindElement(By.Id("TextAge")).Clear();
    driver.FindElement(By.Id("TextAge")).SendKeys("32");
    driver.FindElement(By.Id("Button1")).Click();
}
public void TheVivSTestCaseTest5()
{
    driver.Navigate().GoToUrl("http://localhost:9156/WebForm1.aspx");
    driver.FindElement(By.Id("TextGender")).Click();
```

```
    driver.FindElement(By.Id("TextGender")).Clear();
    driver.FindElement(By.Id("TextGender")).SendKeys("female");
    driver.FindElement(By.Id("TextAge")).Click();
    driver.FindElement(By.Id("TextAge")).Clear();
    driver.FindElement(By.Id("TextAge")).SendKeys("55");
    driver.FindElement(By.Id("Button1")).Click();
}
private bool IsElementPresent(By by)
{
    try
    {
        driver.FindElement(by);
        return true;
    }
    catch (NoSuchElementException)
    {
        return false;
    }
}

private bool IsAlertPresent()
{
    try
    {
        driver.SwitchTo().Alert();
        return true;
    }
    catch (NoAlertPresentException)
    {
        return false;
    }
}

private string CloseAlertAndGetItsText() {
    try {
```

```
            IAlert alert = driver.SwitchTo().Alert();
            string alertText = alert.Text;
            if (acceptNextAlert) {
                alert.Accept();
            } else {
                alert.Dismiss();
            }
            return alertText;
        } finally {
            acceptNextAlert = true;
        }
    }
  }
}
```

Katalon Screenshots