

Selenium WebDriver C# MS Test Page Object Model Example

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Creating a Unit Test project in Visual Studio implementing:

1. App.config file.
2. Page Object Model design pattern.
3. Run test using VSTest.console.exe from the command line
4. Save Logs using parameters:

```
vstest.console.exe [assembly] /logger:trx;LogFileName=[filename].trx
```

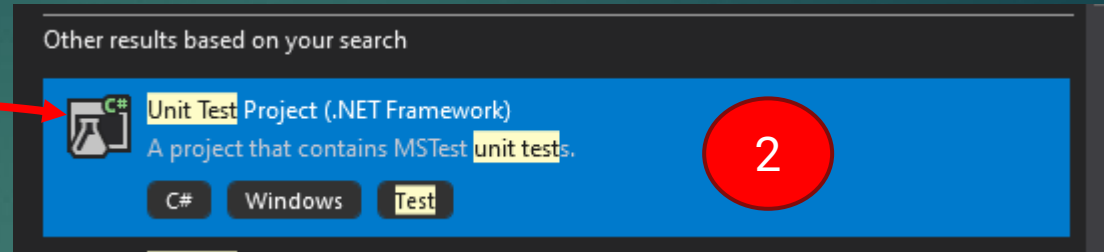
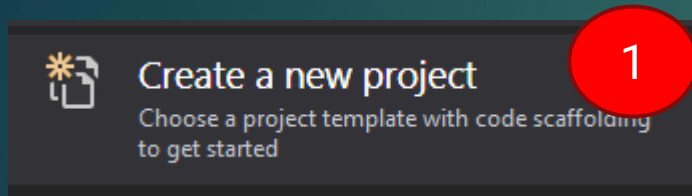
BY DMITRY MIRONOV

1# Objective

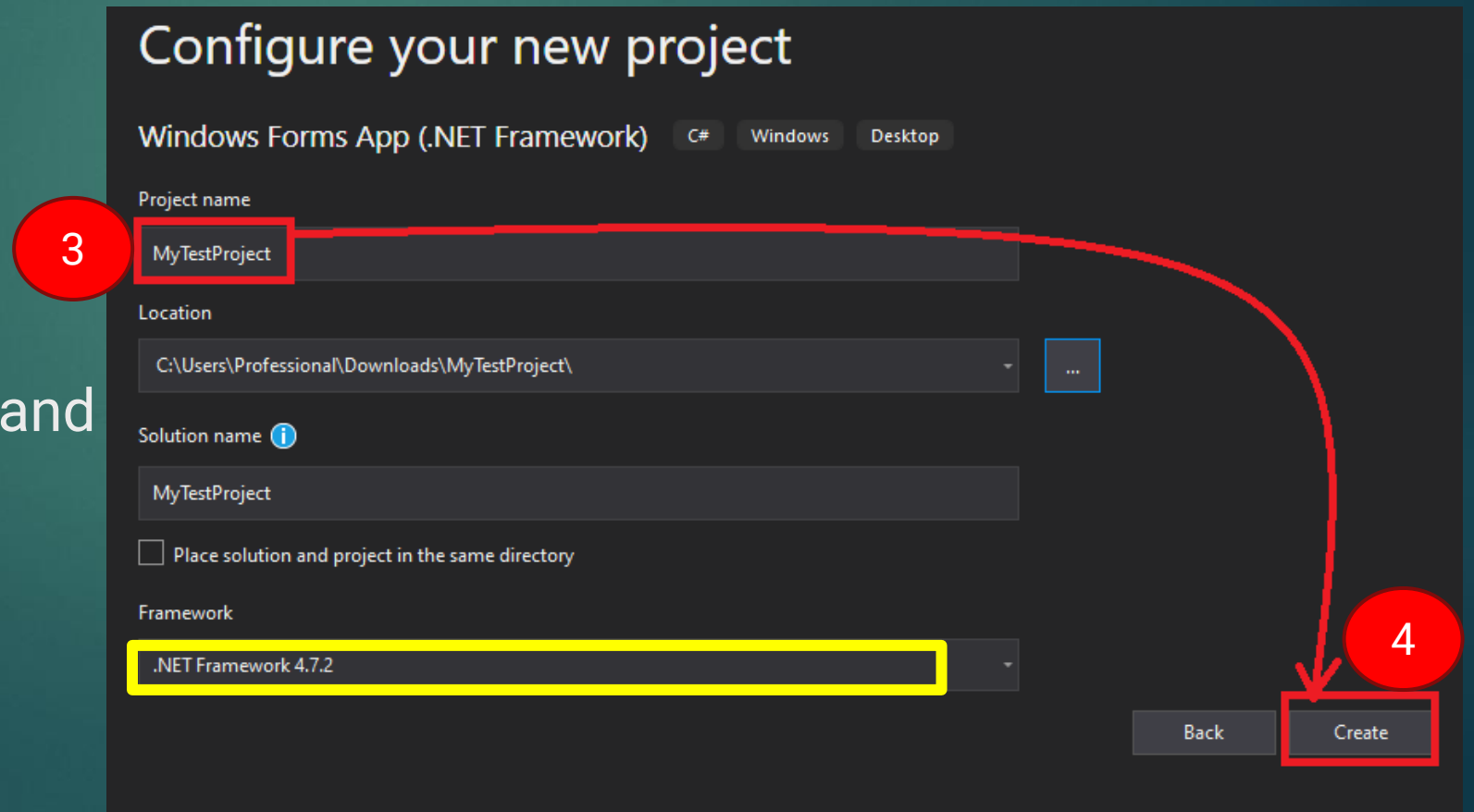
Create Unit Test project:

1. Open Visual Studio 2019
2. Create a new **Unit Test(.NET Framework) Project**

3



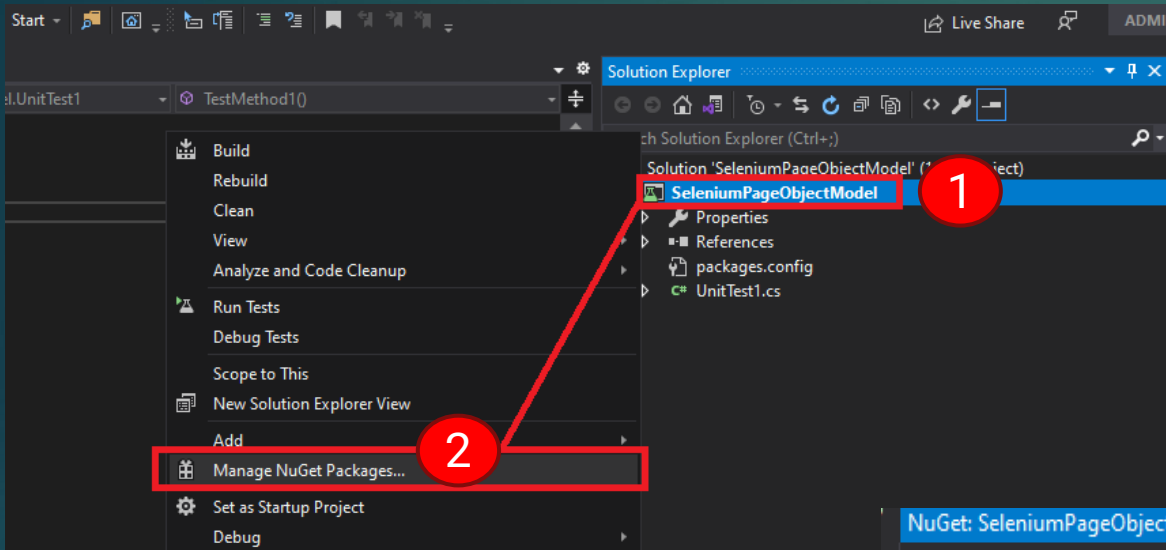
3. Name your project, select correct Framework version, and Click Create button



2# Objective
Add Selenium **NuGet** packages:

4. Right mouse click on your project > choose manage NuGet Packages...

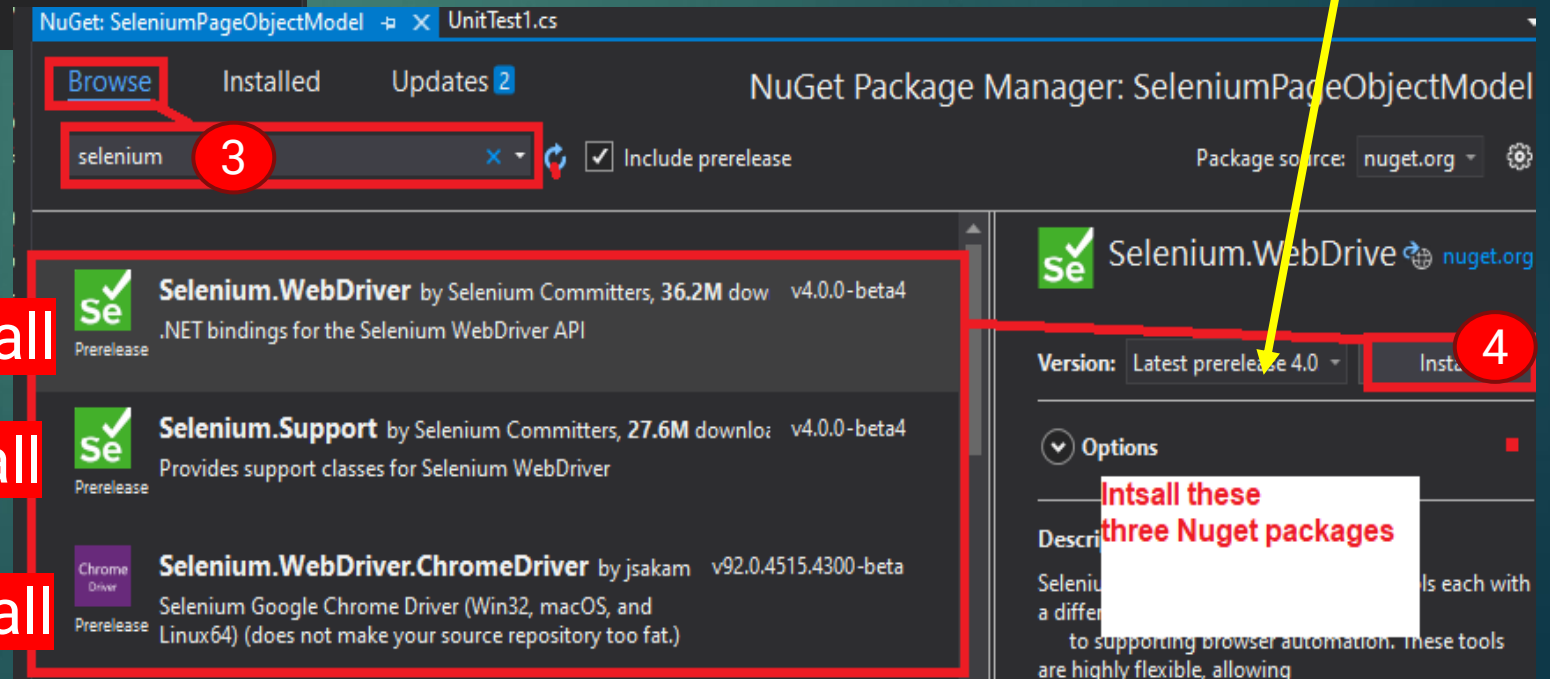
5



Install the following packages:

