```csharp
1  using Microsoft.VisualStudio.TestTools.UnitTesting;
2  using OpenQA.Selenium;
3  using OpenQA.Selenium.Chrome;
4  using OpenQA.Selenium.Support.UI;
5  using System;
6  using System.Collections.Generic;
7  using System.Text;
8
9  namespace AutomationTest
10 {
11     [TestClass]
12     public class UnitTest1
13     {
14         IWebDriver driver;
15         String emailAccount, firstName, lastName, passWord;
16
17
18         public void Initialize()
19         {
20             driver = new ChromeDriver();
21             driver.Manage().Timeouts().ImplicitWait = TimeSpan.FromSeconds ⮑
                 (50);
22             emailAccount = RandomString(8) + "@gmail.com";
23             passWord = "12345";
24             lastName = RandomString(6);
25             firstName = RandomString(6);
26         }
27
28         public void login()
29         {
30             driver.Navigate().GoToUrl("http://automationpractice.com/");
31             //use selenium to go to url
32             driver.FindElement(By.ClassName("login")).Click();
33             //login details
34             driver.FindElement(By.XPath("//input[@id='email']")).SendKeys ⮑
                 (emailAccount);//input email
35             driver.FindElement(By.XPath("//input[@id='passwd']")).SendKeys ⮑
                 (passWord);//input password
36             driver.FindElement(By.XPath("//button                        ⮑
                 [@id='SubmitLogin']")).Click();//submittion
37             driver.FindElement(By.XPath("//a[@class='logout']"));
38         }
39
40         private static string RandomString(int size)
41         {
42             // create a random string
43             StringBuilder builder = new StringBuilder();
44             Random random = new Random();
45             char chari;
```

```csharp
46            for (int i = 0; i < size; i++)
47            {
48                chari = Convert.ToChar(Convert.ToInt32(Math.Floor(26 *
                     random.NextDouble() + 65)));
49                builder.Append(chari);
50            }
51            return builder.ToString();
52        }// end of Random String method
53
54
55        public void createAccount()
56        {
57            // creating an account and logout from the website
58            driver.Navigate().GoToUrl("http://automationpractice.com");
59            driver.FindElement(By.ClassName("login")).Click();
60            IWebElement emailAddr = driver.FindElement(By.XPath(".//*
                 [@id='email_create']"));
61            emailAddr.SendKeys(emailAccount);
62            driver.FindElement(By.Id("SubmitCreate")).Click();
63            driver.FindElement(By.XPath(".//input
                 [@id='id_gender1']")).Click();
64            driver.FindElement(By.XPath("//input
                 [@id='customer_firstname']")).SendKeys(firstName);
65            driver.FindElement(By.XPath("//input
                 [@id='customer_lastname']")).SendKeys(lastName);
66            driver.FindElement(By.XPath("//input[@id='passwd']")).SendKeys
                 (passWord);
67            SelectElement bdDays = new SelectElement(driver.FindElement
                 (By.XPath("//select[@id='days']")));
68            bdDays.SelectByValue("25");//input date
69            SelectElement bdMonth = new SelectElement(driver.FindElement
                 (By.XPath("//select[@id='months']")));
70            bdMonth.SelectByValue("5");//month in the form of number
71            SelectElement bdYear = new SelectElement(driver.FindElement
                 (By.XPath("//select[@id='years']")));
72            bdYear.SelectByValue("1990");
73            //input company details
74            driver.FindElement(By.XPath("//input
                 [@id='company']")).SendKeys("Wintec");
75            driver.FindElement(By.XPath("//input
                 [@id='address1']")).SendKeys("Tristram St");
76            driver.FindElement(By.XPath("//input[@id='city']")).SendKeys
                 ("Hamilton");
77            SelectElement state = new SelectElement(driver.FindElement
                 (By.XPath("//select[@id='id_state']")));
78            state.SelectByText("California");
79            driver.FindElement(By.XPath("//input
                 [@id='postcode']")).SendKeys("55555");
80            SelectElement country = new SelectElement(driver.FindElement
```

```
           (By.XPath("//select[@id='id_country']")));
81         country.SelectByText("United States");
82         driver.FindElement(By.XPath("//input
              [@id='phone_mobile']")).SendKeys("5989898989");
83         driver.FindElement(By.XPath("//button
              [@id='submitAccount']")).Click();
84         driver.FindElement(By.XPath("//a[@class='logout']")).Click();
85         return;
86     } // end of creating account
87
88
89     public double convertAmount(String amount)
90     {
91         var strAmount = amount.Replace('$', ' ').TrimStart();
92         var result = Double.Parse(strAmount);
93         return result;
94     }
95
96     [TestMethod]
97     public void TestThreeItem()
98     {
99
100        Initialize();
101        createAccount();
102        driver.FindElement(By.ClassName("login")).Click();
103        driver.FindElement(By.XPath("//input[@id='email']")).SendKeys
              (emailAccount);
104        driver.FindElement(By.XPath("//input[@id='passwd']")).SendKeys
              (passWord);
105        driver.FindElement(By.XPath("//button
              [@id='SubmitLogin']")).Click();
