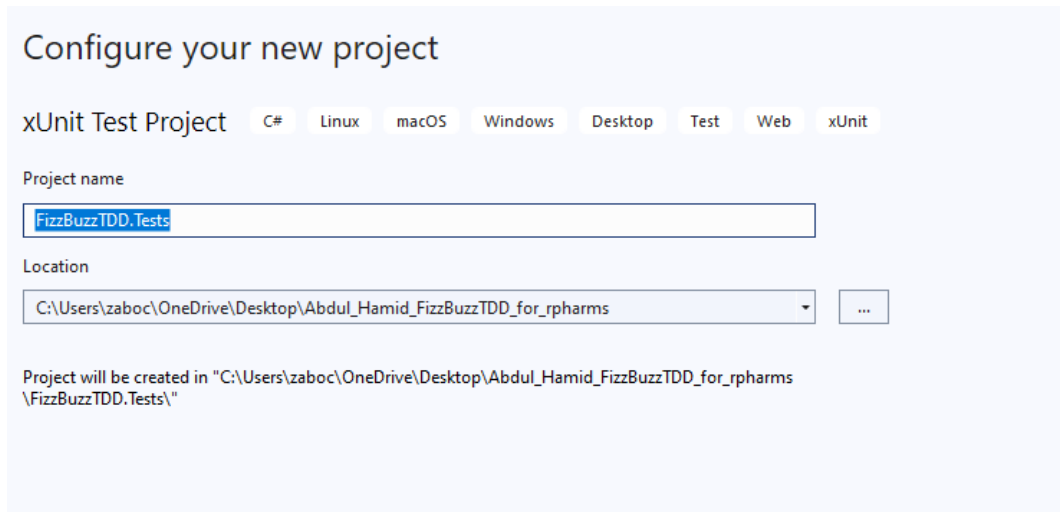
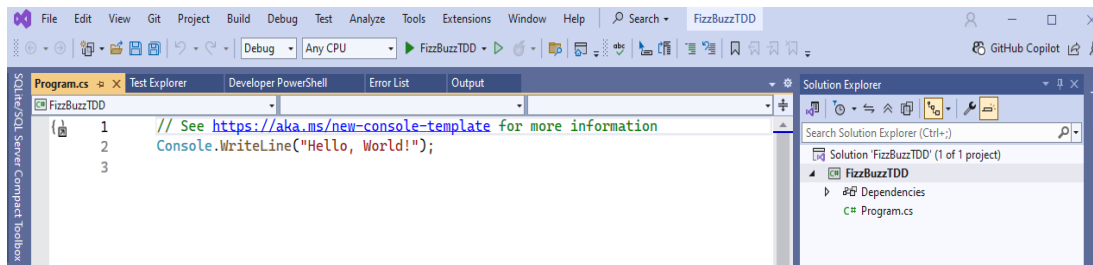


