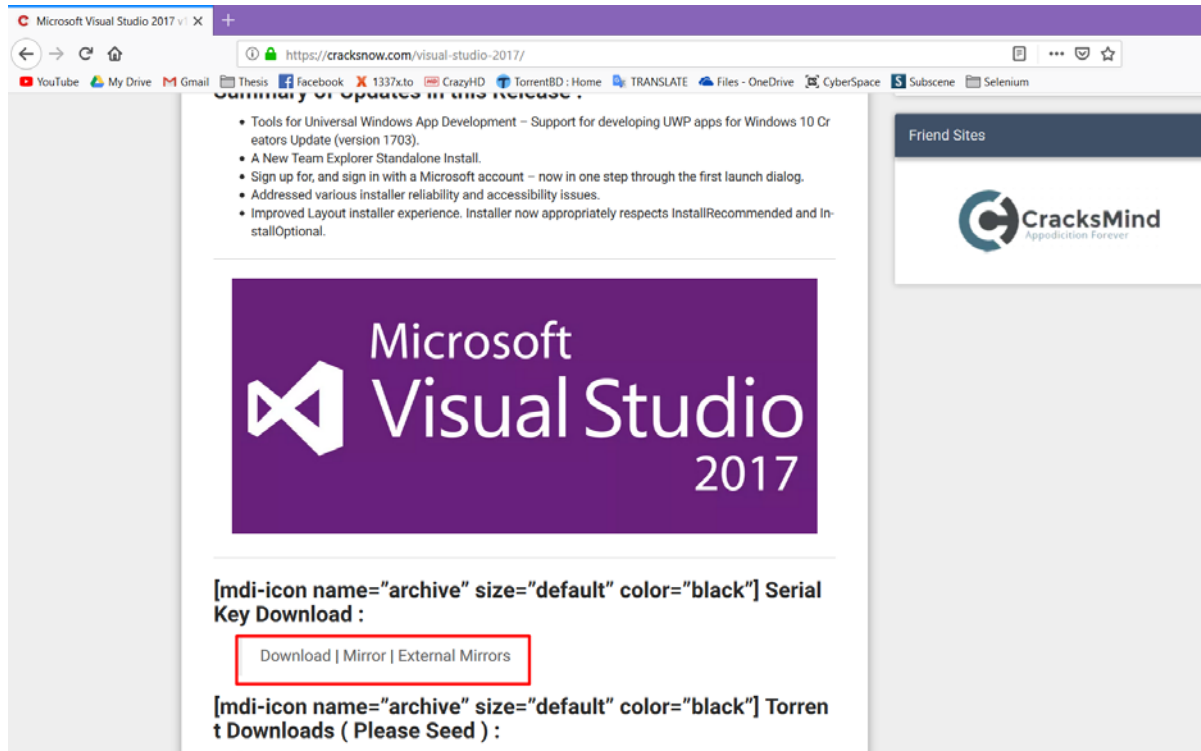


Step_01:

First, Download the Microsoft Visual Studio.

Link: <https://cracksnow.com/visual-studio-2017>

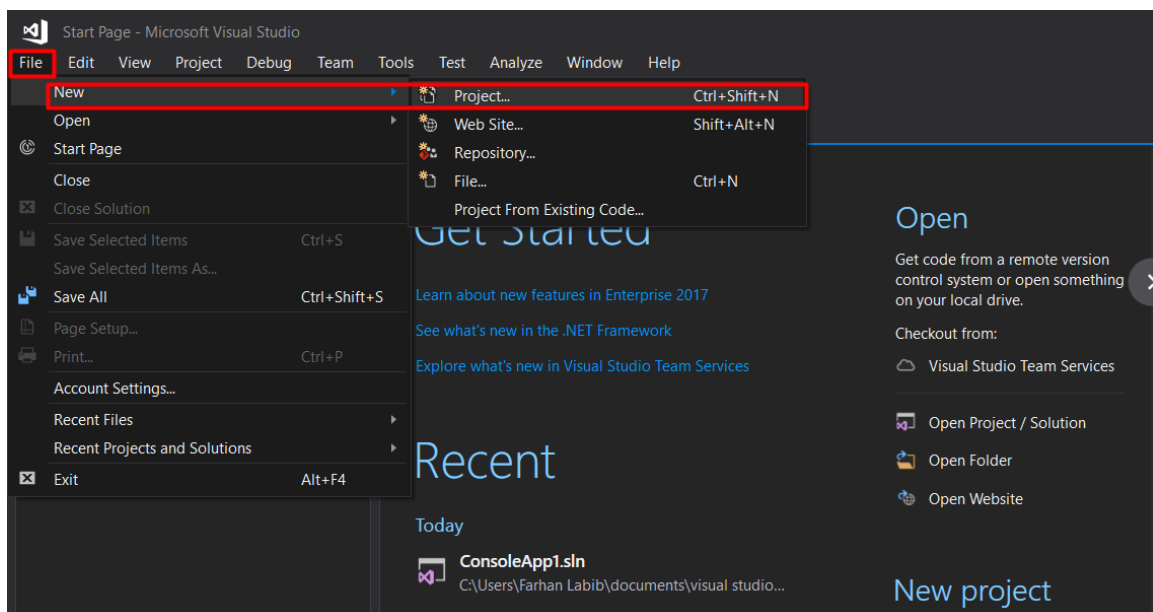
Then download and install it.

