

FIBONACCI GENERATOR TESTS

Ultimate C# Masterclass Assignment

Overview

The purpose of this assignment is to add unit tests to the Fibonacci class.

Unit tests

The source of the class to be tested is attached to the video with assignment requirements, and is present in the Git repository.

```
public static IEnumerable<int> Generate(int n)
{
    if (n < 0)
    {
        throw new ArgumentException(
            $"{nameof(n)} cannot be smaller than 0.");
    }

    const int MaxValidNumber = 46;
    if (n > MaxValidNumber)
    {
        throw new ArgumentException(
            $"{nameof(n)} cannot be larger than {MaxValidNumber}, " +
            $"as it will cause numeric overflow.");
    }

    var result = new List<int>();

    int a = -1;
    int b = 1;
    for (int i = 0; i < n; i++)
    {
        int sum = a + b;
        result.Add(sum);
        a = b;
        b = sum;
    }

    return result;
}
```

Remember to:

- 1) Place unit tests in a dedicated project (must have NUnit, NUnit3TestAdapter and Microsoft.NET.Test.Sdk packages installed).
- 2) Cover all edge cases, like scenarios when the input number is smaller than 0 or larger than 46, when it is 1 or 2 or anything between 2 and 46.
- 3) Name your tests in a clean, readable way.