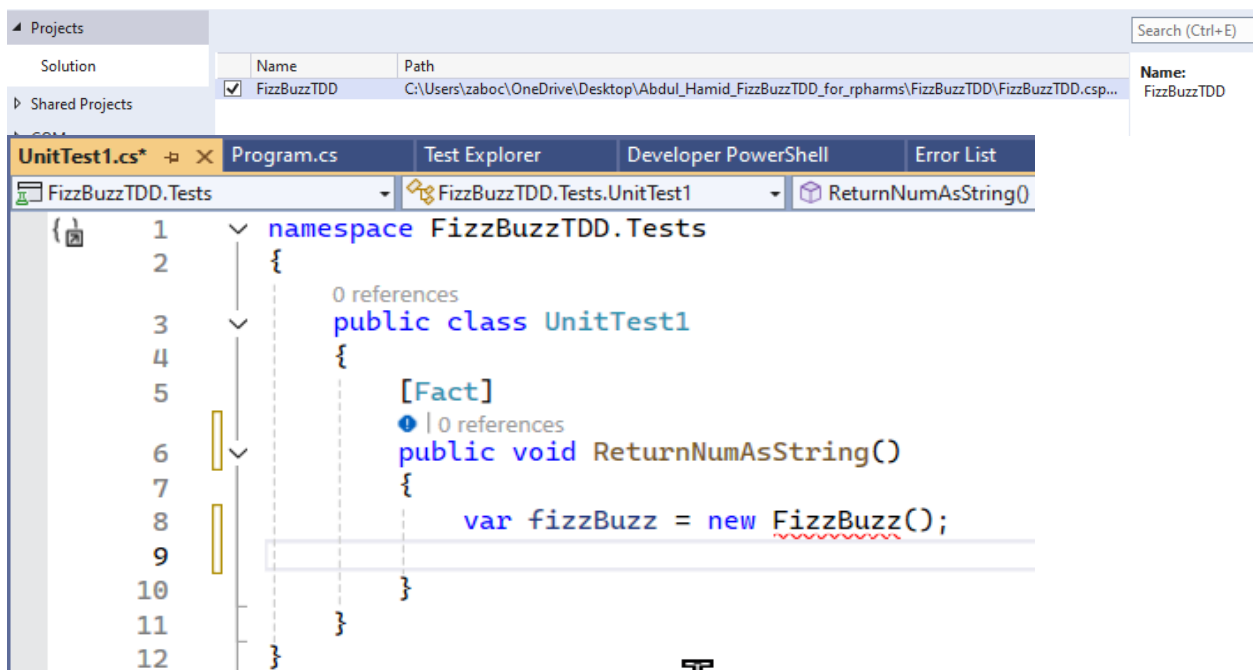
Walkthrough of FizzBuzzTDD - Abdul Hamid

1. Created new default console app in visual studio vs2022



2. First failing test + added project dependency

Reference Manager - FizzBuzzTDD.Tests



Walkthrough of FizzBuzzTDD - Abdul Hamid

3. Fixed by adding class and method

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

- Code Editor:** Displays the `FizzBuzzTDD` namespace containing a `FizzBuzz` class with a `GetNum(int num)` method. The code is as follows:

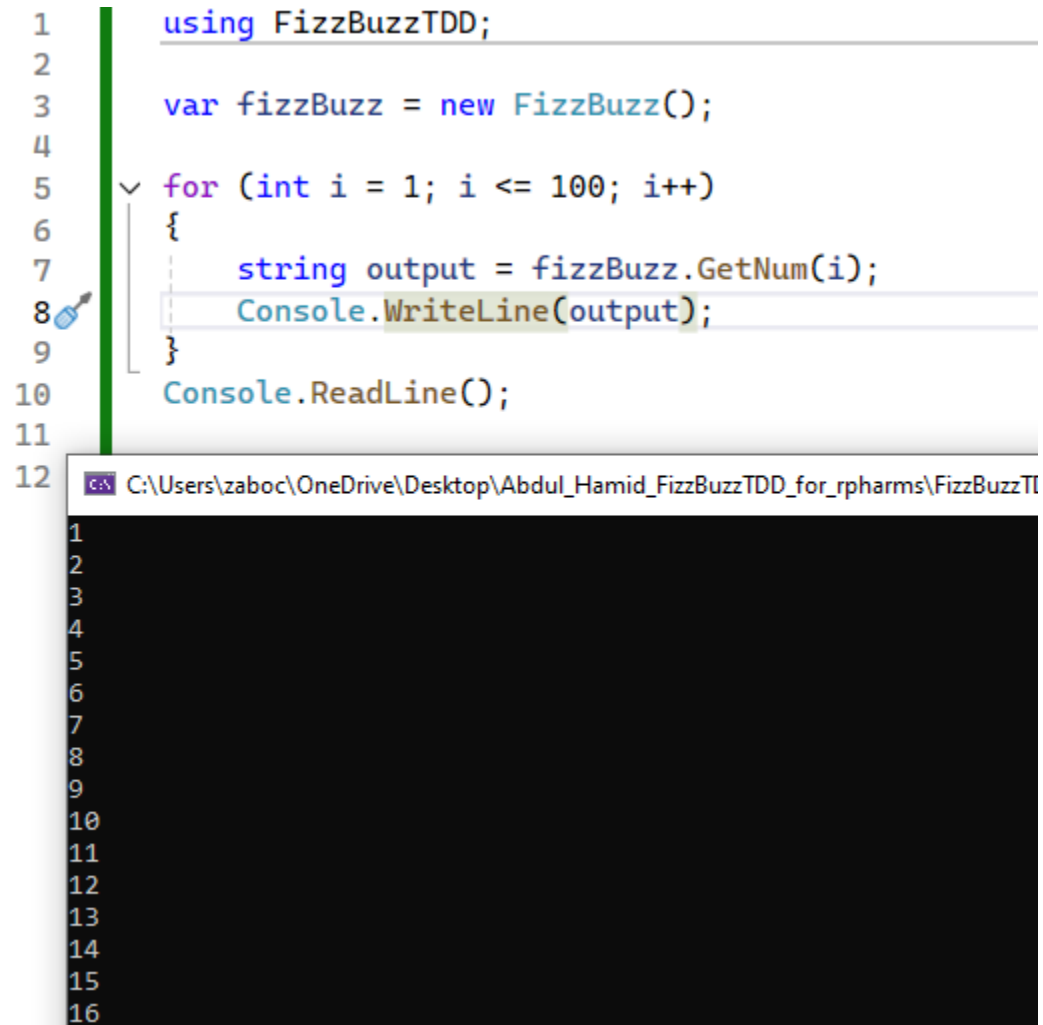
```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace FizzBuzzTDD
8 {
9     public class FizzBuzz
10    {
11        public string GetNum(int num)
12        {
13            return num.ToString();
14        }
15    }
16 }
```
- Test Explorer:** Shows the results of a test run. The status bar indicates "Test run finished: 1 Tests (1 Passed, 0 Failed, 0 Skipped) run in 143 ms". The test results table is as follows:

Test	Duration	Traits	Error Message
▲ FizzBuzzTDD.Tests (1)	6 ms		
▲ FizzBuzzTDD.Tests (1)	6 ms		
▲ FizzBuzzTests (1)	6 ms		
ReturnNumAsString	6 ms		

Walkthrough of FizzBuzzTDD - Abdul Hamid

4. Introduce iteration for numbers to 100

```
1  using FizzBuzzTDD;
2
3  var fizzBuzz = new FizzBuzz();
4
5  for (int i = 1; i <= 100; i++)
6  {
7      string output = fizzBuzz.GetNum(i);
8      Console.WriteLine(output);
9  }
10 Console.ReadLine();
11
12 C:\Users\zaboc\OneDrive\Desktop\Abdul_Hamid_FizzBuzzTDD_for_rpharms\FizzBuzzTDD\Program.cs
```



Walkthrough of FizzBuzzTDD - Abdul Hamid

5. Continue adding tests and logic

✖ FizzBuzzTDD.Tests (2)	10 ms		
✖ FizzBuzzTDD.Tests (2)	10 ms		
✖ FizzBuzzTests (2)	10 ms		
✔ ReturnNumAsString	5 ms		
✖ ReturnString_WhenDivisibleBy3	5 ms	Assert.Equal() Failure: Strings differ	↓ (pos 0) Expected: "Fizz" Actual: "3" ↑ (...)

```
namespace FizzBuzzTDD
```

```
{
```

```
    3 references
```

```
    public class FizzBuzz
```

```
    {
```

```
        3 references | ✖ 1/2 passing
```

```
        public string GetNum(int num)
```

```
        {
```