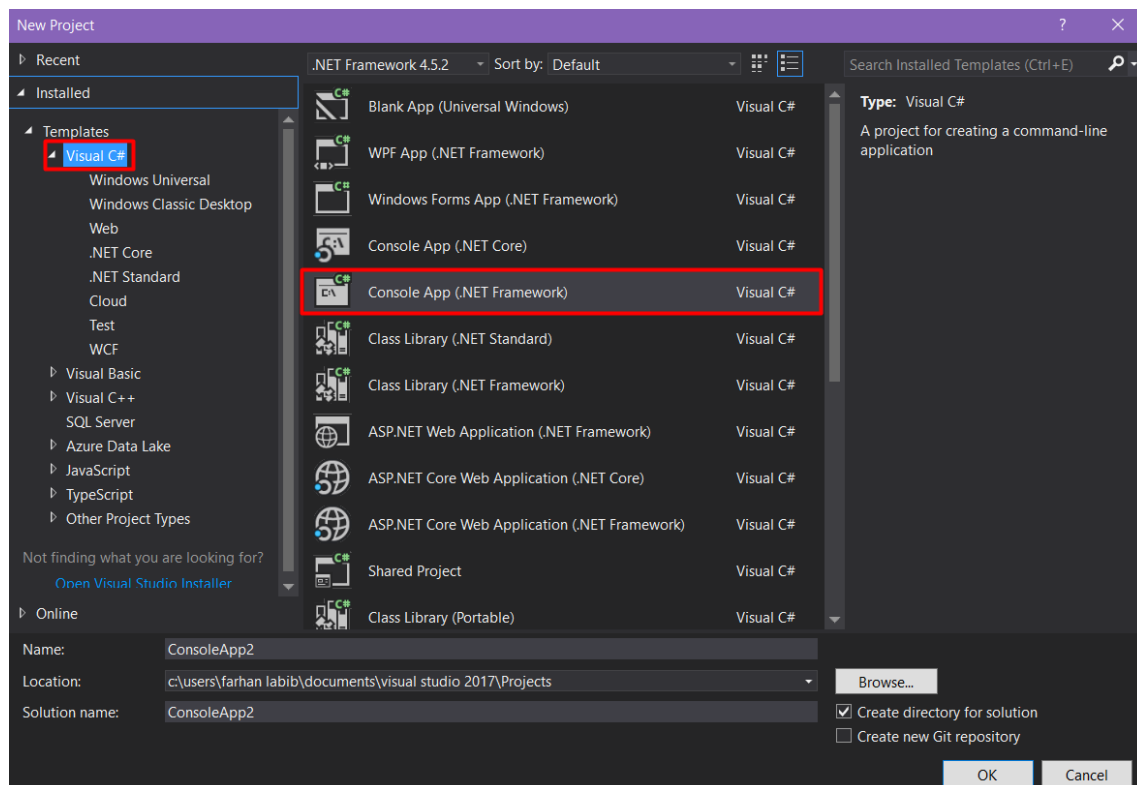


Step_02:

Open Visual Studio.

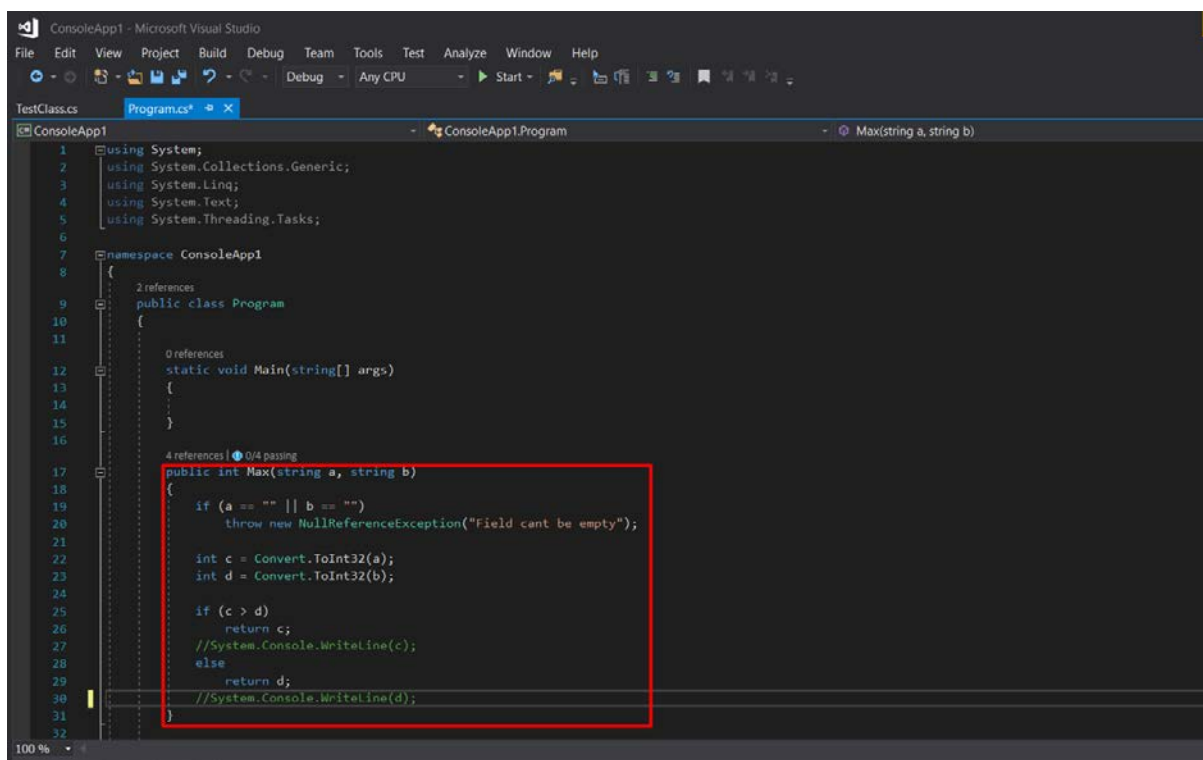
Then open your project or simply open **File>New Project>Visual C#>Console App (.NET Framework)**





