

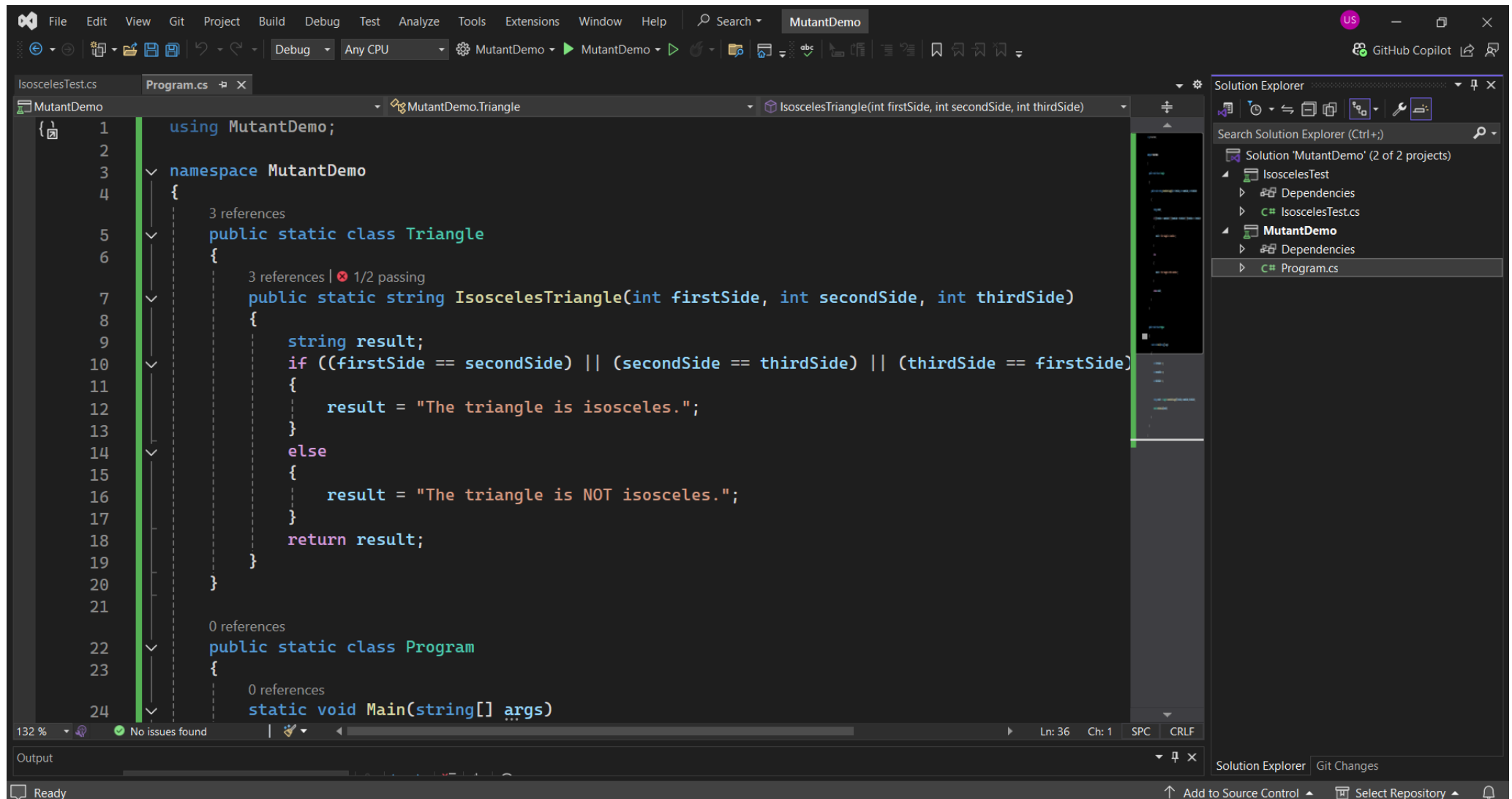
Lab 3: Mutation Testing

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Subject: Software Testing Methodologies (SENG8041)

Screenshot for Program.cs in MutantDemo:



File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search MutantDemo

Debug Any CPU MutantDemo MutantDemo

IsoscelesTest.cs Program.cs

MutantDemo MutantDemo.Triangle IsoscelesTriangle(int firstSide, int secondSide, int thirdSide)

```
12         result = "The triangle is isosceles.";
13     }
14     else
15     {
16         result = "The triangle is NOT isosceles.";
17     }
18     return result;
19 }
20
21
22 0 references
23 public static class Program
24 {
25     0 references
26     static void Main(string[] args)
27     {
28         int firstSide = 4;
29         int secondSide = 4;
30         int thirdSide = 6;
31
32         string result = Triangle.IsoscelesTriangle(firstSide, secondSide, thirdSide);
33         Console.WriteLine(result);
34     }
35 }
36
```

132 % No issues found Ln: 36 Ch: 1 SPC CRLF

Output

Ready

Solution Explorer

Search Solution Explorer (Ctrl+)