1. Selenium.WebDriver
2. Selenium.Support
3. Selenium.WebDriver.ChromeDriver

Always install latest stable version



3# Objective

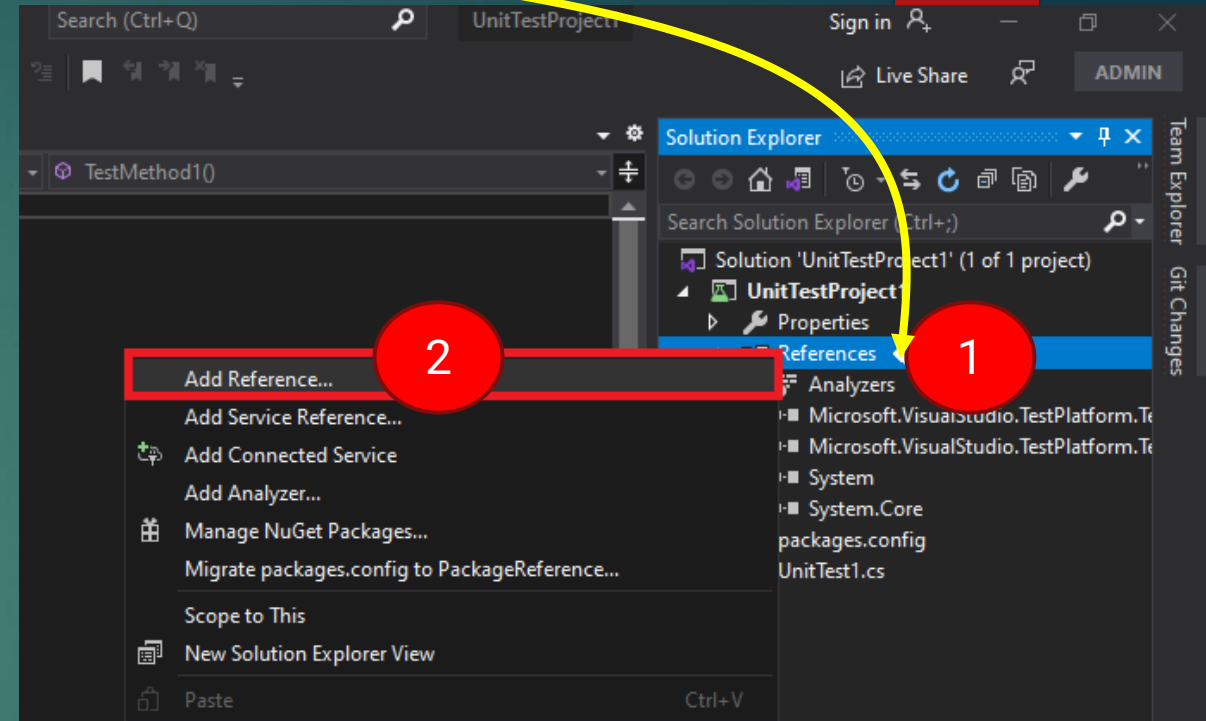
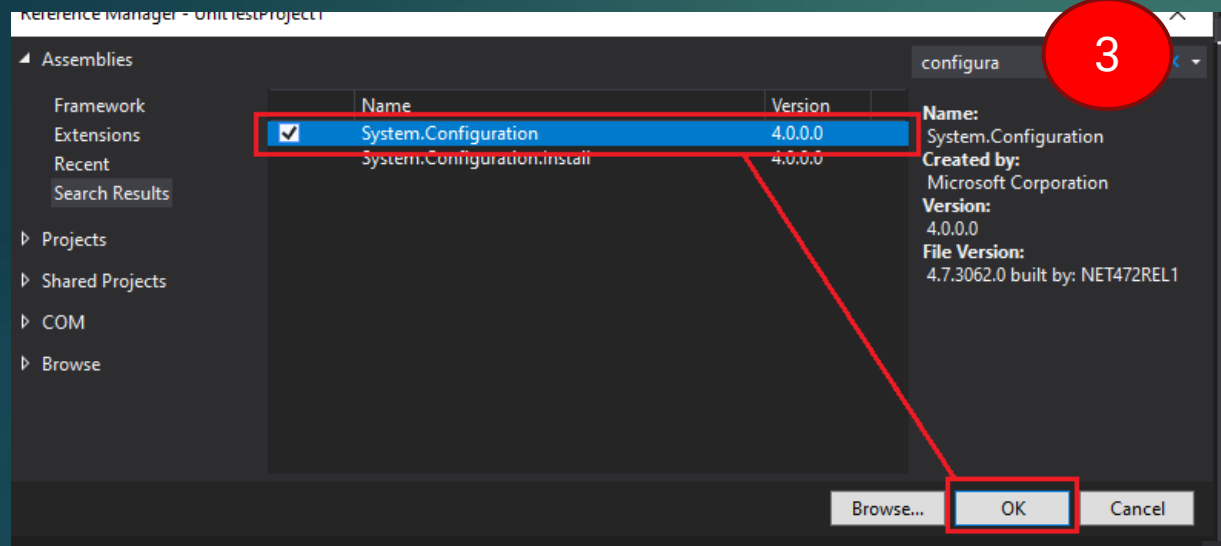
Add Reference to System.Configuration.dll

5. Right Mouse click on References, and choose Add reference.

6. Search for System.Configuration.

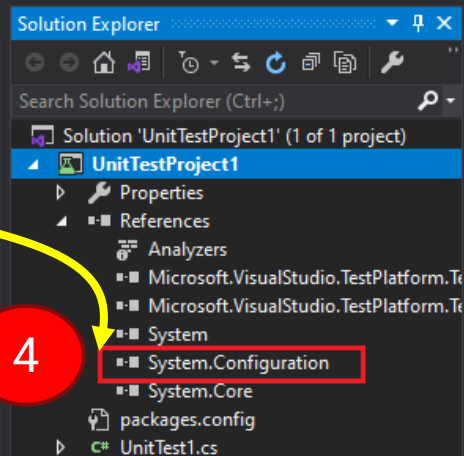
7. Once selected, click OK button.

7



8. Verify System.configuration namespace is displayed under references

4

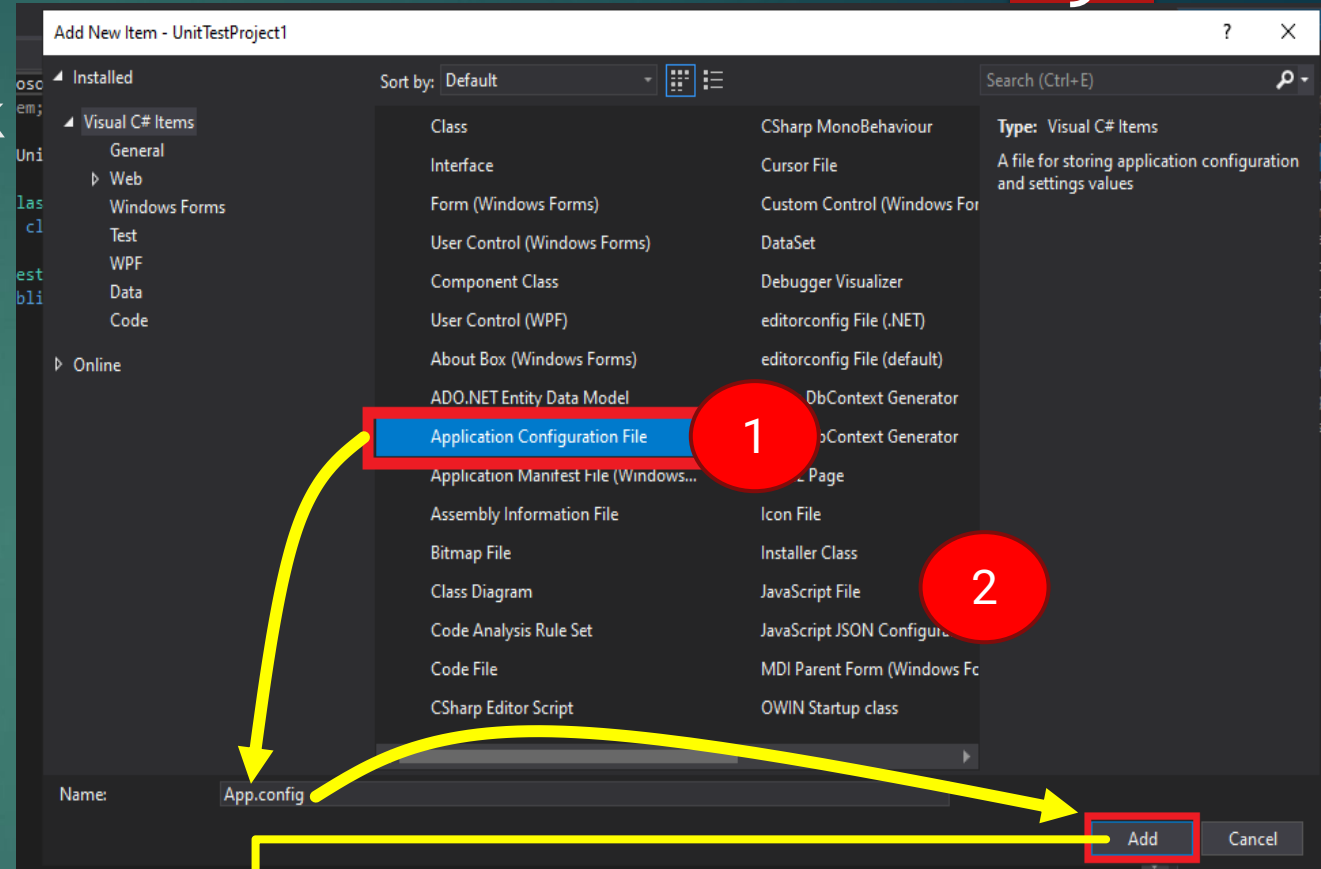
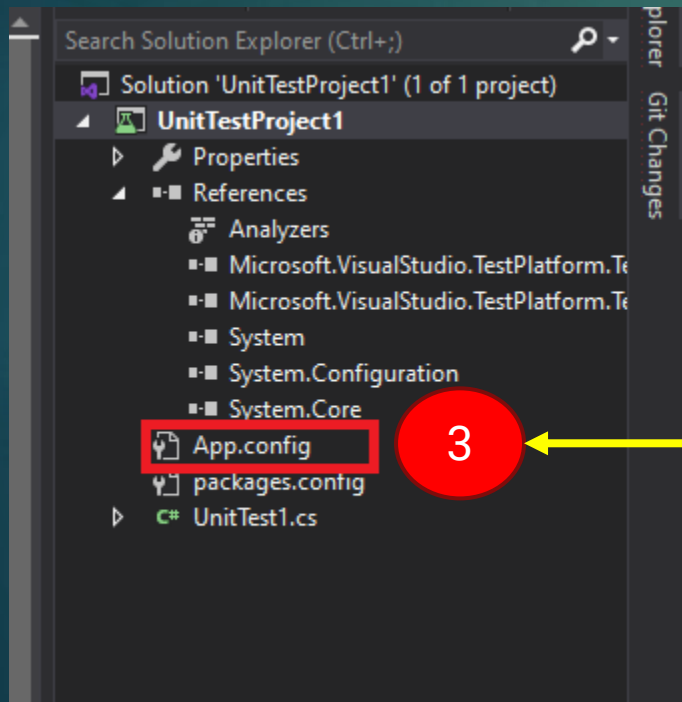