Step_03:

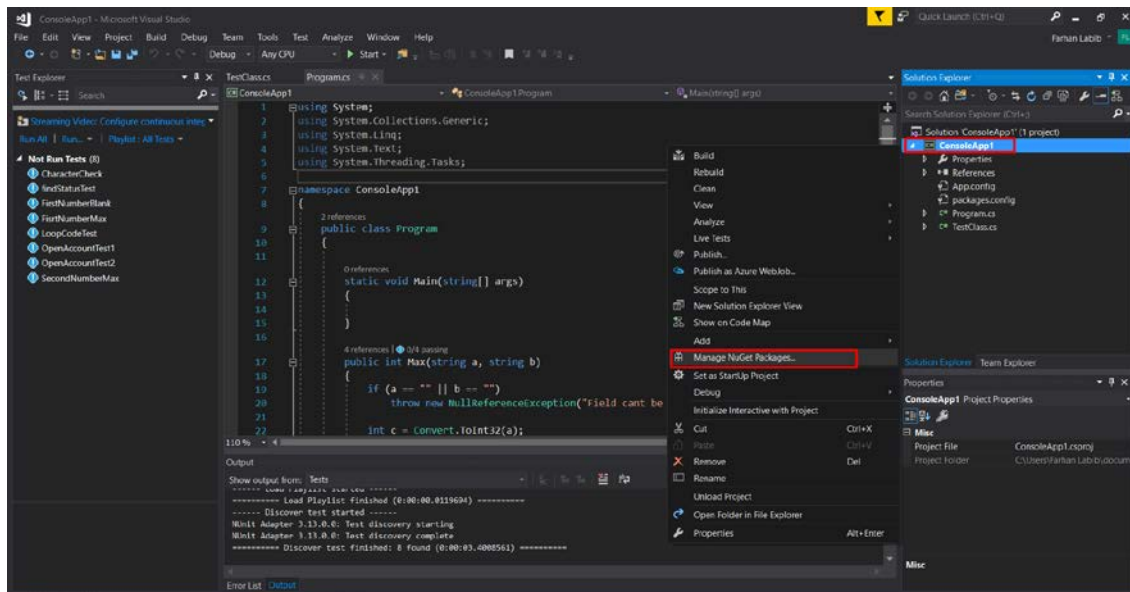
After open your project (or Simply write the given picture code)



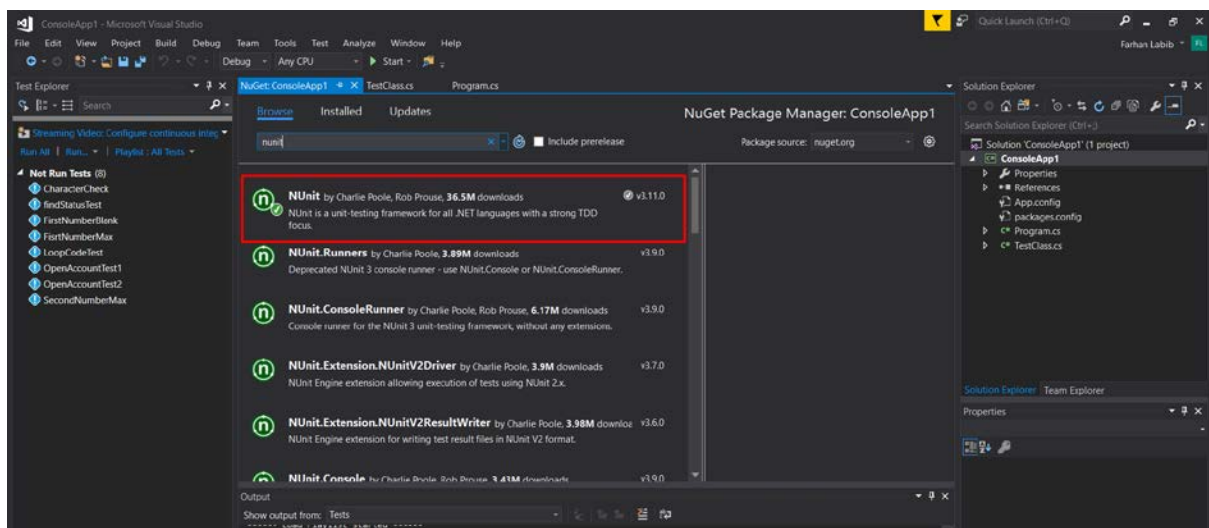
Its mainly a Maximum Function which is for calculate the Maximum number between two input number.