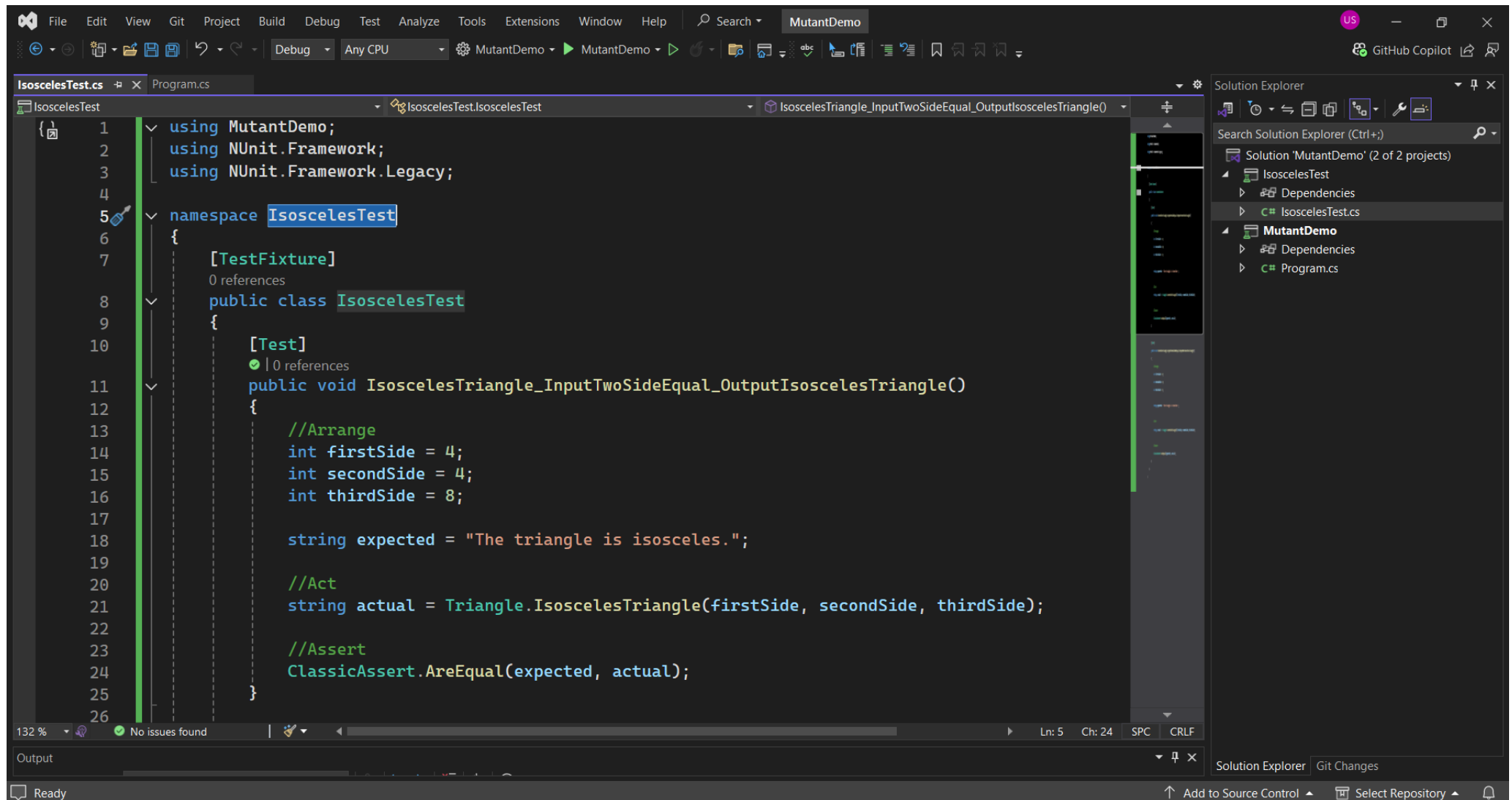
Solution 'MutantDemo' (2 of 2 projects)

- IsoscelesTest
 - Dependencies
 - IsoscelesTest.cs
- MutantDemo
 - Dependencies
 - Program.cs

Solution Explorer Git Changes

Add to Source Control Select Repository

Screenshot for IsoscelesTest.cs in IsoscelesTest:



File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search MutantDemo

Debug Any CPU MutantDemo MutantDemo

IsoscelesTest.cs* Program.cs

IsoscelesTest

```
20 //Act
21 string actual = Triangle.IsoscelesTriangle(firstSide, secondSide, thirdSide);
22
23 //Assert
24 ClassicAssert.AreEqual(expected, actual);
25 }
26
27 [Test]
28 // 0 references
29 public void IsoscelesTriangle_InputThreeSideUnequal_OutputNotIsoscelesTriangle()
30 {
31     //Arrange
32     int firstSide = 4;
33     int secondSide = 5;
34     int thirdSide = 6;
35
36     string expected = "The triangle is isosceles.";
37
38     //Act
39     string actual = Triangle.IsoscelesTriangle(firstSide, secondSide, thirdSide);
40
41     //Assert
42     ClassicAssert.AreEqual(expected, actual);
43 }
44 }
45
46
```

132 % No issues found Ln: 46 Ch: 1 SPC CRLF

Output

Ready

Solution Explorer

Search Solution Explorer (Ctrl+)

Solution 'MutantDemo' (2 of 2 projects)

- IsoscelesTest
 - Dependencies
 - C# IsoscelesTest.cs
- MutantDemo
 - Dependencies
 - C# Program.cs

Solution Explorer Git Changes

Add to Source Control Select Repository

Screenshot for Pass and Fail Test:

Test Explorer

2

1

1

Test run finished: 2 Tests (1 Passed, 1 Failed, 0 Skipped) run in 132 ms

Test

Dur

▲

✖

 IsoscelesTest (2)

▲

✖

 IsoscelesTest (2)

▲

✖

 IsoscelesTest (2)

✖

 IsoscelesTriangle_InputThreeSideUnequal_OutputNotIsoscelesTriangle

✔

 IsoscelesTriangle_InputTwoSideEqual_OutputIsoscelesTriangle

▶ Run

🐞 Debug

Group Summary

IsoscelesTest

Tests in group : 2

🕒

 Total Duration: 17 ms

Outcomes

✔

 1 Passed

✖

 1 Failed