3# Objective
Add **App.config** file
to the project

9. Right mouse click the project, and choose Add > New item

9

10. Search for
Application Configuration file and click
Add button.



11. Verify the App.config file
is added to your project.

#4 Objective

Add Code to App.Config.file

12. Double click app.config file and add the following Code to it.

11

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>

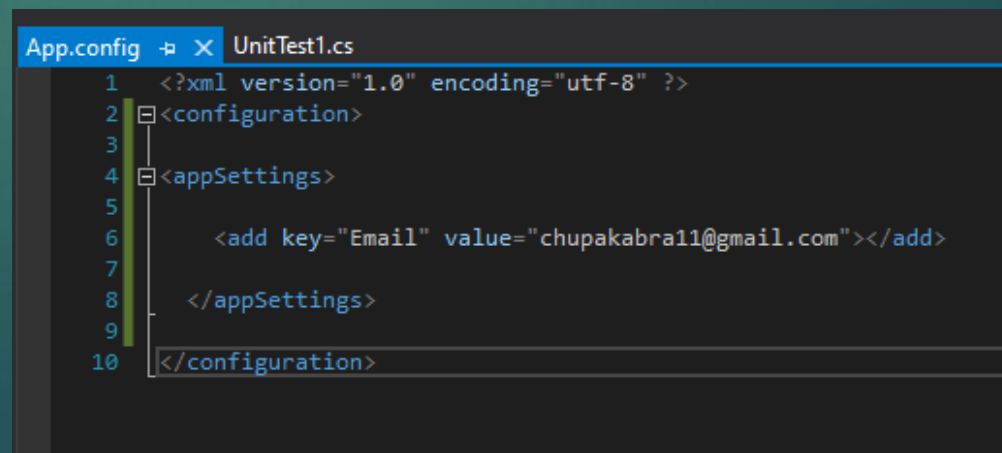
  <appSettings>

    <add key="Email" value="chupakabra11@gmail.com"></add>

  </appSettings>

</configuration>
```

Later on we will use this property to manipulate Email outside Visual studio. Another words: This property will serve as the only interface between us and our Test. We would change this property later on, using notepad.exe, or any other text editor you wish.

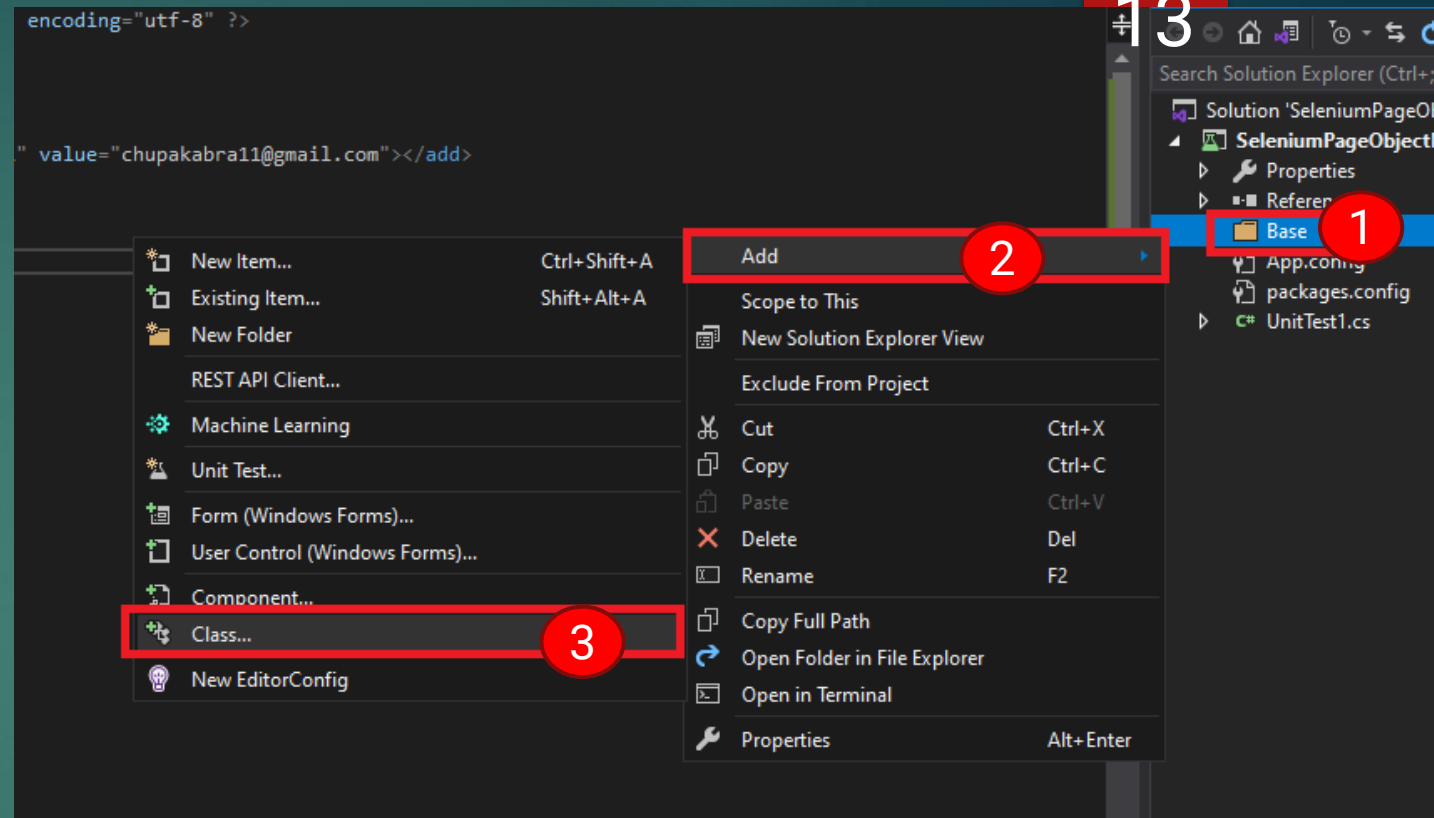
A screenshot of a code editor window with two tabs: 'App.config' and 'UnitTest1.cs'. The 'App.config' tab is active, showing the XML code from the previous block. The code is syntax-highlighted with colors: blue for XML tags, red for attributes, and black for text. Line numbers 1 through 10 are visible on the left side of the editor. The code is as follows:

```
1 <?xml version="1.0" encoding="utf-8" ?>
2 <configuration>
3
4 <appSettings>
5
6   <add key="Email" value="chupakabra11@gmail.com"></add>
7
8 </appSettings>
9
10 </configuration>
```

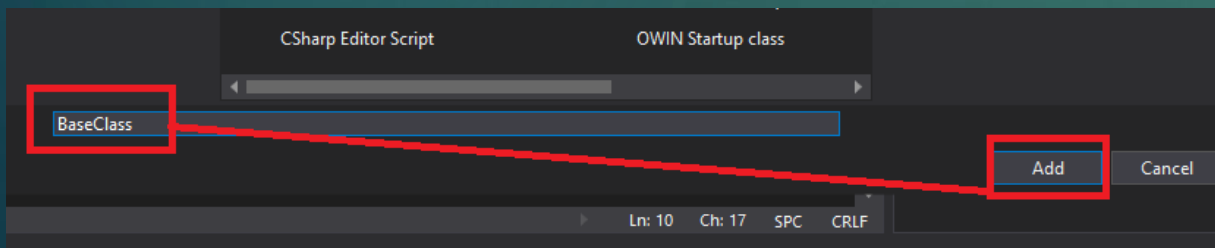
5# Objective

Create C# Base Class

12. Right click the project and choose Add > new folder
13. Name it as Base(or give it another name)



14. Right click the Base folder and select Add > Class
- 15 Name it as BaseClass finally press Add button.



6# Objective
Insert code into **BaseClass**

Before You Continue
please download a source code
from [GitHub](#)

Modify your BaseClass.cs so it matches below code (except namespace) You will use your own namespace.

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```
using Microsoft.VisualStudio.TestTools.UnitTesting;
using OpenQA.Selenium;
using OpenQA.Selenium.Chrome;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace SeleniumPageObjectModel.Base
{
    public class BaseClass
    {
        public IWebDriver _Driver;

        [TestInitialize] //Runs before each test methods
        public void OpenDriver()
        {
            this._Driver = new ChromeDriver();
            _Driver.Manage().Window.Maximize();
            _Driver.Url = "http://automationpractice.com/index.php";

            if (_Driver.PageSource.Length < 800) //If html source.Length less than 800 chars looks like we have a problem.
            {
                throw new Exception("Cannot Connect to remote server. Try again later");
            }
        }

        [TestCleanup] //Runs immediately after each test is run
        public void CloseDriver()
        {
            _Driver.Close();
            _Driver.Quit(); //Kills Chrome's Driver.exe in Task Manager
        }
    }
}
```

Initialization and Cleanup lifecycle

Attribute	When executed
TestInitialize	Before <i>each</i> test in the same class
TestCleanup	After <i>each</i> test in the same class
ClassInitialize	Before the <i>first</i> test in the class
ClassCleanup	After the <i>last</i> test in the class
AssemblyInitialize	Before the first test in the project
AssemblyCleanup	After the last test in the project

BaseClass Explanation:

Runs before each test, and acts like a constructor for each New ChromeDriver object.

Runs every time the test ends its execution. Closes the driver, and Kills ChromeDriver.exe from Task manager. No need to kill chormeDriver.exe manually.

BaseClass.cs* App.config UnitTest1.cs

SeleniumPageObjectModel SeleniumPageObjectModel.Base.BaseClass CloseDriver()

```
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9
10 namespace SeleniumPageObjectModel.Base
11 {
12     public class BaseClass
13     {
14         public IWebDriver _Driver;
15
16         [TestInitialize] //Runs before each test methods
17         public void OpenDriver()
18         {
19             this._Driver = new ChromeDriver();
20             _Driver.Manage().Window.Maximize();
21             _Driver.Url = "http://automationpractice.com/index.php";
22
23             if (_Driver.PageSource.Length < 800) //If html source.Length less then 800 chars looks like we hav
24             {
25                 throw new Exception("Cannot Connect to remote server. Try again later");
26             }
27         }
28
29         [TestCleanup] //Runs immediately after each test is run
30         public void CloseDriver()
31         {
32             _Driver.Close();
33             _Driver.Quit(); //Kills Chrome's Driver.exe in Task Manager
34         }
35     }
36 }
37
38
39
```

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7# Objective
Create html **relative C# Classes**

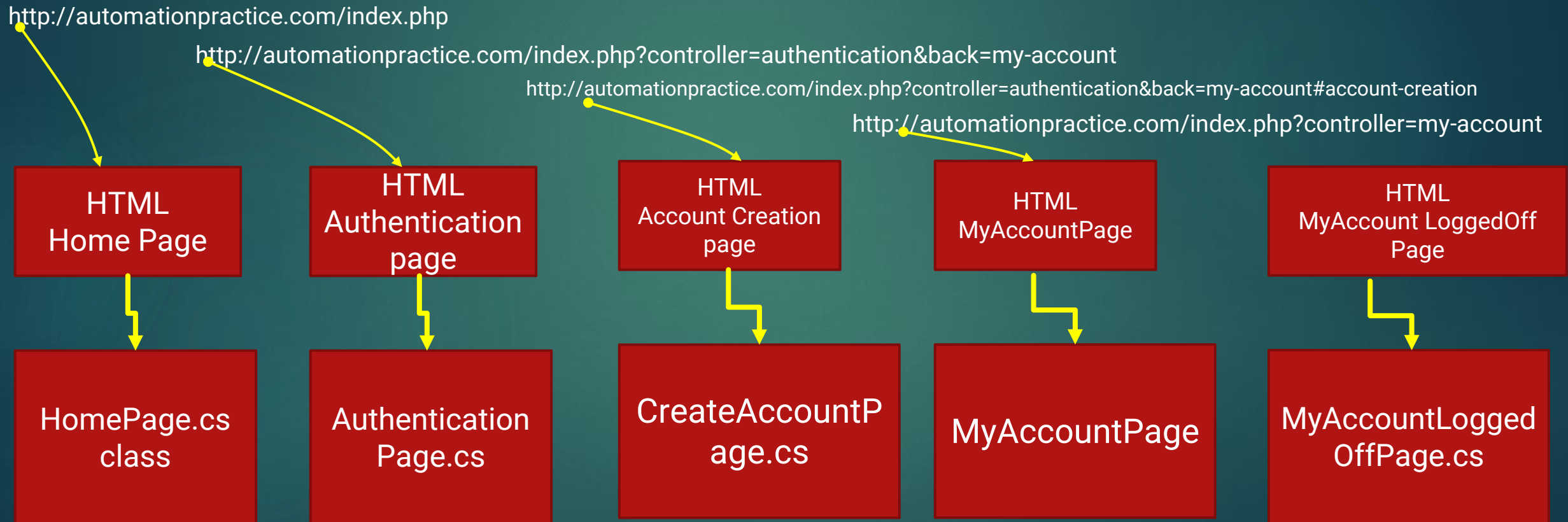
Just before we continue let's understand the Page Object Model

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We will be testing new user registration on <http://automationpractice.com/index.php>