106
107
108        driver.FindElement(By.XPath("//a[@title='Women']")).Click();
109        driver.FindElement(By.XPath("//img[@alt='Faded Short Sleeve T-
              shirts']")).Click();
110        driver.FindElement(By.XPath("//button[@name='Submit']")).Click
              ();
111        var wait = new WebDriverWait(driver, TimeSpan.FromSeconds
              (10));
112        wait.Until
              (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi
              ble(By.XPath(".//*[@id='layer_cart']/div[1]/div[2]/div[4]/a/
              span")));
113
114
115        driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div
              [2]/div[4]/span")).Click();
116        driver.FindElement(By.XPath("//a[@title='Women']")).Click();
```

```
117          driver.FindElement(By.XPath("//img[@alt='Blouse']")).Click();
118          driver.FindElement(By.XPath("//button[@name='Submit']")).Click ⮐
             ();
119          wait = new WebDriverWait(driver, TimeSpan.FromSeconds(10));
120          wait.Until                                                      ⮐
               (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi ⮐
               ble(By.XPath(".//*[@id='layer_cart']/div[1]/div[2]/div[4]/a/ ⮐
               span")));
121
122          driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div ⮐
               [2]/div[4]/span")).Click();
123          driver.FindElement(By.XPath("//a[@title='Women']")).Click();
124          driver.FindElement(By.XPath("//img[@alt='Printed            ⮐
               Dress']")).Click();
125          driver.FindElement(By.XPath("//button[@name='Submit']")).Click ⮐
             ();
126          wait = new WebDriverWait(driver, TimeSpan.FromSeconds(10));
127          wait.Until                                                      ⮐
               (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi ⮐
               ble(By.XPath("//*[@id='layer_cart']/div[1]/div[2]/div[4]/   ⮐
               a")));
128
129
130          driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div ⮐
               [2]/div[4]/a/span")).Click();
131          driver.Manage().Timeouts().ImplicitWait = TimeSpan.FromSeconds ⮐
             (0);
132
133          //Calculate Price
134          var total = convertAmount(driver.FindElement(By.XPath(".//*   ⮐
               [@id='total_price']")).Text);
135
136          Console.WriteLine("\nTotal Price : " + total);
137
138          // Last Item Price
139          var lastProductPrice = convertAmount(driver.FindElement       ⮐
               (By.XPath("//table[@id='cart_summary']/tbody[1]/tr[3]/td[6]/ ⮐
               span")).Text);
140
141          Console.WriteLine("\n Price for 3rd Item : " +                ⮐
               lastProductPrice);
142
143          var calculatedtotalPrice = Math.Round(total -                 ⮐
               lastProductPrice, 2);
144          Console.WriteLine("\n Calculated total Price after removeing   ⮐
               Item : " + calculatedtotalPrice);
145
146          // Remove Last Item
147          driver.FindElement(By.XPath("//table[@id='cart_summary']/tbody ⮐
```

```
                         [1]/tr[3]/td[7]/div[1]/a")).Click();
148
149              driver.FindElement(By.XPath(".//*[@id='center_column']/p[2]/a
                     [1]/span")).Click();
150              driver.FindElement(By.XPath(".//*[@id='center_column']/form/p/
                     button")).Click();
151              driver.FindElement(By.XPath("//input[@id='cgv']")).Click();
152              driver.FindElement(By.XPath("//button
                     [@name='processCarrier']")).Click();
153
154              var newtotalPrice = convertAmount(driver.FindElement(By.XPath
                     (".//*[@id='total_price']")).Text);
155
156              Console.WriteLine("\n New total Price after remove last Item :
                      " + newtotalPrice);
157              Assert.AreEqual(calculatedtotalPrice, newtotalPrice);
158
159              Console.Read();
160              driver.Quit(); // closing the driver
161          }// end of testing an order
162
163
164          public int getExpensiveItem(IWebElement tableElement)
165          {
166              double price = 0.00;
167              int expensive = 0;
168              int i = 1;
169              IList<IWebElement> tableRow = tableElement.FindElements
                     (By.TagName("tr"));
170              IList<IWebElement> rowTD;
171              foreach (IWebElement row in tableRow)
172              {
173                  rowTD = row.FindElements(By.TagName("td"));
174
175                  var stPrice = rowTD[5].FindElement(By.ClassName
                       ("price")).Text;
176                  var tempPrice = convertAmount(stPrice);
177                  if (tempPrice > price)
178                  {
179                      price = tempPrice;
180                      expensive = i;
181                  }
182                  i++;
183              }
184              return expensive;
185          }
186
187
188          [TestMethod]
```

```
189            public void TestFourItem()
190            {
191                Initialize();
192                createAccount();
193                driver.FindElement(By.ClassName("login")).Click();
194                driver.FindElement(By.XPath("//input[@id='email']")).SendKeys
                       (emailAccount);
195                driver.FindElement(By.XPath("//input[@id='passwd']")).SendKeys