Step_04:

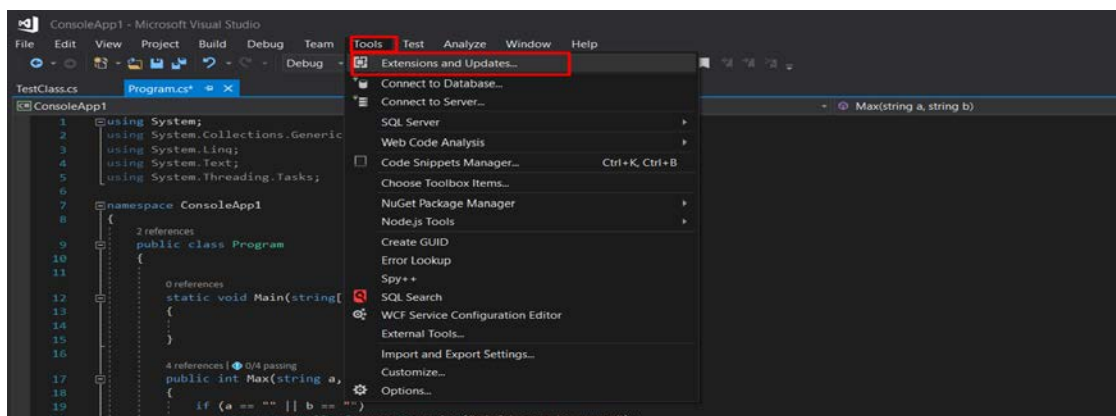
Now we have to set the NUnit Module. Right click on your project and Select Manage NuGet Packages.



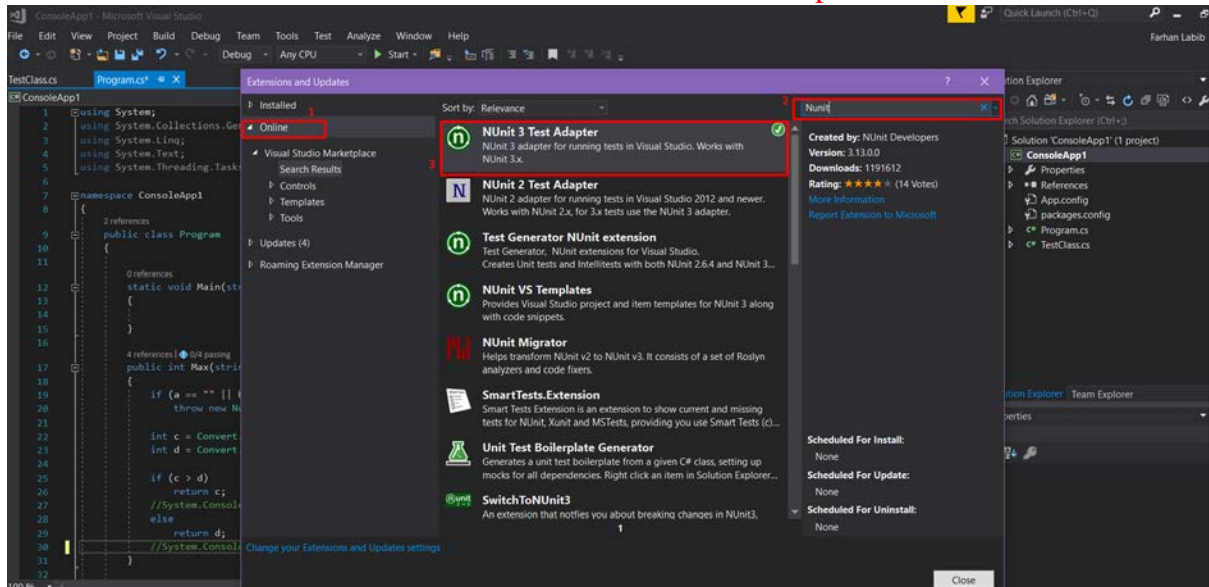
Then Search NUnit and Install it.