1. We will start from creating a HomePage.cs Class that will correspond to above website's Homepage .

Rule of thumbs: Each page will have the corresponding C# class



HomePage.cs

1. Right click project, choose Add > new Folder
2. Add a new class inside new folder named HomePage by right clicking the folder, and choosing Add > New Class Name it as HomePage.cs
3. Add the following code to HomePage.cs file

```
using OpenQA.Selenium;
using SeleniumPageObjectModel.Base;
using System.Threading;

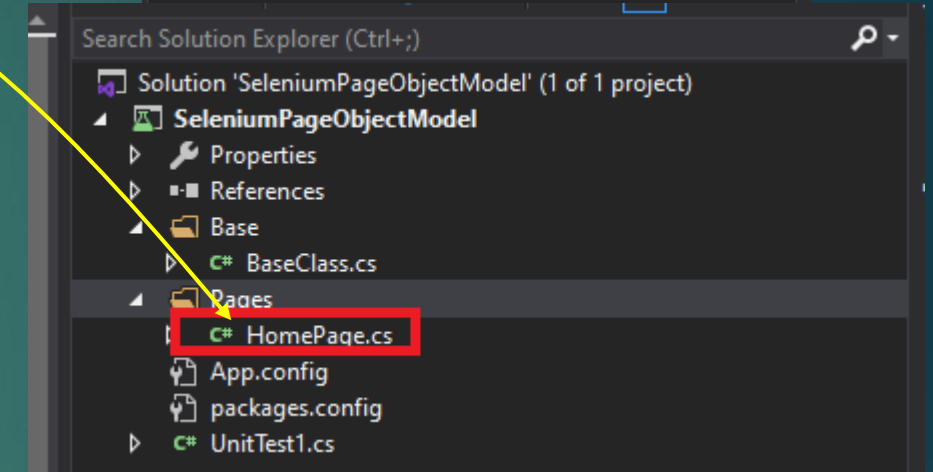
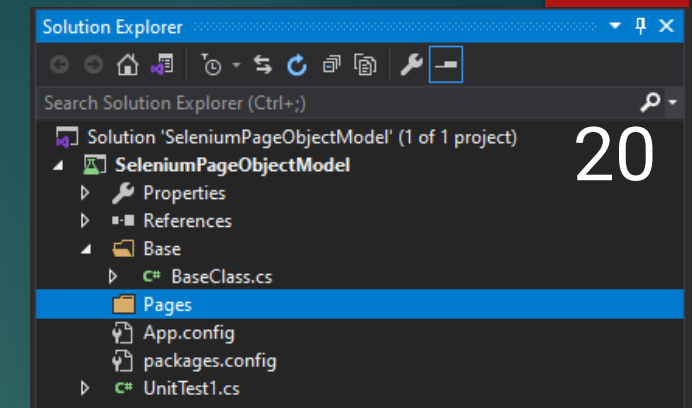
namespace SeleniumPageObjectModel.Pages
{
    public class HomePage : BaseClass
    {
        private IWebDriver _Driver;
        private IWebElement LoginButton => _Driver.FindElement(By.ClassName("login"));
        private IWebElement EmailTextBox => _Driver.FindElement(By.Id("#email"));
        private IWebElement PasswordTextBox => _Driver.FindElement(By.Id("#passwd"));

        public HomePage(IWebDriver driver) //will get the initialized driver from the base class
        {
            this._Driver = driver;
        }

        public AuthenticationPage SignIn_ToAuthPage()
        {
            LoginButton.Click();
            Thread.Sleep(2000);
            return new AuthenticationPage(_Driver);
        }

        internal MyAccountPage Login_WithExistingUser(string email, string password)
        {
            EmailTextBox.SendKeys(email);
            PasswordTextBox.SendKeys(password);
            LoginButton.Click();
            return new MyAccountPage(_Driver);
        }
    }
}
```

Gets the html element from the driver's DOM .
Acts like Properties' getter using Lambda expression



You will receive an error, because we still need to create a few more classes:

AuthenticationPage.cs

MyAccountPage.cs

We can create them manually, or select one of the missing classes and press CTRL+. and select the option of auto-generation. This is a preferred way of doing this.

Explanation:

Let's say by pressing submit button(or any other redirection button) on each page, you will be redirected to the next page. Another word After clicking the submit button, we will always return current page driver to the next Page like here

```
return new MyAccountPage(_Driver);
```

This way you will always pass your driver back and fourth, between objects.

As you remember, each html page will have a corresponding Class for it. Every time you create new object of this class, you will pass the selenium WebDriver to it's constructor. This way every new object will be using driver that has being received from a previous page.

You can create them manually for the sake of simplicity, or download a fully working code from my GitHub, and continue from there. I provided the rest of the code on the following pages.

Wait! Just think of the general Idea behind this Page object model.
Thinks of the program flow between the pages.
Taken from UnitTest1.cs

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Homepage while pressing login button go to > authenticationPage Idea

```
34 . AuthenticationPage AuthPage = new HomePage(base._Driver).SignIn_ToAuthPage();
```

Implementation

AuthenticationPage on pressing Create account button go to > CreateAccountPage Idea

```
43. CreateAccountPage CreateAccPage = AuthPage.Login_ToCreateAnAccountPage2(_email_fromConfig);
```

Implementation

Each html Page Will have a corresponding Page Object Model Class.
Each Model class will have a constructor for initializing driver.
Each class will have a properties to get the HTML elements using Lambda expression as Getter.
Each class will also have it's own methods.

Each html Page Will have a corresponding Page Object Model Class.
Each Model class will have a constructor for initializing driver.
Each class will have a properties to get the HTML elements using Lambda expression as Getter.
Each class will also have it's own methods.

BaseClass.cs **HomePage.cs** UnitTest1.cs

SeleniumPageObjectModel

```
1 using OpenQA.Selenium;
2 using SeleniumPageObjectModel.Base;
3 using System.Threading;
4
5 namespace SeleniumPageObjectModel.Pages
```

```
6 {
7     public class HomePage : BaseClass
8     {
9         private IWebDriver _Driver;
10        private IWebElement LoginButton => _Driver.FindElement(By.ClassName("login"));
11        private IWebElement EmailTextBox => _Driver.FindElement(By.Id("#email"));
12        private IWebElement PasswordTextBox => _Driver.FindElement(By.Id("#passwd"));
13    }
```

Points to html elements

```
16 public HomePage(IWebDriver driver) //will get the initialized driver from the base class
17 {
18     this._Driver = driver;
19 }
```

Constructor

```
21 public AuthenticationPage SignIn_ToAuthPage()
22 {
23     LoginButton.Click();
24     Thread.Sleep(2000);
25     return new AuthenticationPage(_Driver);
26 }
```

**Each Class
has its methods**

```
28 internal MyAccountPage Login_WithExistingUser(string email, string password)
29 {
30     EmailTextBox.SendKeys(email);
31     PasswordTextBox.SendKeys(password);
32     LoginButton.Click();
33     return new MyAccountPage(_Driver);
34 }
35 }
36 }
37 }
```

Search Solution Explorer (Ctrl+)

Solution 'SeleniumPageObjectModel' (C#)

- ▶ SeleniumPageObjectModel
 - ▶ Properties
 - ▶ References
 - ▶ Base
 - ▶ C# BaseClass.cs
 - ▶ Pages
 - ▶ C# AuthenticationPage.cs
 - ▶ C# CreateAccountPage.cs
 - ▶ **C# HomePage.cs**
 - ▶ C# MyAccountLoggedInOffPage.cs
 - ▶ C# MyAccountPage.cs
 - ▶ App.config
 - ▶ packages.config
 - ▶ C# UnitTest1.cs

Lets continue creating the rest of the
classes

AuthenticationPage.cs

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```
using OpenQA.Selenium;
using SeleniumPageObjectModel.Base;
using System.Threading;

namespace SeleniumPageObjectModel.Pages
{
    public class AuthenticationPage : BaseClass // BaseClass serves WaitFindElement() method
    {
        //Properties
        private IWebDriver _Driver;
        private IWebElement EmailTextBox => _Driver.FindElement(By.CssSelector(".form-group>.is_required#email_create"));
        private IWebElement SubmitButton => _Driver.FindElement(By.CssSelector(".form_content >.submit>#SubmitCreate"));
        private IWebElement ErrorMessage => _Driver.FindElement(By.CssSelector("#create_account_error"));
        private string _ErrorMessage = "";
        public AuthenticationPage(IWebDriver driver)
        {
            this._Driver = driver;
            this._ErrorMessage = this.ErrorMessage.Text;
        }

        public CreateAccountPage Login_ToCreateAnAccountPage(string email)
        {
            EmailTextBox.Clear();
            EmailTextBox.SendKeys(email);
            SubmitButton.Click();
            // Pause(_Driver, 4000);
            Thread.Sleep(2000);
            if (_Driver.Url == "http://automationpractice.com/index.php?controller=authentication&back=my-account" && ErrorMessage.Text.Length > 0)
            {
                //Error was shown
                return null;
            }
            else
            {
                //No error was shown
                return new CreateAccountPage(_Driver); //Passing driver to the next page
            }
        }

        public CreateAccountPage Login_ToCreateAnAccountPage2(string email)
        {
            EmailTextBox.Clear();
            EmailTextBox.SendKeys(email);
            SubmitButton.Click();
            // Pause(_Driver, 4000);
            Thread.Sleep(2000);
            if (this._Driver.Url.Equals("http://automationpractice.com/index.php?controller=authentication&back=my-account#account-creation"))
            {
                //Email was generated successfully
                return new CreateAccountPage(_Driver); //Passing driver to the next page
            }
            return null; //Email was generated badly!!!!
        }
    }
}
```

```
using OpenQA.Selenium;
using SeleniumPageObjectModel.Base;

namespace SeleniumPageObjectModel.Pages
{
    public class MyAccountPage : BaseClass
    {
        private IWebDriver _Driver;
        private IWebElement LogOffButton => _Driver.FindElement(By.CssSelector(".header_user_info>.logout"));
        public IWebElement Username => _Driver.FindElement(By.ClassName("account"));
        private IWebElement PassWord => _Driver.FindElement(By.CssSelector(".header_user_info>.logout"));

        public MyAccountPage(IWebDriver driver)
        {
            this._Driver = driver;
        }

        public MyAccountLoggedOffPage LogOff_ToAccLoggedOff()
        {
            LogOffButton.Click();

            return new MyAccountLoggedOffPage(_Driver);
        }
    }
}
```

CreateAccountPage.cs (Part-1)

```
using OpenQA.Selenium;
using OpenQA.Selenium.Support.UI;
using SeleniumPageObjectModel.Base;
using System.Threading;

namespace SeleniumPageObjectModel.Pages
{
    public class CreateAccountPage : BaseClass
    {
        public struct MonthStruct
        {
            public string January;
            public string February;
            public string March;
            public string April;
            public string May;
            public string June;
            public string July;
            public string August;
            public string September;
            public string October;
            public string November;
            public string December;
        }

        //properties
        private IWebDriver _Driver;

        #region DOM Elements
        //Getting the Gender MR radio_btn (wait 4 seconds before finding the first radio button. This will also give some time to other elements to load onto the DOM)
        private IWebElement MR_GenderRadioBtn => _Driver.FindElement(By.Id("id_gender1"));
        //Getting the Gender MRs radio_btn
        private IWebElement MRs_GenderRadioBtn => this._Driver.FindElement(By.CssSelector(".radio-inline>.top>#uniform-id_gender2>span>#id_gender2"));
        //Getting First Name TextBox
        private IWebElement FirstName_TextBox => this._Driver.FindElement(By.Id("customer_firstname"));
        //Getting Last Name TextBox
        private IWebElement LastName_TextBox => this._Driver.FindElement(By.Id("customer_lastname"));
        //Getting Email TextBox
        private IWebElement Email_TextBox => this._Driver.FindElement(By.Id("email"));
        //Getting Password TextBox
        private IWebElement Password_TextBox => this._Driver.FindElement(By.Id("passwd"));
        //Getting DateOfBirth_Days TextBox
        private IWebElement DateOfBirth_Days_DD => this._Driver.FindElement(By.Id("days"));
        //Getting DateOfBirth_Months TextBox
        private IWebElement DateOfBirth_Months_DD => this._Driver.FindElement(By.Id("months"));
        //Getting DateOfBirth_Years TextBox
        private IWebElement DateOfBirth_Years_DD => this._Driver.FindElement(By.Id("years"));
        //Getting News Letter CheckBox
        private IWebElement Newsletter_CheckBox => this._Driver.FindElement(By.Id("newsletter"));
        //Getting Special Offers CheckBox
        private IWebElement SpecialOffers_CheckBox => this._Driver.FindElement(By.Id("optin"));