                       (passWord);
196                driver.FindElement(By.XPath("//button
                       [@id='SubmitLogin']")).Click();
197
198                driver.FindElement(By.XPath("//a[@title='Women']")).Click();
199                IJavaScriptExecutor js = (IJavaScriptExecutor)driver;
200                js.ExecuteScript("window.scrollBy(0,1050);");
201                var wait = new WebDriverWait(driver, TimeSpan.FromSeconds
                       (10));
202                driver.FindElement(By.XPath("//img[@alt='Printed Chiffon
                       Dress']")).Click();
203
204                driver.FindElement(By.XPath("//button[@name='Submit']")).Click
                       ();
205                wait.Until
                       (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi
                       ble(By.XPath("//*[@id='layer_cart']/div[1]/div[2]/div[4]/
                       a")));
206
207                driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div
                       [2]/div[4]/span")).Click();
208                driver.FindElement(By.XPath("//a[@title='Women']")).Click();
209                driver.FindElement(By.XPath("//img[@alt='Faded Short Sleeve T-
                       shirts']")).Click();
210                driver.FindElement(By.XPath("//button[@name='Submit']")).Click
                       ();
211                wait = new WebDriverWait(driver, TimeSpan.FromSeconds(10));
212                wait.Until
                       (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi
                       ble(By.XPath(".//*[@id='layer_cart']/div[1]/div[2]/div[4]/a/
                       span")));
213
214
215                driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div
                       [2]/div[4]/span")).Click();
216                driver.FindElement(By.XPath("//a[@title='Women']")).Click();
217                driver.FindElement(By.XPath("//img[@alt='Blouse']")).Click();
218                driver.FindElement(By.XPath("//button[@name='Submit']")).Click
                       ();
219                wait = new WebDriverWait(driver, TimeSpan.FromSeconds(10));
220                wait.Until
```

```
              (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi ⮑
              ble(By.XPath(".//*[@id='layer_cart']/div[1]/div[2]/div[4]/a/ ⮑
              span")));
221
222           driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div ⮑
              [2]/div[4]/span")).Click();
223           driver.FindElement(By.XPath("//a[@title='Women']")).Click();
224           driver.FindElement(By.XPath("//img[@alt='Printed              ⮑
              Dress']")).Click();
225           driver.FindElement(By.XPath("//button[@name='Submit']")).Click ⮑
              ();
226           wait = new WebDriverWait(driver, TimeSpan.FromSeconds(10));
227           wait.Until                                                     ⮑
              (SeleniumExtras.WaitHelpers.ExpectedConditions.ElementIsVisi  ⮑
              ble(By.XPath("//*[@id='layer_cart']/div[1]/div[2]/div[4]/     ⮑
              a")));
228
229           //Find expensive Item Postion
230           var tablelist = driver.FindElement(By.XPath("//table          ⮑
              [@id='cart_summary']/tbody[1]"));
231           var ItemPostion = getExpensiveItem(tablelist);
232
233
234
235           //Price Calculation
236           var totalPrice = convertAmount(driver.FindElement(By.XPath    ⮑
              (".//*[@id='total_price']")).Text);
237
238           Console.WriteLine("\nTotal Price : " + totalPrice);
239
240           // Last Item Price
241           var lastProductPrice = convertAmount(driver.FindElement       ⮑
              (By.XPath("//table[@id='cart_summary']/tbody[1]/tr[" +        ⮑
              ItemPostion + "]/td[6]/span")).Text);
242
243           Console.WriteLine("\n Price for 3rd Item : " +                ⮑
              lastProductPrice);
244
245           var calculatedtotalPrice = Math.Round(totalPrice –            ⮑
              lastProductPrice, 2);
246           Console.WriteLine("\n Calculated total Price after removeing   ⮑
              Item : " + calculatedtotalPrice);
247
248           // Remove Last Item
249           driver.FindElement(By.XPath("//table[@id='cart_summary']/tbody ⮑
              [1]/tr[" + ItemPostion + "]/td[7]/div[1]/a")).Click();
250
251           driver.FindElement(By.XPath(".//*[@id='center_column']/p[2]/a  ⮑
              [1]/span")).Click();
```

```
252            driver.FindElement(By.XPath(".//*[@id='center_column']/form/p/
                  button")).Click();
253            driver.FindElement(By.XPath("//input[@id='cgv']")).Click();
254            driver.FindElement(By.XPath("//button
                  [@name='processCarrier']")).Click();
255
256            var newtotalPrice = convertAmount(driver.FindElement(By.XPath
                  (".//*[@id='total_price']")).Text);
257
258            Console.WriteLine("\n New total Price after remove last Item :
                   " + newtotalPrice);
259            Assert.AreEqual(calculatedtotalPrice, newtotalPrice);
260
261
262            driver.FindElement(By.XPath(".//*[@id='layer_cart']/div[1]/div
                  [2]/div[4]/a/span")).Click();
263
264            Assert.AreEqual(calculatedtotalPrice, newtotalPrice);
265            Console.Read();
266            driver.Quit(); // closing the driver
267        }// end of testing an order
268
269     }
270 }
271
```