After that click on Tools>Extensions and Update

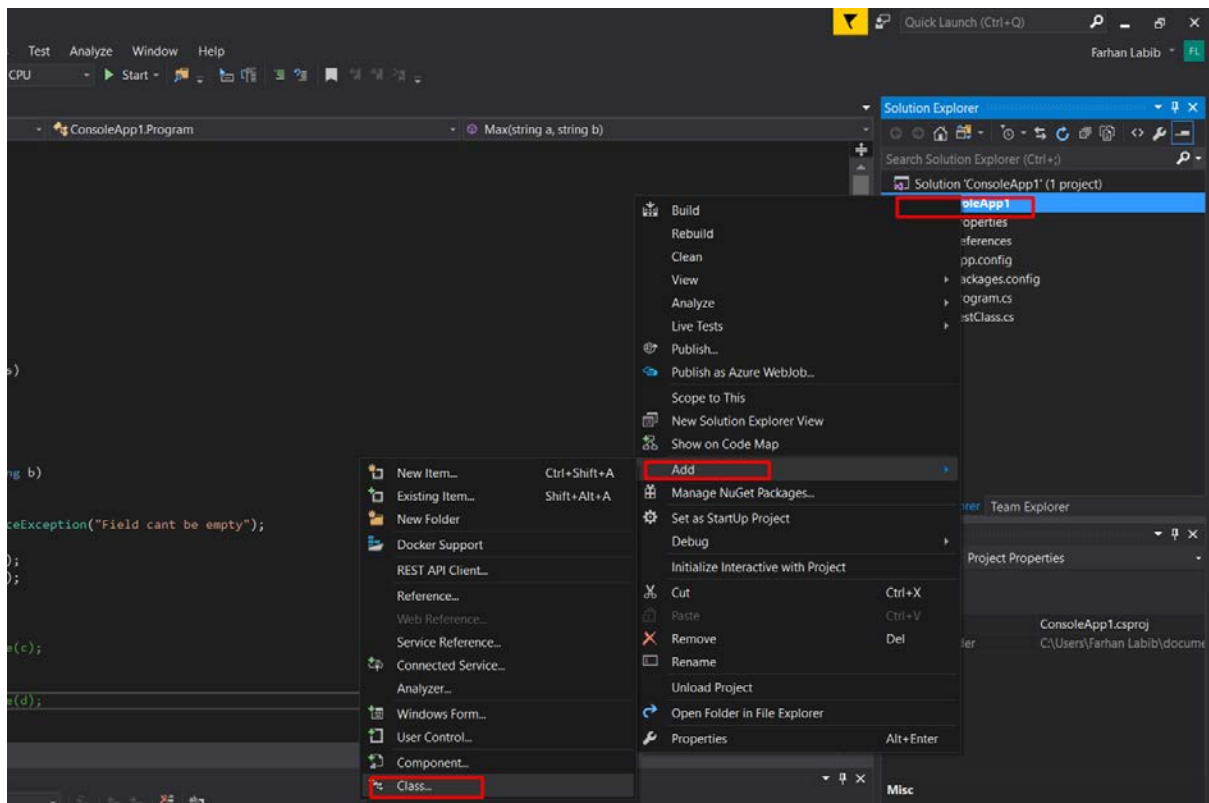


Then click **Online** and **Search Nunit** and Install **Nunit Test Adapter**