        ///YOUR ADDRESS section.....
        //Getting FirstName From Address section
        private IWebElement Address_FirstName_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>.form-group>#firstname"));
        //Getting LastName From Address section
        private IWebElement Address_LastName_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>.form-group>#lastname"));
        //Getting Company TextBox From Address section
        private IWebElement Address_Company_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>.form-group>#company"));
        //Getting Address TextBox From Address section
        private IWebElement Address_Address_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(5)>#address1"));
        //Getting Address(line2) TextBox From Address section
        private IWebElement Address_AddressLineTwo_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>.is_customer_param>#address2"));
        //Getting Address TextBox From Address section
        private IWebElement Address_City_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(7)>#city"));
        //Getting State DropDownBox From Address section
        private IWebElement Address_State_DropDownBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>.id_state>#uniform-id_state>#id_state"));
        //Getting Zip-Postal-Code TextBox From Address section
        private IWebElement Address_ZipPostalCode_textBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>.postcode>#postcode"));
        //Getting Country DropDownBox From Address section
        private IWebElement Address_Country_DropDownBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(10)>div>#id_country"));
        //Getting AdditionalInfo TextBox From Address section
        private IWebElement Address_AdditionalInfo_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(11)>#other"));
        //Getting HomePhone TextBox From Address section
        private IWebElement Address_HomePhone_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(13)>#phone"));
        //Getting MobilePhone TextBox From Address section
        private IWebElement Address_MobilePhone_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(14)>#phone_mobile"));
        //Getting AddressAlias TextBox From Address section
        private IWebElement Address_AddressAlias_TextBox => this._Driver.FindElement(By.CssSelector("#account-creation_form>div:nth-child(2)>p:nth-child(15)>#alias"));
        //Getting Submit Button From Address section
        private IWebElement Address_Submit_Button => this._Driver.FindElement(By.CssSelector(".submit>#submitAccount"));
        #endregion
    }
}
```

CreateAccountPage.cs (Part-2)

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```
//Constructor
public CreateAccountPage(IWebDriver driver)
{
    this._Driver = driver;
}

internal MyAccountPage RegisterNewUser_And_GoToMyAccountPage(string firstname, string lastname, string email, string password, string birthday_day, string birthday_month, string birthday_year, string company, string address, string city, string state, string additional_info, string mobilePhone)
{
    int index = 0;
    switch (birthday_month)
    {
        case "January":
            index = 1;
            break;
        case "February":
            index = 2;
            break;
        case "March":
            index = 3;
            break;
        case "April":
            index = 4;
            break;
        case "May":
            index = 5;
            break;
        case "June":
            index = 6;
            break;
        case "July":
            index = 7;
            break;
        case "August":
            index = 8;
            break;
        case "September":
            index = 9;
            break;
        case "October":
            index = 10;
            break;
        case "November":
            index = 11;
            break;
        case "December":
            index = 12;
            break;
    }

    Thread.Sleep(2000);

    MR_GenderRadioBtn.Click();
    FirstName_TextBox.SendKeys(firstname);
    LastName_TextBox.SendKeys(lastname);
    Email_TextBox.Clear();
    Email_TextBox.SendKeys(email);
    Password_TextBox.SendKeys(password);
    SelectElement Day = new SelectElement(DateOfBirth_Days_DD);
    Day.SelectByValue(birthday_day);
    SelectElement Month = new SelectElement(DateOfBirth_Months_DD);
    Month.SelectByIndex(index); //--fixed via switch
    SelectElement Years = new SelectElement(DateOfBirth_Years_DD);
    Years.SelectByValue(birthday_year);
    Newsletter_CheckBox.Click();
    SpecialOffers_CheckBox.Click();

    //YOUR ADDRESS section.....
    Address_FirstName_TextBox.Clear();
    Address_FirstName_TextBox.SendKeys(firstname);
    Address_LastName_TextBox.Clear();
    Address_LastName_TextBox.SendKeys(lastname);
    Address_Company_TextBox.SendKeys(company);
    Address_Address_TextBox.SendKeys(address);
    Address_AddressLineTwo_TextBox.SendKeys("I Live in Mars");
    Address_City_TextBox.SendKeys(city);
    Address_State_DropDownBox.SendKeys(state);
    Address_ZipPostalCode_TextBox.SendKeys("90001");
    SelectElement Country = new SelectElement(Address_Country_DropDownBox);
    Country.SelectByIndex(1); //only US available
    Address_AdditionalInfo_TextBox.SendKeys(additional_info);
    Address_HomePhone_TextBox.SendKeys("213-509-6995");
    Address_MobilePhone_TextBox.SendKeys(mobilePhone);
    Address_AddressAlias_TextBox.Clear();
    Address_AddressAlias_TextBox.SendKeys(firstname + " " + lastname);
    Address_Submit_Button.Click();

    return new MyAccountPage(_Driver);
}
}
```

MyAccountLoggedOffPage.cs

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```
using OpenQA.Selenium;
using SeleniumPageObjectModel.Base;

namespace SeleniumPageObjectModel.Pages
{
    public class MyAccountLoggedOffPage :BaseClass
    {
        private IWebDriver _Driver;
        private IWebElement EmailTextBox => _Driver.FindElement(By.Id("email"));
        private IWebElement PassWordTextBox => _Driver.FindElement(By.Id("passwd"));
        private IWebElement SubmitButton => _Driver.FindElement(By.Id("SubmitLogin"));

        public MyAccountLoggedOffPage(IWebDriver driver)
        {
            this._Driver = driver;
        }

        internal MyAccountPage Login_WithExistingUser(string email, string password)
        {
            EmailTextBox.SendKeys(email);
            PassWordTextBox.SendKeys(password);
            SubmitButton.Click();
            return new MyAccountPage(_Driver);
        }
    }
}
```

UnitTest1.cs (main Test Method)

30

```
using Microsoft.VisualStudio.TestTools.UnitTesting;
using SeleniumPageObjectModel.Base;
using SeleniumPageObjectModel.Pages;
using System;
using System.Configuration;

namespace SeleniumPageObjectModel
{
    [TestClass]
    public class UnitTest1 : BaseClass
    {
        string _FirstName = "Chupa";
        string _LastName = "Kabra";
        // string _Email = "chupa10@gmail.com";
        string _email_fromConfig = ConfigurationManager.AppSettings["Email"]; // This is the only property you have to change to register new user(If Exists, simply put here new email, and run the test!)
        string _Password = "chupa@123";
        string _Day = "13";
        string _Month = "February";
        string _Year = "1980";
        string _Company = "Chupa&Sons";
        string _Address = "ChupaStreet. POB 123";
        string _City = "Los Angeles";
        string _State = "California";
        string _AddInfo = "I like Snikers";
        string _MobilePhone = "0549967045";
        Random rnd = new Random();

        [TestMethod]
        public void TestMethod1()
        {
            AuthenticationPage AuthPage = new HomePage(base._Driver).SignIn_ToAuthPage();
            //Check if user already exists in the database
            if (null == AuthPage.Login_ToCreateAnAccountPage(_email_fromConfig))
            {
                //If true, user Exists in database!
                // Error message is shown to the user.
                //2.Manipulate Email
                _email_fromConfig = rnd.Next(1, 10000).ToString() + _email_fromConfig;
                //3.Start again with new Email :-))
                CreateAccountPage CreateAccPage = AuthPage.Login_ToCreateAnAccountPage2(_email_fromConfig);
                if (CreateAccPage == null) { throw new Exception("This generated Email was failed. Please generate new unique Email address, and try again"); }
                MyAccountPage MyAccPage = CreateAccPage.RegisterNewUser_And_GoToMyAccountPage(_FirstName, _LastName, _email_fromConfig, _Password, _Day, _Month, _Year, _Company, _Address, _City, _State, _AddInfo, _MobilePhone); //provide your Unregisterd user
                MyAccountLoggedInPage MyAccLoggedInOff = MyAccPage.LogOff_ToAccLoggedInOff();
                MyAccPage = MyAccLoggedInOff.Login_WithExistingUser(_email_fromConfig, _Password); //verification

                //Assert here
                Assert.IsTrue(MyAccPage.Username.Text.Equals(_FirstName + " " + _LastName));
                Assert.AreEqual("http://automationpractice.com/index.php?controller=my-account", _Driver.Url.ToString());
            }
            else
            {
                //if user reaches the account-creation.htm change the flow of the logic
                if (_Driver.Url == "http://automationpractice.com/index.php?controller=authentication&back=my-account#account-creation")
                {
                    CreateAccountPage CreateAccPage = new CreateAccountPage(_Driver);
                    MyAccountPage MyAccPage = CreateAccPage.RegisterNewUser_And_GoToMyAccountPage(_FirstName, _LastName, _email_fromConfig, _Password, _Day, _Month, _Year, _Company, _Address, _City, _State, _AddInfo, _MobilePhone); //provide your Unregisterd user
                    MyAccountLoggedInPage MyAccLoggedInOff = MyAccPage.LogOff_ToAccLoggedInOff();
                    MyAccPage = MyAccLoggedInOff.Login_WithExistingUser(_email_fromConfig, _Password); //verification
                    //Assert here
                    Assert.IsTrue(MyAccPage.Username.Text.Equals(_FirstName + " " + _LastName));
                    Assert.AreEqual("http://automationpractice.com/index.php?controller=my-account", _Driver.Url.ToString());
                }
                else
                {
                    throw new Exception("account-creation.html does not exists");
                }
            }
        }
    }
}
```

Running test from Visual Studio

Next Step: Run The Test

32

You can improve 'Startup' performance by auto hiding or collapsing 'Test Results' window. Manage performance Don't show this message again

The screenshot shows the Visual Studio IDE with the Test Explorer on the left, the Solution Explorer on the right, and the code editor in the center. The Test Explorer shows a test run for 'SeleniumPageObjectModel' with 1 passed test and 0 failed tests. The Solution Explorer shows the project structure with 'SeleniumPageObjectModel' as the selected project. The code editor shows the 'TestMethod1()' method in 'UnitTest1.cs'. A yellow box highlights the 'TestMethod1()' method signature, and a yellow arrow points from the 'Run' button in the Test Explorer to this box. Another yellow arrow points from the 'Run' button in the Test Explorer to the 'Run' button in the code editor.

Test Explorer

Search Test Explorer

Test Class Stack Trace

1 SeleniumPageObjectMo...
1 SeleniumPageObject...
1 UnitTest1 (1) UnitTest1
1 TestMethod1 UnitTest1

Group Summary

SeleniumPageObjectModel

Tests in group: 1

⌚ Total Duration: 2.4 min

Outcomes

1 Passed

MyAccountLoggedOffPage.cs UnitTest1.cs CreateAccountPage.cs HomePage.cs

SeleniumPageObjectModel SeleniumPageObjectModel.UnitTest1 TestMethod1()

```
12  
13  
14 string _FirstName = "Chupa";  
15 string _Lastname = "Kabra";  
16 // string _Email = "chupa10@gmail.com";  
17 string _email_fromConfig = ConfigurationManager.AppSettings["Email"]; // This is the only property yo  
18 string _Password = "chupa123";  
19 string _Day = "13";  
20 string _Month = "February";  
21 string _Year = "1980";  
22 string _Company = "Chupa&Sons";  
23 string _Address = "ChupaStreet. POB 123";  
24 string _City = "Los Angeles";  
25 string _State = "California";  
26 string _AddInfo = "I like Snikers";  
27 string _MobilePhone = "0549967045";  
28 Random rnd = new Random();  
  
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```

81 % No issues found Ln: 54 Ch: 17 SPC CRLF

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'SeleniumPageObjectModel' (

SeleniumPageObjectModel

Properties

References

Base

BaseClass.cs

Pages

AuthenticationPage.cs

CreateAccountPage.cs

HomePage.cs

MyAccountLoggedOffPage.c

MyAccountPage.cs

App.config

packages.config

UnitTest1.cs

1. Click build project button
2. Open test Explorer Window
3. TestMethod1 should appear
4. Right mouse click and press Run, to run the test.