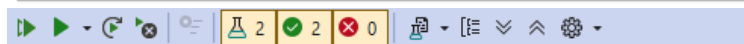
```
            if (num % 3 == 0) return "Fizz";
```

```
            return num.ToString();
```

```
        }
```

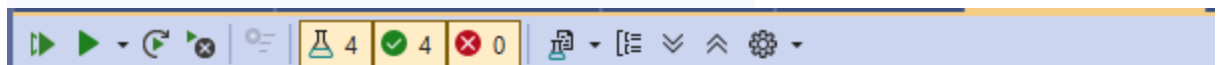
```
    }
```

```
}
```



Test run finished: 1 Tests (1 Passed, 0 Failed, 0 Skipped) run in 144 ms

Test	Duration	Traits	Error Message
✔ FizzBuzzTDD.Tests (2)	10 ms		
✔ FizzBuzzTDD.Tests (2)	10 ms		
✔ FizzBuzzTests (2)	10 ms		
✔ ReturnNumAsString	5 ms		
✔ ReturnString_WhenDivisibleBy3	5 ms		



Test run finished: 4 Tests (4 Passed, 0 Failed, 0 Skipped) run in 146 ms

Test	Duration	Traits	Error Message
✔ FizzBuzzTDD.Tests (4)	4 ms		
✔ FizzBuzzTDD.Tests (4)	4 ms		
✔ FizzBuzzTests (4)	4 ms		
✔ ReturnNumAsString	< 1 ms		
✔ ReturnString_WhenDivisibleBy3	< 1 ms		
✔ ReturnString_WhenDivisibleBy3and5	4 ms		
✔ ReturnString_WhenDivisibleBy5	< 1 ms		

Walkthrough of FizzBuzzTDD - Abdul Hamid

6. Improving test suite

```
// [Fact]
// public void ReturnString_WhenDivisibleBy3and5()
// {

//     var fizzBuzz = new FizzBuzz();
//     string result = fizzBuzz.GetNum(15);

//     Assert.Equal("FizzBuzz", result);
// }

[Theory]
[InlineData(1, "1")]
[InlineData(3, "Fizz")]
[InlineData(5, "Buzz")]
[InlineData(45, "FizzBuzz")]
[InlineData(98, "98")]
0 references
public void GetNum_ReturnsCorrectFizzBuzzOutput(int input, string expected)
{
    var fizzBuzz = new FizzBuzz();
    string result = fizzBuzz.GetNum(input);
    Assert.Equal(expected, result);
}
```

Test	Duration	Traits	E
▲ ✓ FizzBuzzTDD.Tests (5)	3 ms		
▲ ✓ FizzBuzzTDD.Tests (5)	3 ms		
▲ ✓ FizzBuzzTests (5)	3 ms		
▲ ✓ GetNum_ReturnsCorrectFizzBuzzOutput (5)	3 ms		
✓ GetNum_ReturnsCorrectFizzBuzzOutput(input: 1, expected: "1")	< 1 ms		
✓ GetNum_ReturnsCorrectFizzBuzzOutput(input: 3, expected: "Fizz")	3 ms		
✓ GetNum_ReturnsCorrectFizzBuzzOutput(input: 45, expected: "FizzBuzz")	< 1 ms		
✓ GetNum_ReturnsCorrectFizzBuzzOutput(input: 5, expected: "Buzz")	< 1 ms		
✓ GetNum_ReturnsCorrectFizzBuzzOutput(input: 98, expected: "98")	< 1 ms		