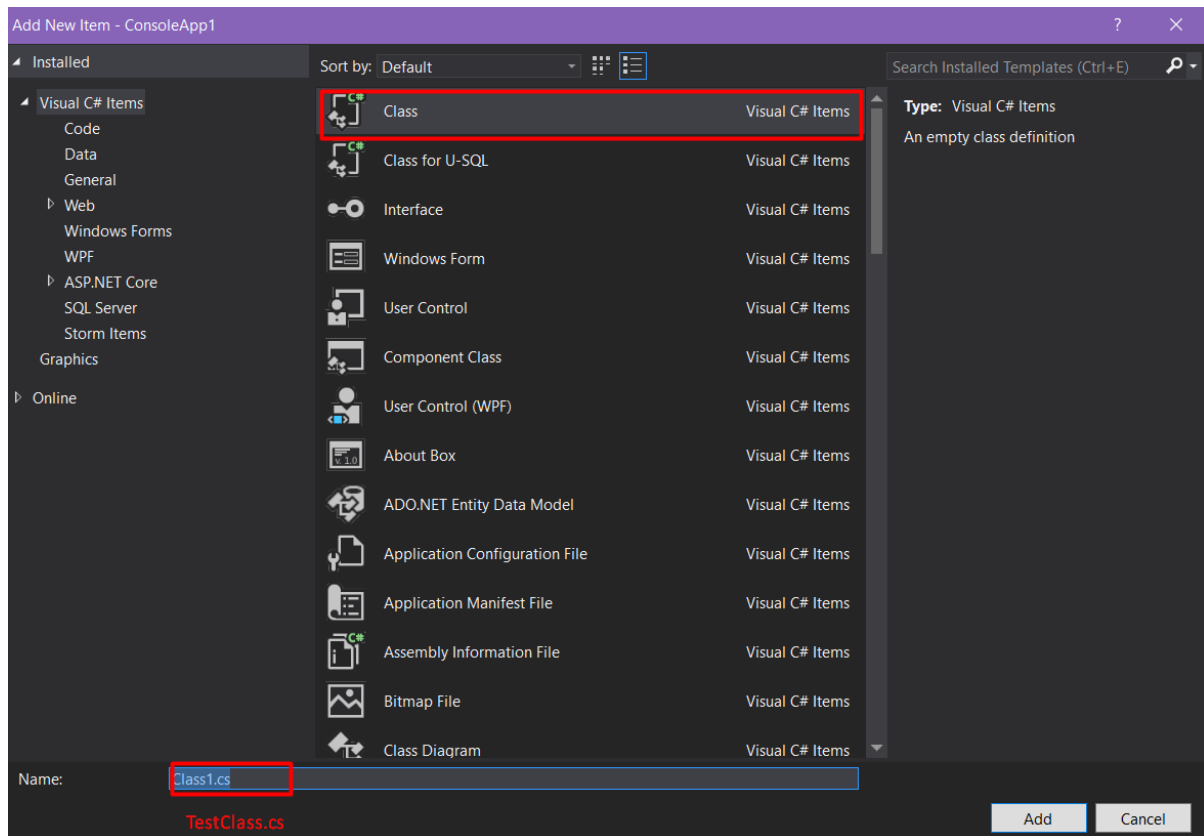


Step_05:

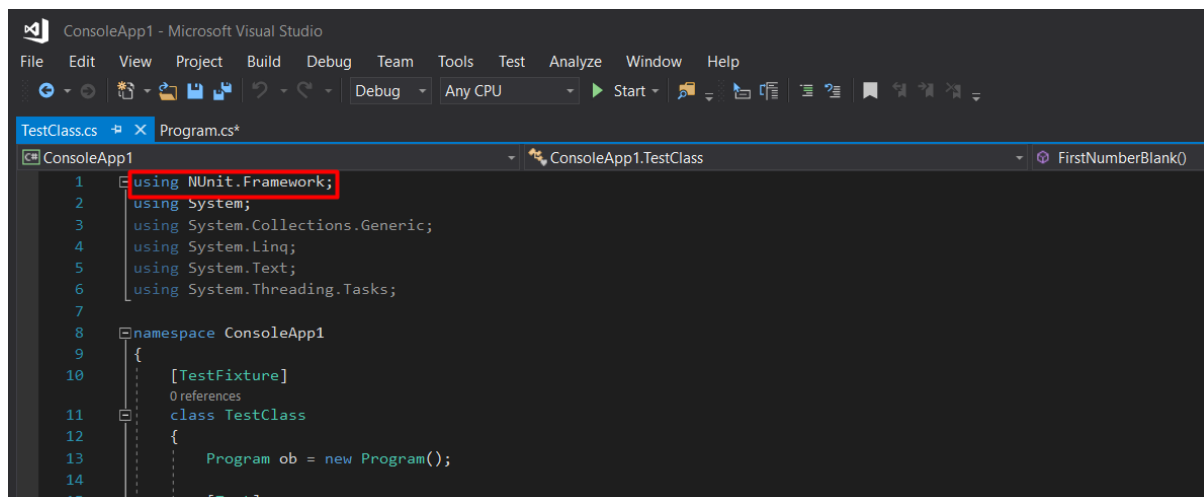
Now right click on your **project** and click on **Add>Class**