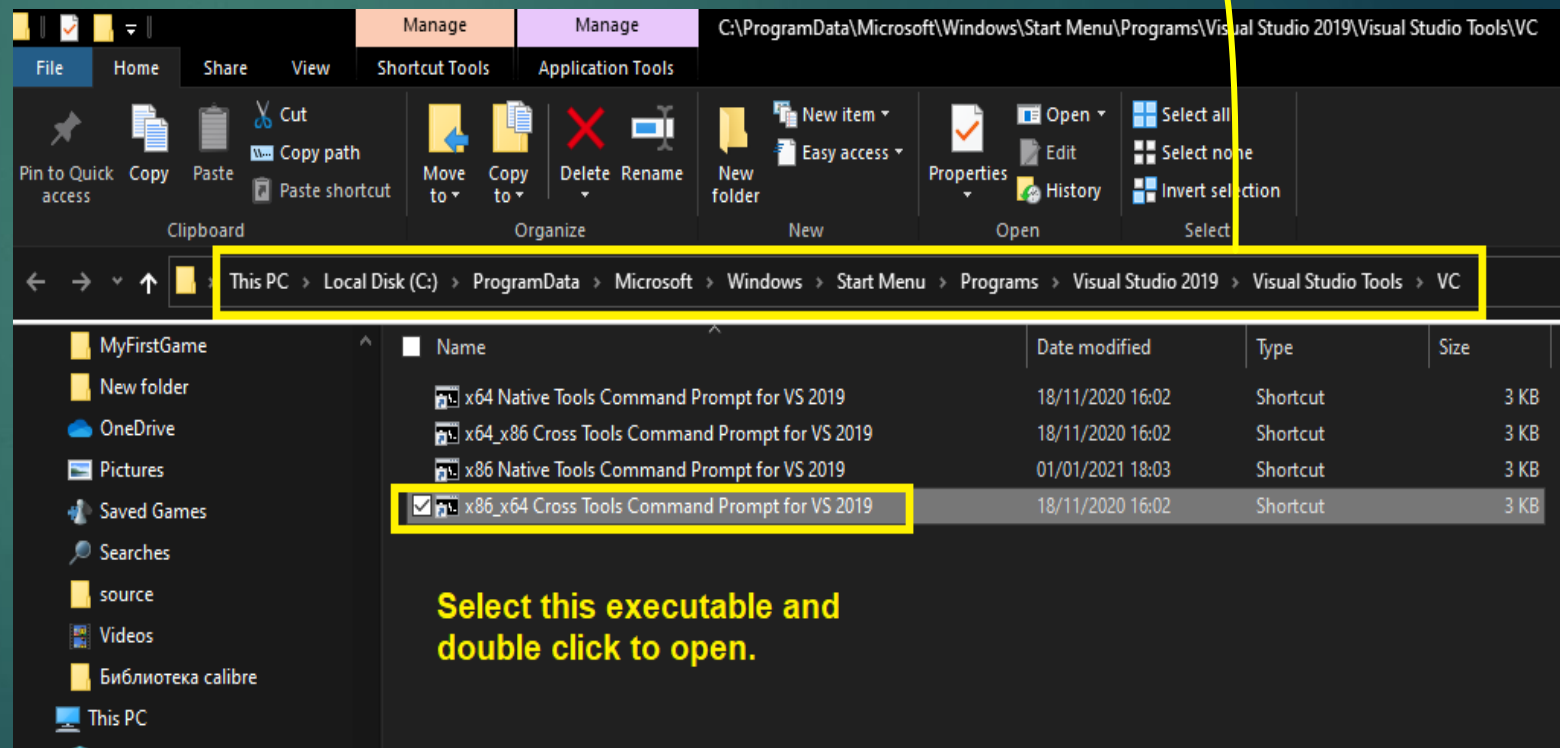
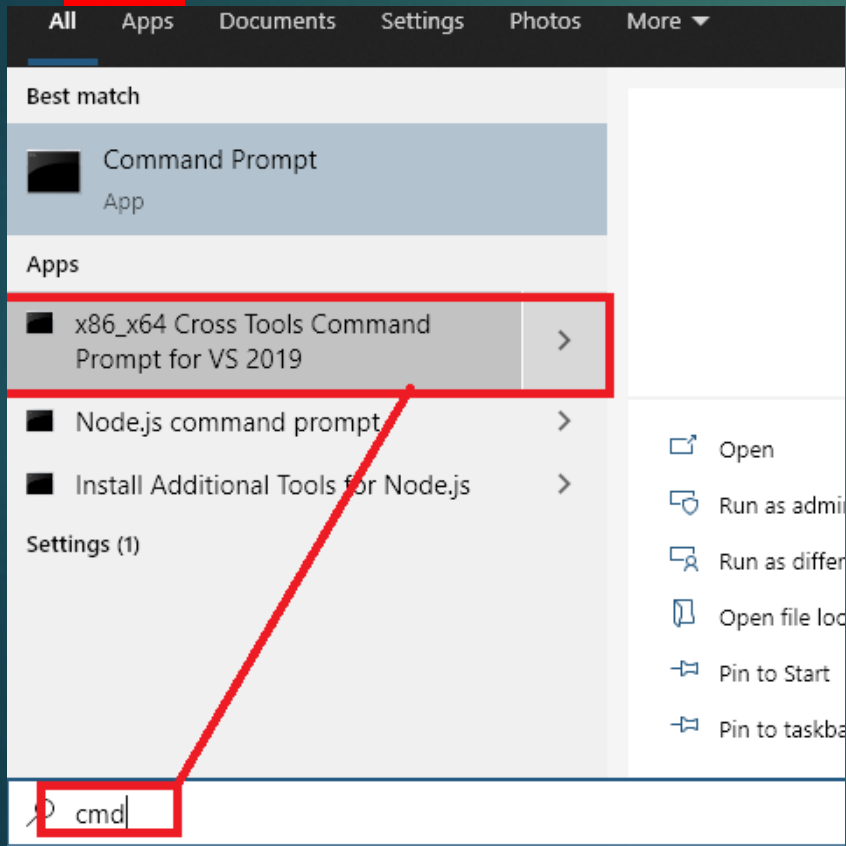
Running test from command line

33

- Navigate to this path

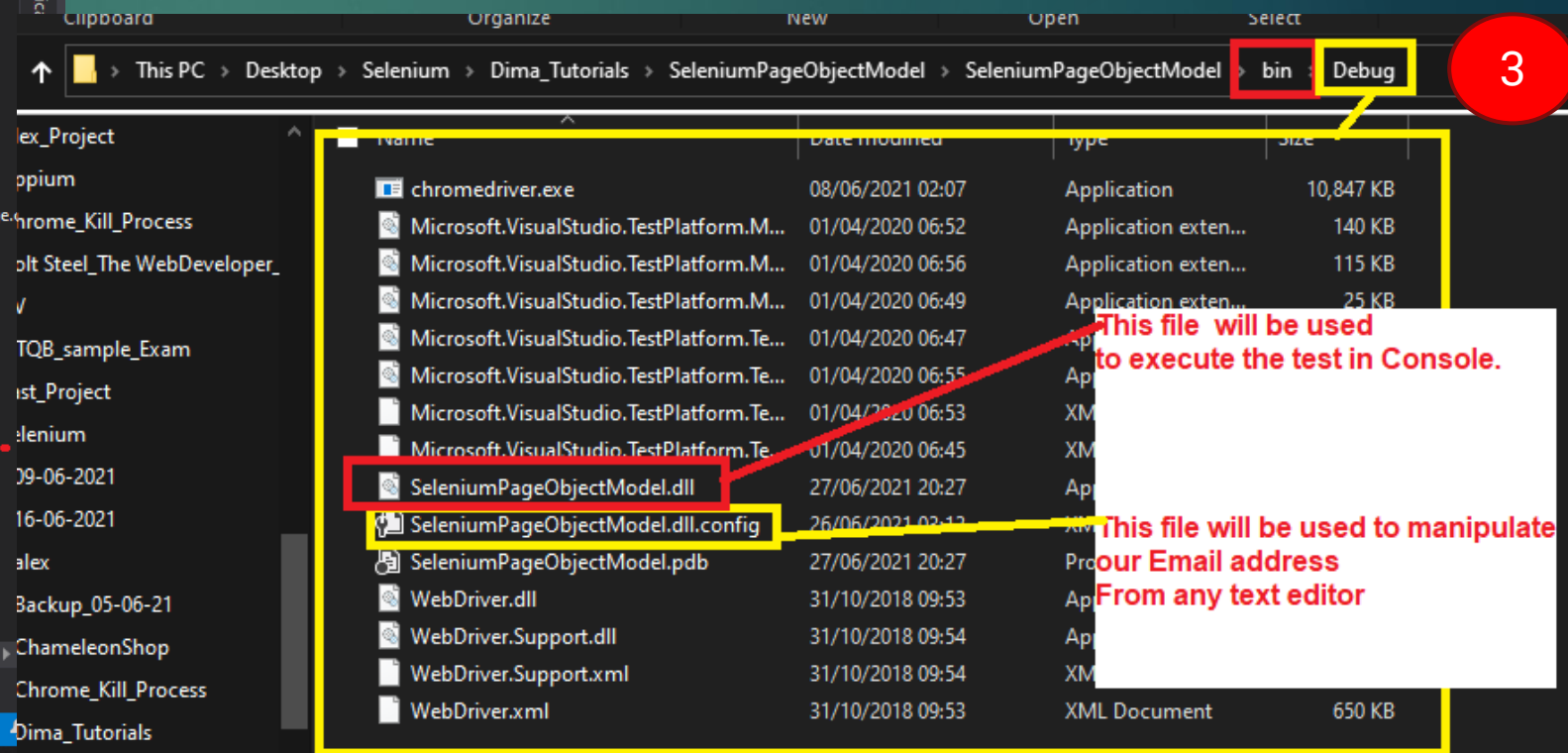
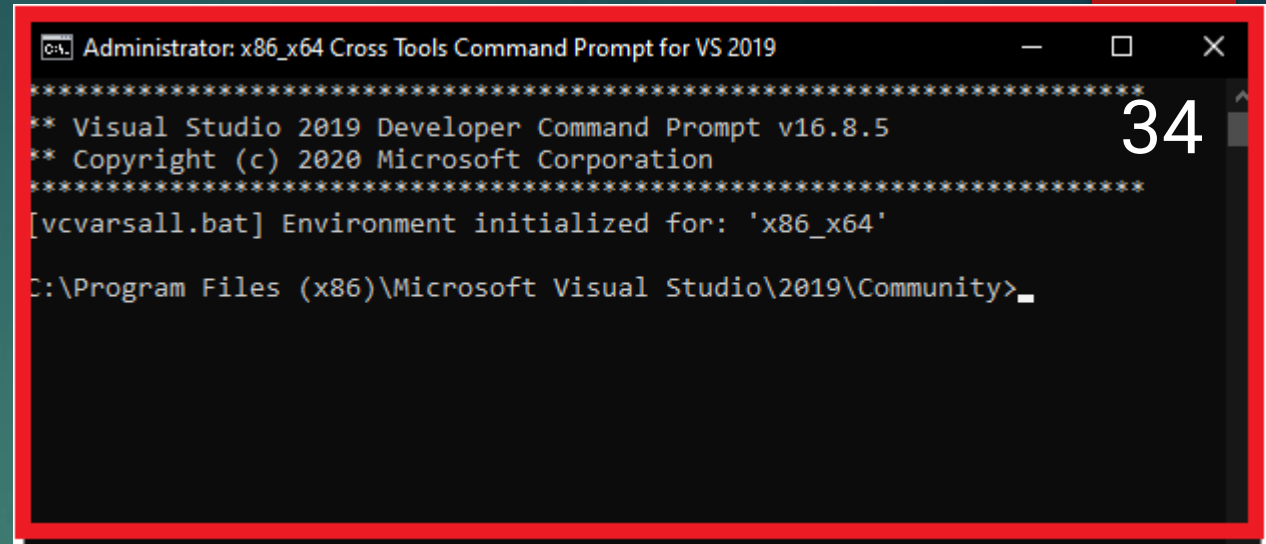
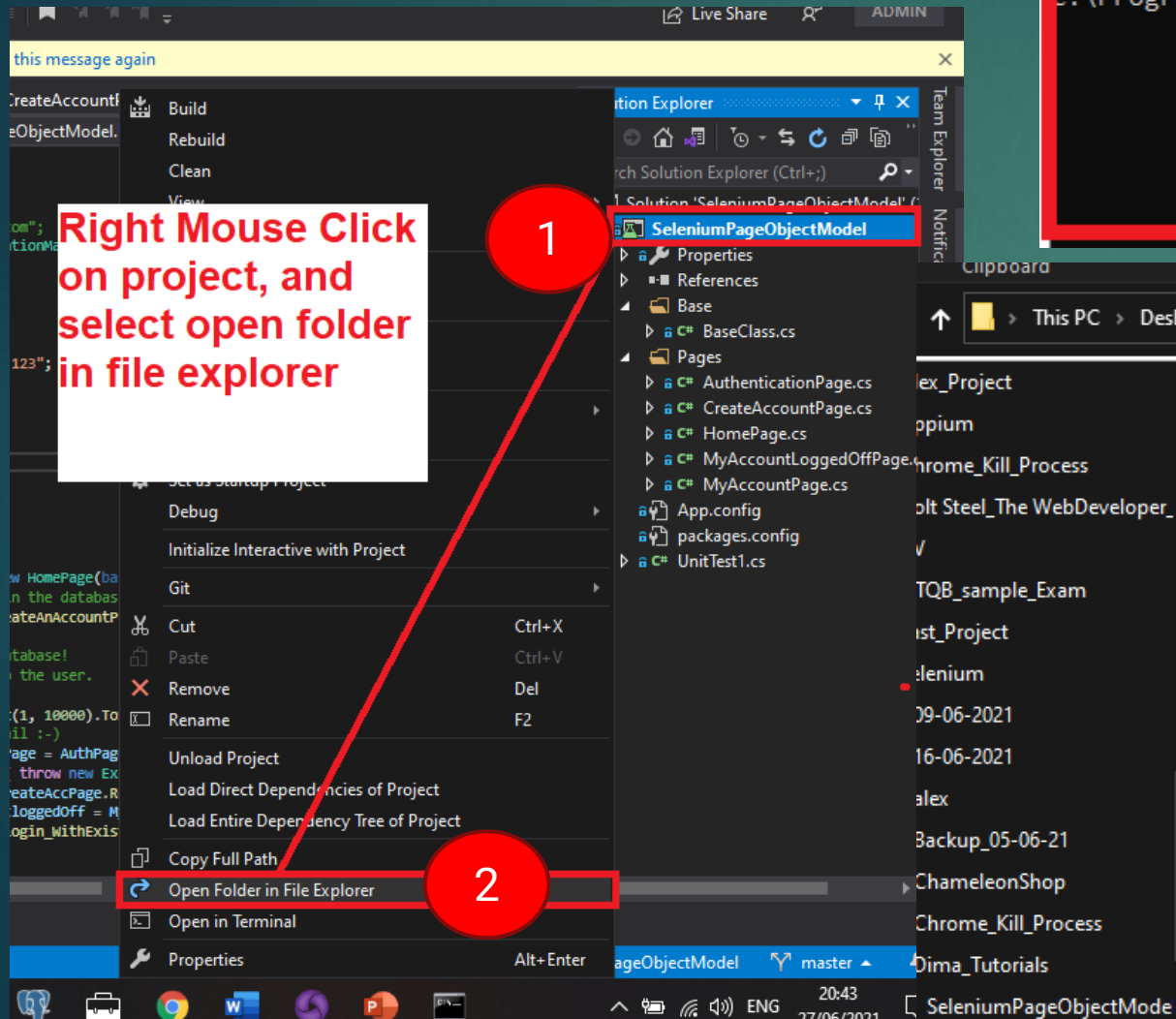
C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Visual Studio 2019\Visual Studio Tools\VC

