

# Software Engineering Assessment

GitHub Analyser App	
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Version	1.0
Release Notes	Initial release
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## Scenario

Your line manager proposed the development of a new web page, where team developers can inform their GitHub id (login) and receive advices about how they can improve their own profiles.

## Prerequisites

- Microsoft Visual Studio

## Notes

For clarification or setup questions, please feel free to contact me. If there are specific shortcomings related to business logic or optimisation, I am willing to discuss and provide an update.

## Instructions

1. Extract SoftwareEngineeringAssessment folder to C:\

2. Run GithubAnalyser.Solution

C:\SoftwareEngineeringAssessment\SoftwareEngineeringAssessment\  
GithubAnalyseer.Solution.sln

3. Log is available at:

C:\SoftwareEngineeringAssessment\SoftwareEngineeringAssessment\GithubAnalyser.App\bin\Debug\net6.0\log.txt

4. Additional inline comments are available throughout GithubAnalyser.Solution

## App Overview

Enter GitHub username in input field. Press Analyse:

GitHub Analyser Home About

### GitHub Analyser

Enter GitHub username to analyse

 Analyse

View result. Press Search again to perform new search:

GitHub Analyser Home About

### Github Analyser

 Search for **test123** was succesful


 Company is set to **Amazon**

 Location is set to **Madrid, Spain**

 Bio is set to **Software Development Manager**

 Consider adding **1 public repos** to profile

 Consider adding **5 followings** to profile

 Search again

# Unit Tests

Test Parameter	Expected Result	Actual Result	Remarks
kevincatania14	kevincatania14,null,null,null,0,0,null	kevincatania14,null,null,null,0,0,null	<b>MATCH (PASS)</b>
asdgasdgasdgsadgadsgadsgad	null,null,null,null, null, null, asdgasdgasdgsadgadsgadsgad	null,null,null,null, null, null, asdgasdgasdgsadgadsgadsgad	<b>MATCH (PASS)</b>

Run GithubAnalyser.UnitTesting

C:\SoftwareEngineeringAssessment\SoftwareEngineeringAssessment\GithubAnalyser.UnitTesting

1. Test method for correct intended input e.g. kevincatania14

The screenshot displays a Visual Studio IDE with a C# unit test method and its execution results. The code is as follows:

```

8      /// <summary>
9      /// Test method for correct intended input
10     /// </summary>
11     [TestMethod]
12     public void TestMethod1()
13     {
14         GithubProfileCustomModel expected = new GithubProfileCustomModel()
15         {
16             login = "kevincatania14",
17             bio = null,
18             company = null,
19             location = null,
20             following = "0",
21             public_repos = "0",
22             message = null
23         };
24
25         GithubAnalyser.BusinessLogic.GithubAnalyser testMethod = new GithubAnalyser.BusinessLogic.GithubAnalyser();
26         GithubProfileCustomModel actual = testMethod.Analyse("kevincatania14");
27         Assert.AreEqual(actual.login, expected.login);
28         Assert.AreEqual(actual.bio, expected.bio);
29         Assert.AreEqual(actual.company, expected.company);
30         Assert.AreEqual(actual.location, expected.location);
31         Assert.AreEqual(actual.following, expected.following);
32         Assert.AreEqual(actual.public_repos, expected.public_repos);
33         Assert.AreEqual(actual.message, expected.message);
34     }
35

```

The Test Explorer at the bottom shows the test results:

Test	Duration	Traits	Error Message
✓ GithubAnalyser.UnitTesting (2)	787 ms		
✓ GithubAnalyser.UnitTesting (2)	787 ms		
✓ UnitTest1 (2)	787 ms		
✓ TestMethod1	504 ms		
✓ TestMethod2	283 ms		

The Test Detail Summary for TestMethod1 shows:

- ✓ TestMethod1
- Source: [UnitTest1.cs](#) line 12
- Duration: 504 ms



## 2. Test method for incorrect random input e.g. asdgasdgsadgsadgsadgsad:

```
36  /// <summary>
37  /// Test method for incorrect random input
38  /// </summary>
39  [TestMethod]
40  public void TestMethod2()
41  {
42      string randomInput = "asdgasdgsadgsadgsadgsad";
43
44      GithubProfileCustomModel expected = new GithubProfileCustomModel()
45      {
46          login = null,
47          bio = null,
48          company = null,
49          location = null,
50          following = null,
51          public_repos = null,
52          message = randomInput
53      };
54
55      GithubAnalyser.BusinessLogic.GithubAnalyser testMethod = new GithubAnalyser.BusinessLogic.GithubAnalyser();
56      GithubProfileCustomModel actual = testMethod.Analyse(randomInput);
57      Assert.AreEqual(actual.login, expected.login);
58      Assert.AreEqual(actual.bio, expected.bio);
59      Assert.AreEqual(actual.company, expected.company);
60      Assert.AreEqual(actual.location, expected.location);
61      Assert.AreEqual(actual.following, expected.following);
62      Assert.AreEqual(actual.public_repos, expected.public_repos);
63      Assert.AreEqual(actual.message, expected.message);
64  }
```

97% 0 10 100

Ln: 64 Ch: 10 SPC CF

Test Explorer

Test run finished: 2 Tests (2 Passed, 0 Failed, 0 Skipped) run in 856 ms

Test	Duration	Traits	Error Message
✓ GithubAnalyser.UnitTesting (2)	787 ms		
✓ GithubAnalyser.UnitTesting (2)	787 ms		
✓ UnitTest1 (2)	787 ms		
✓ TestMethod1	504 ms		
✓ TestMethod2	283 ms		

Test Detail Summary

- ✓ TestMethod1
  - Source: [UnitTest1.cs](#) line 12
  - Duration: 504 ms

## Improvement Suggestions

1. Usage of Angular/React/Vue in place of HTML/CSS/JS/Razor
2. Injecting NLog in place of static class
3. Usage of AutoMapper in place of Model/ViewModel