Walkthrough of FizzBuzzTDD - Abdul Hamid

7. Final refactor for layout:

```
using FizzBuzzTDD;

var fizzBuzz = new FizzBuzz();

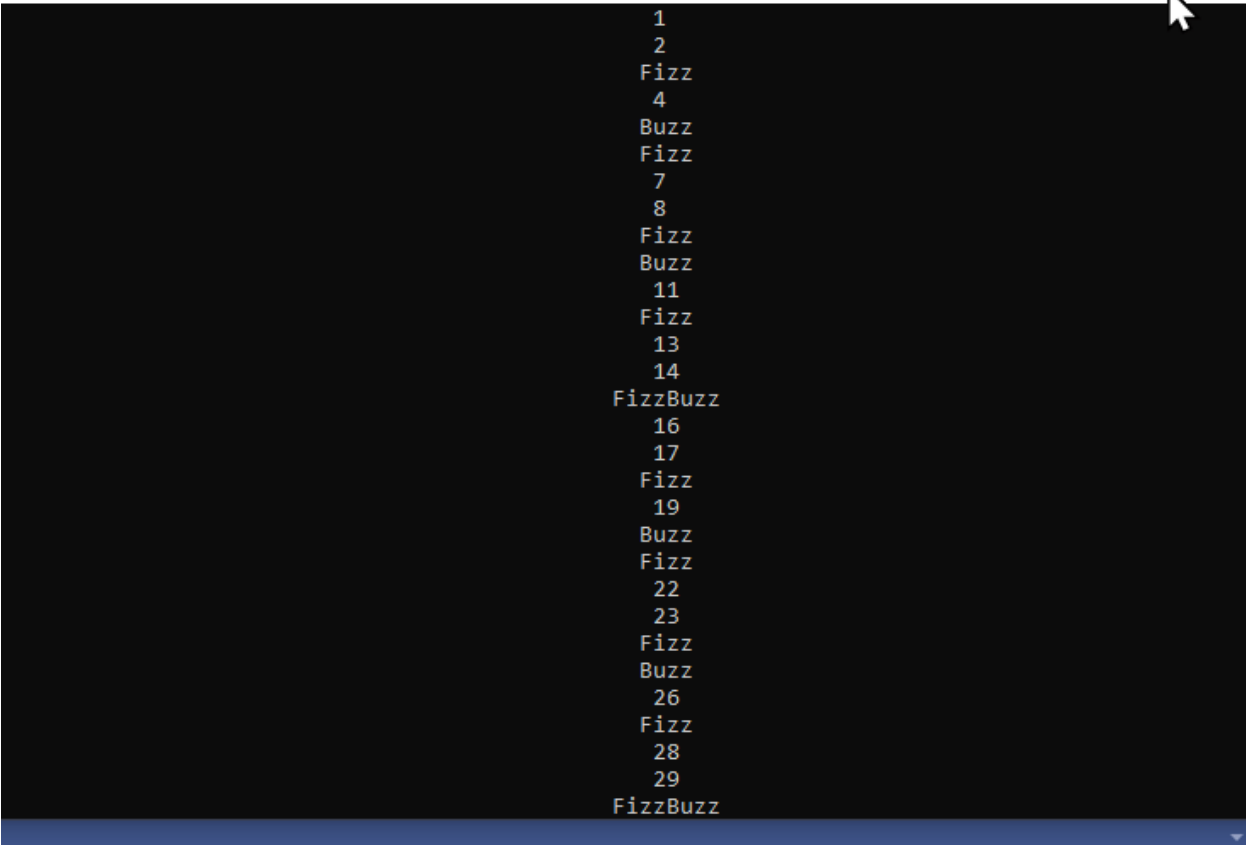
for (int i = 1; i <= 100; i++)
{
    string output = fizzBuzz.GetNum(i);
    CenterText(output);
}

Console.ReadLine();

1 reference
static void CenterText(string text)
{
    int textWidth = text.Length;
    int leftPadding = (Console.WindowWidth - textWidth) / 2;

    if (leftPadding > 0)
    {
        Console.WriteLine(new string(' ', leftPadding) + text);
    }
}
```

boc\OneDrive\Desktop\Abdul_Hamid_FizzBuzzTDD_for_rpharms\FizzBuzzTDD\bin\Debug\net9.0\FizzBuzzTDD.exe



```
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
Fizz
22
23
Fizz
Buzz
26
Fizz
28
29
FizzBuzz
```