Or Open Search and type CMD choose Cross Tools Command Prompt for VS

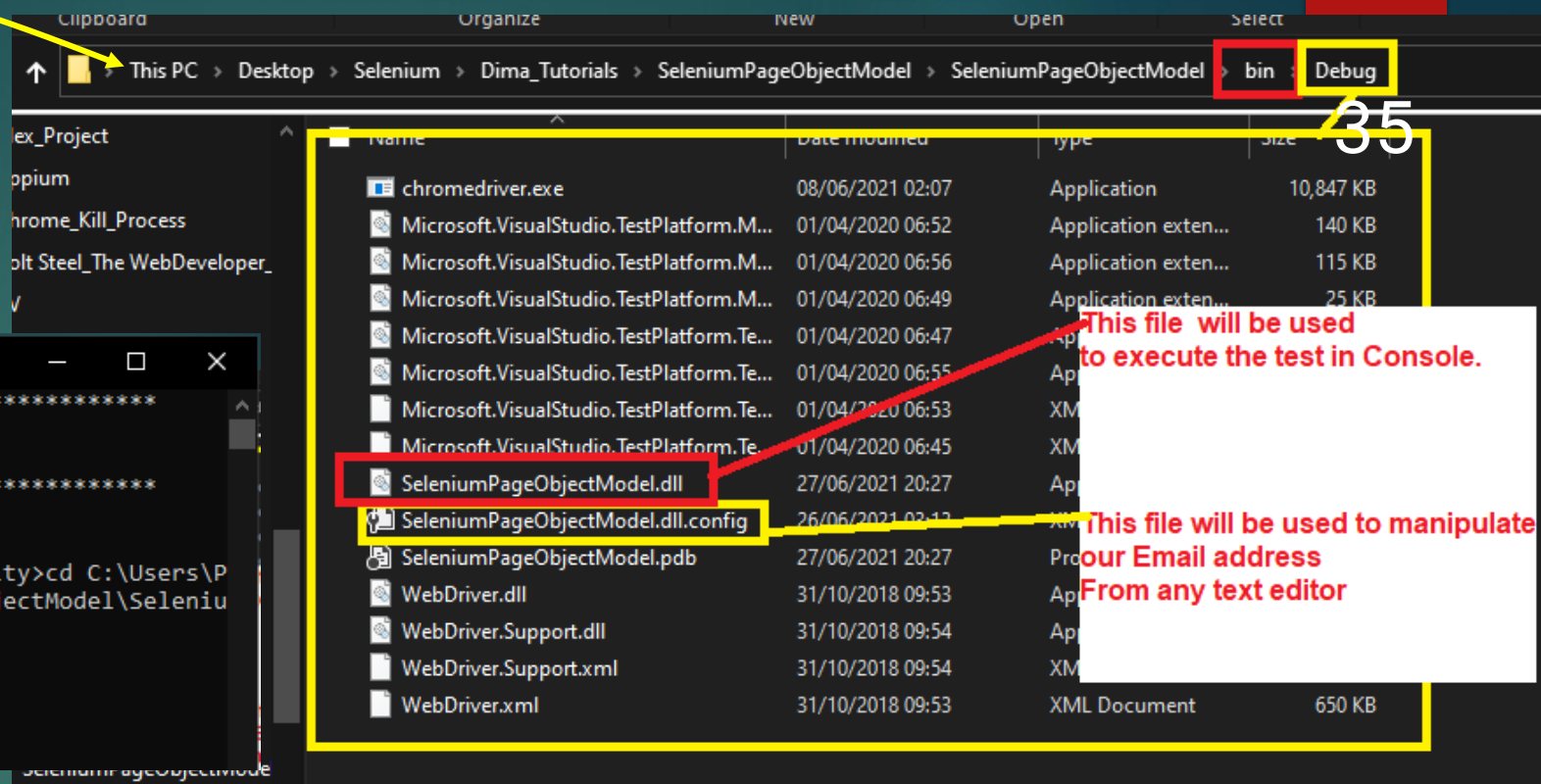


Once the Command Line is open, follow these steps:

1. Right mouse click on project, and select open folder in file explorer.



2. Copy this path. CTRL+C
3. Open Previously opened CMD
4. Type cd + space, and Paste the Path into CMD by pressing CTRL+V
5. Press Enter.



This file will be used to execute the test in Console.

This file will be used to manipulate our Email address From any text editor

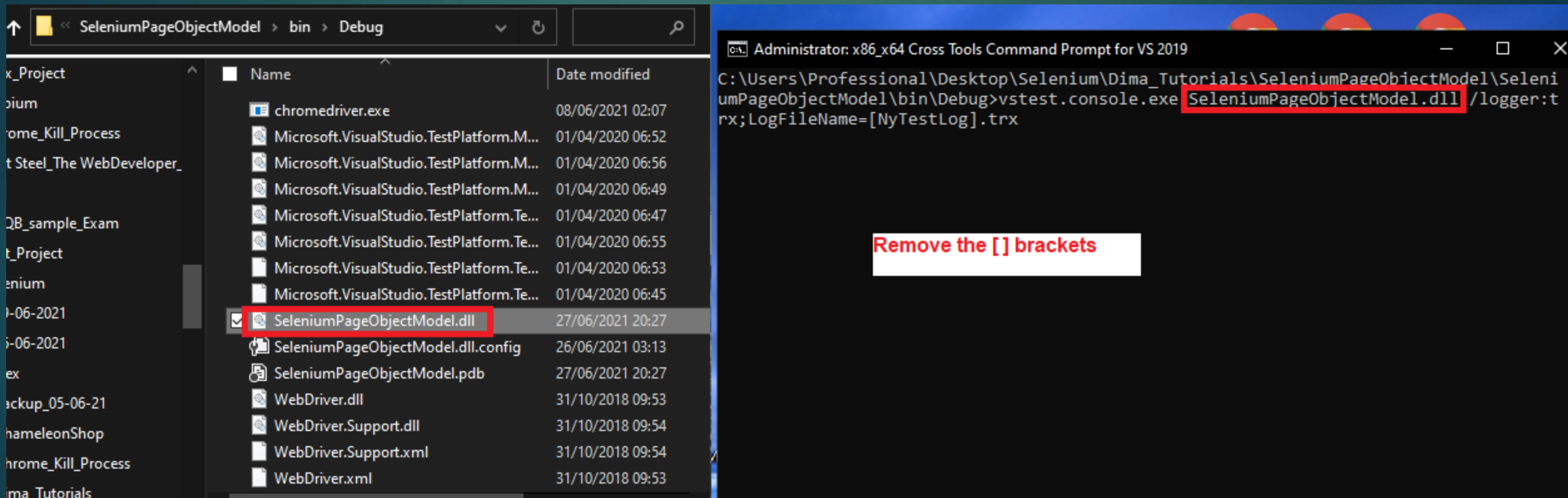
6. Once you in Debug folder Enter the following command: without [] brackets

`vstest.console.exe [assembly.dll] /logger:trx;LogFileName=[filename].trx`

DLL to execute

.trx file to hold the log file

Once you ready execute the command

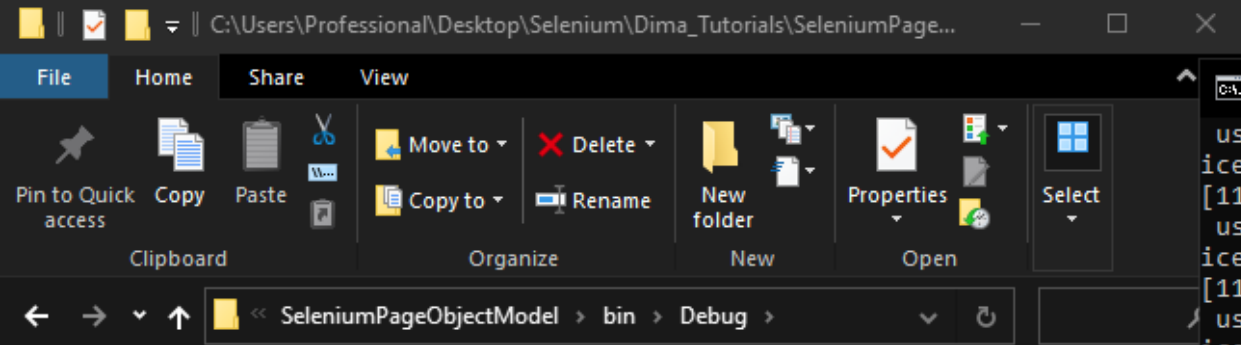


The image shows a file explorer window on the left and a command prompt window on the right. The file explorer is displaying the contents of the 'bin > Debug' directory for the 'SeleniumPageObjectModel' project. The file 'SeleniumPageObjectModel.dll' is selected and highlighted with a red box. The command prompt window shows the command being executed: `C:\Users\Professional\Desktop\Selenium\Dima_Tutorials\SeleniumPageObjectModel\SeleniumPageObjectModel\bin\Debug>vstest.console.exe SeleniumPageObjectModel.dll /logger:trx;LogFileName=[NyTestLog].trx`. The file 'SeleniumPageObjectModel.dll' in the command is also highlighted with a red box. A red text box with the instruction 'Remove the [] brackets' is overlaid on the command prompt.