Create a **class** and name it to **TestClass.cs**

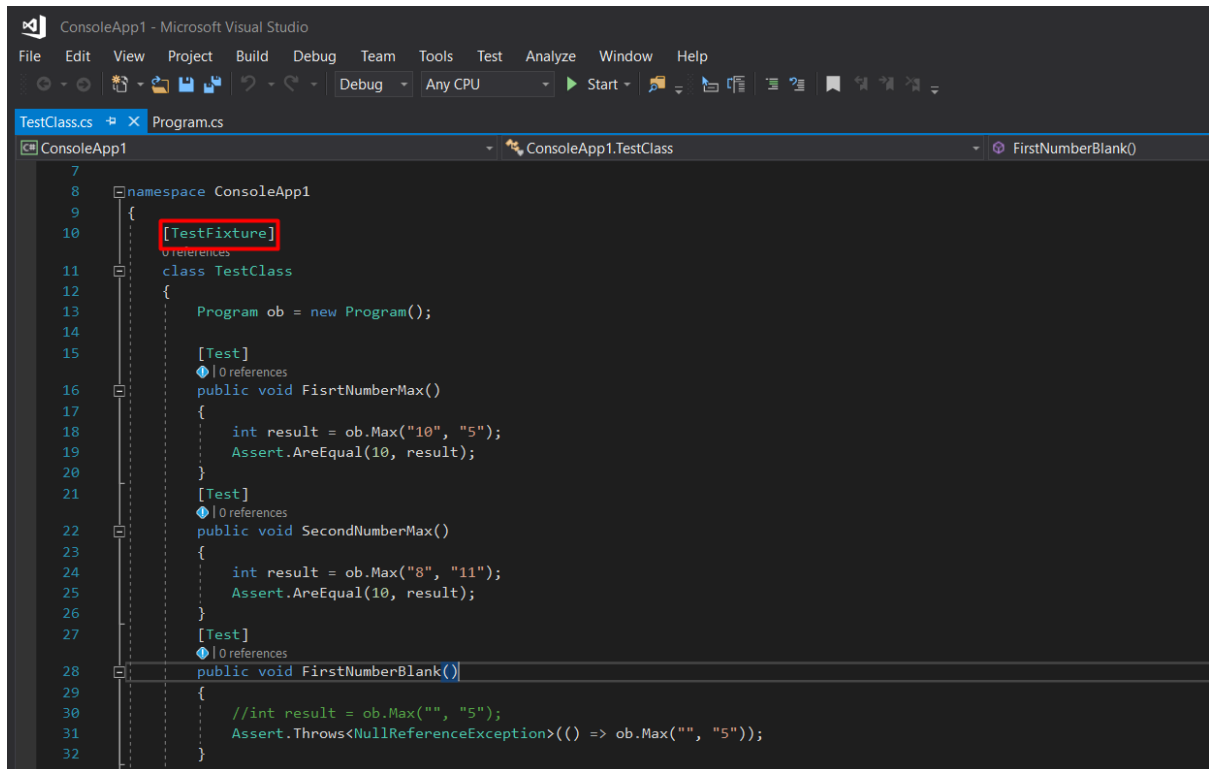


Then add a library> **using NUnit.Framework;**



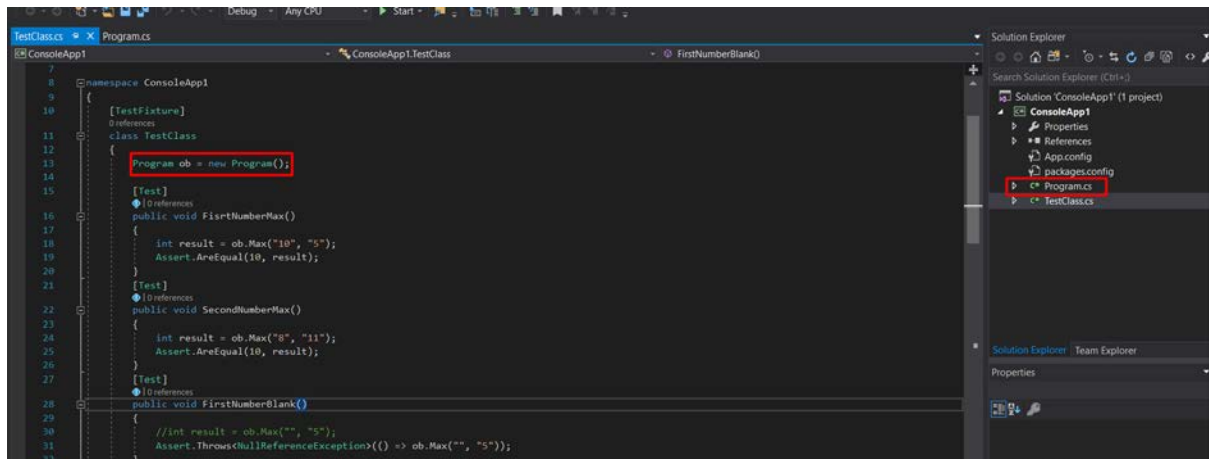
Step_06:

Now we have to write code for test purpose. First, we need to write **[TestFixture]** as in the below picture.



```
7
8 namespace ConsoleApp1
9 {
10     [TestFixture]
11     class TestClass
12     {
13         Program ob = new Program();
14
15         [Test]
16         public void FirsrNumberMax()
17         {
18             int result = ob.Max("10", "5");
19             Assert.AreEqual(10, result);
20         }
21         [Test]
22         public void SecondNumberMax()
23         {
24             int result = ob.Max("8", "11");
25             Assert.AreEqual(10, result);
26         }
27         [Test]
28         public void FirstNumberBlank()
29         {
30             //int result = ob.Max("", "5");
31             Assert.Throws<NullReferenceException>(() => ob.Max("", "5"));
32         }
33     }
```

The we have to create an **object** of our program.



```
7
8 namespace ConsoleApp1
9 {
10     [TestFixture]
11     class TestClass
12     {
13         Program ob = new Program();
14
15         [Test]
16         public void FirsrNumberMax()
17         {
18             int result = ob.Max("10", "5");
19             Assert.AreEqual(10, result);
20         }
21         [Test]
22         public void SecondNumberMax()
23         {
24             int result = ob.Max("8", "11");
25             Assert.AreEqual(10, result);
26         }
27         [Test]
28         public void FirstNumberBlank()
29         {
30             //int result = ob.Max("", "5");
31             Assert.Throws<NullReferenceException>(() => ob.Max("", "5"));
32         }
33     }
```