Name	Date modified
chromedriver.exe	08/06/2021 02:07
Microsoft.VisualStudio.TestPlatform.M...	01/04/2020 06:52
Microsoft.VisualStudio.TestPlatform.M...	01/04/2020 06:56
Microsoft.VisualStudio.TestPlatform.M...	01/04/2020 06:49
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:47
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:55
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:53
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:45
SeleniumPageObjectModel.dll	27/06/2021 20:27
SeleniumPageObjectModel.dll.config	26/06/2021 03:13
SeleniumPageObjectModel.pdb	27/06/2021 20:27
WebDriver.dll	31/10/2018 09:53
WebDriver.Support.dll	31/10/2018 09:54
WebDriver.Support.xml	31/10/2018 09:54
WebDriver.xml	31/10/2018 09:53

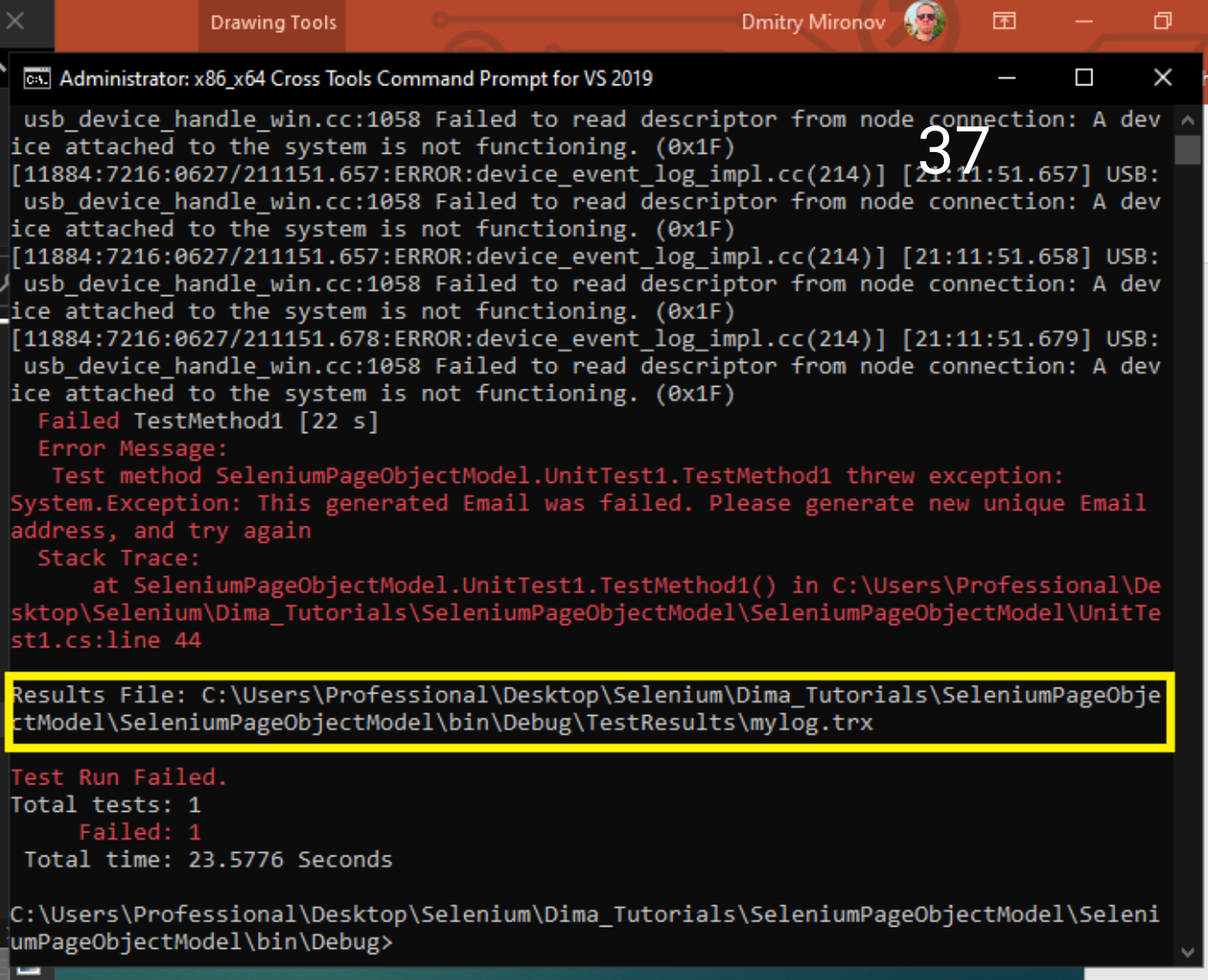
```
C:\Users\Professional\Desktop\Selenium\Dima_Tutorials\SeleniumPageObjectModel\SeleniumPageObjectModel\bin\Debug>vstest.console.exe SeleniumPageObjectModel.dll /logger:trx;LogFileName=[NyTestLog].trx
```

Remove the [] brackets



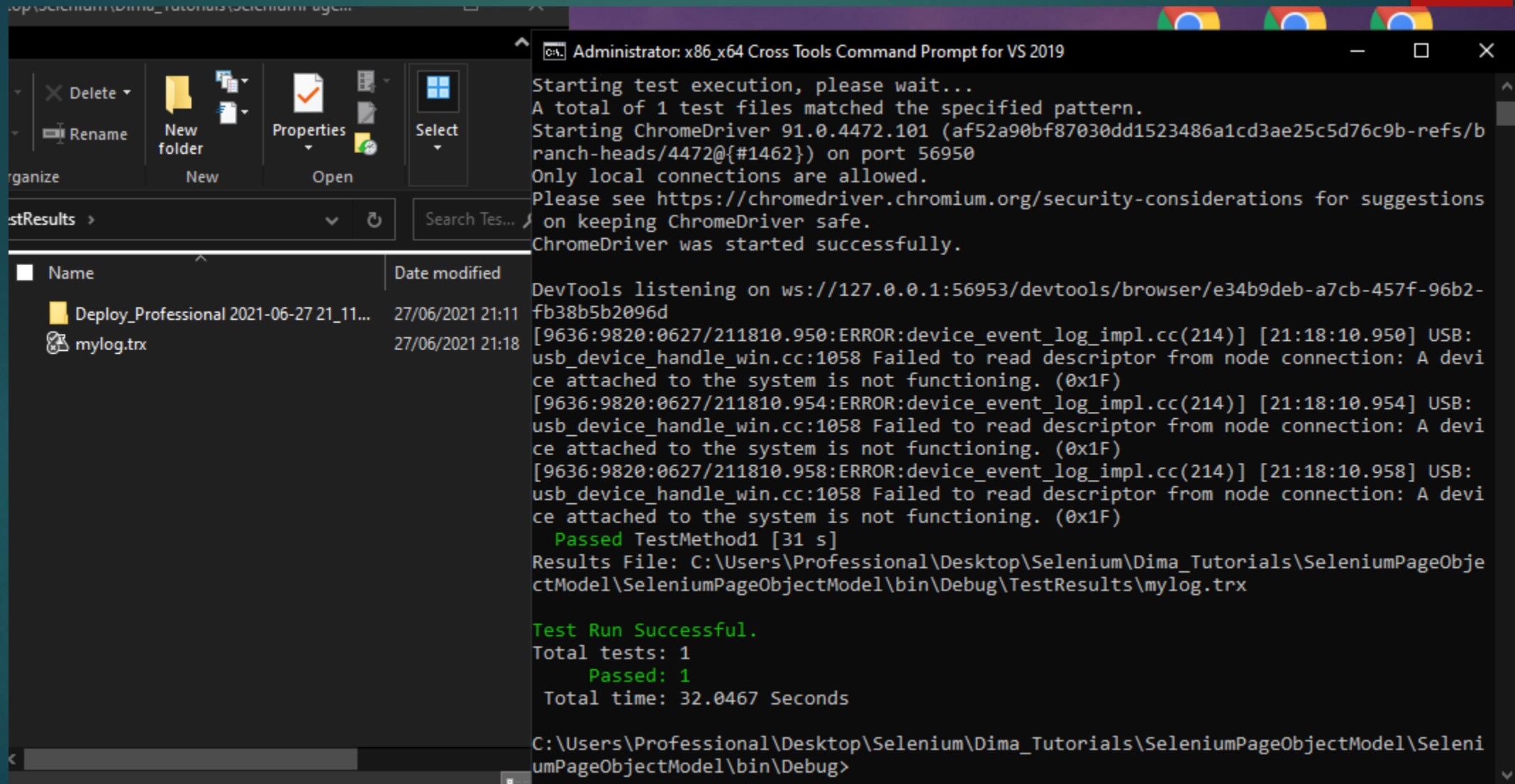
This folder will contain LogFile
Inspect the log file
to explore the Error root cause

Name	Date modified
TestResults	27/06/2021 21:11
chromedriver.exe	08/06/2021 02:07
Microsoft.VisualStudio.TestPlatform.M...	01/04/2020 06:52
Microsoft.VisualStudio.TestPlatform.M...	01/04/2020 06:56
Microsoft.VisualStudio.TestPlatform.M...	01/04/2020 06:49
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:47
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:55
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:53
Microsoft.VisualStudio.TestPlatform.Te...	01/04/2020 06:45
SeleniumPageObjectModel.dll	27/06/2021 20:27
SeleniumPageObjectModel.dll.config	26/06/2021 03:13
SeleniumPageObjectModel.pdb	27/06/2021 20:27
WebDriver.dll	31/10/2018 09:53
WebDriver.Support.dll	31/10/2018 09:54
WebDriver.Support.xml	31/10/2018 09:54



Passed

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The screenshot shows a Selenium IDE interface on the left and a Windows Command Prompt window on the right. The Selenium IDE interface displays a table of test results for a test named 'mylog.trx'. The table has two columns: 'Name' and 'Date modified'. The test result is 'Passed'.

Name	Date modified
Deploy_Professional 2021-06-27 21_11...	27/06/2021 21:11
mylog.trx	27/06/2021 21:18

The Windows Command Prompt window, titled 'Administrator: x86_x64 Cross Tools Command Prompt for VS 2019', displays the following text:

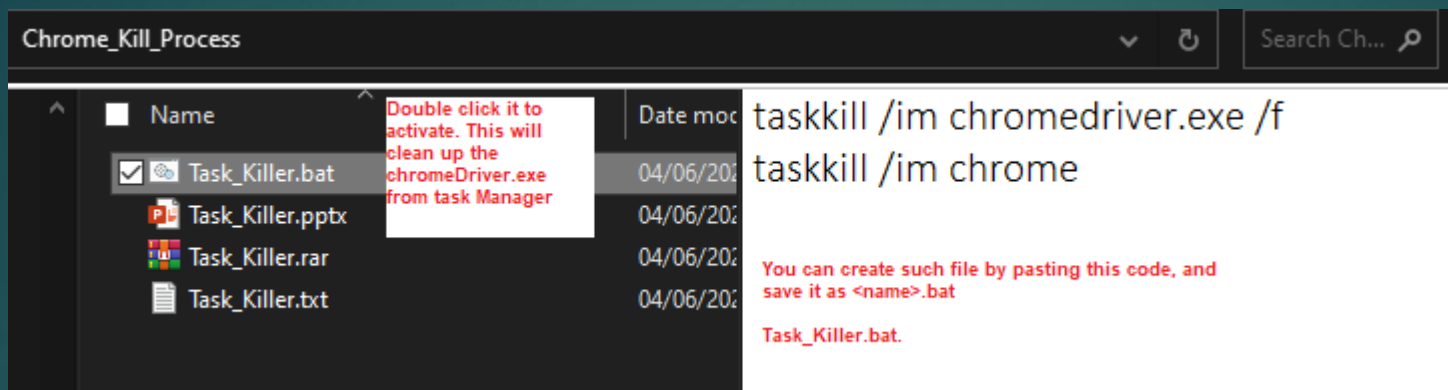
```
Starting test execution, please wait...
A total of 1 test files matched the specified pattern.
Starting ChromeDriver 91.0.4472.101 (af52a90bf87030dd1523486a1cd3ae25c5d76c9b-refs/b
ranch-heads/4472@{#1462}) on port 56950
Only local connections are allowed.
Please see https://chromedriver.chromium.org/security-considerations for suggestions
on keeping ChromeDriver safe.
ChromeDriver was started successfully.

DevTools listening on ws://127.0.0.1:56953/devtools/browser/e34b9deb-a7cb-457f-96b2-
fb38b5b2096d
[9636:9820:0627/211810.950:ERROR:device_event_log_impl.cc(214)] [21:18:10.950] USB:
usb_device_handle_win.cc:1058 Failed to read descriptor from node connection: A devi
ce attached to the system is not functioning. (0x1F)
[9636:9820:0627/211810.954:ERROR:device_event_log_impl.cc(214)] [21:18:10.954] USB:
usb_device_handle_win.cc:1058 Failed to read descriptor from node connection: A devi
ce attached to the system is not functioning. (0x1F)
[9636:9820:0627/211810.958:ERROR:device_event_log_impl.cc(214)] [21:18:10.958] USB:
usb_device_handle_win.cc:1058 Failed to read descriptor from node connection: A devi
ce attached to the system is not functioning. (0x1F)
Passed TestMethod1 [31 s]
Results File: C:\Users\Professional\Desktop\Selenium\Dima_Tutorials\SeleniumPageObje
ctModel\SeleniumPageObjectModel\bin\Debug\TestResults\mylog.trx

Test Run Successful.
Total tests: 1
Passed: 1
Total time: 32.0467 Seconds

C:\Users\Professional\Desktop\Selenium\Dima_Tutorials\SeleniumPageObjectModel\Seleni
umPageObjectModel\bin\Debug>
```

Additional info regarding ChromeDriver.exe task killer



Manually created Task_Killer.bat file (if needed)

Open notepad, and copy the following command:

```
taskkill /im chromedriver.exe /f  
taskkill /im chrome
```

Paste it into a text editor and save it as: TaskKiller.bat

After some testing using C# Selenium, just double click TaskKiller.bat file to clean up task manager.