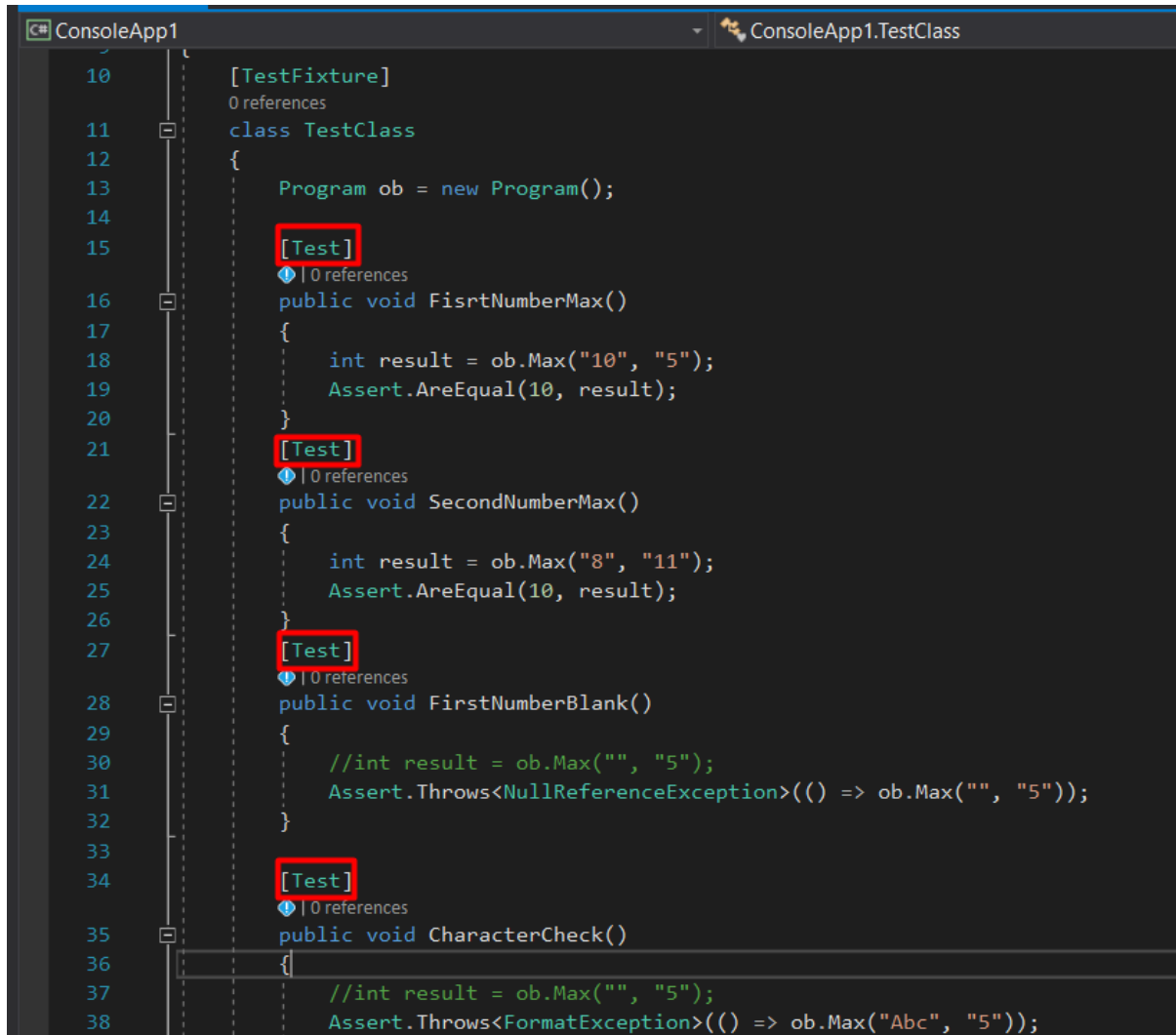
Solution Explorer (Ctrl+0)

- Solution 'ConsoleApp1' (1 project)
 - ConsoleApp1
 - Properties
 - References
 - App.config
 - packages.config
 - Program.cs
 - TestClass.cs

Solution Explorer Team Explorer

Properties

Before writing a test case, we need to write [Test].



```
10 [TestFixture]
11 class TestClass
12 {
13     Program ob = new Program();
14
15     [Test]
16     public void FirstNumberMax()
17     {
18         int result = ob.Max("10", "5");
19         Assert.AreEqual(10, result);
20     }
21
22     [Test]
23     public void SecondNumberMax()
24     {
25         int result = ob.Max("8", "11");
26         Assert.AreEqual(10, result);
27     }
28
29     [Test]
30     public void FirstNumberBlank()
31     {
32         //int result = ob.Max("", "5");
33         Assert.Throws<NullReferenceException>(() => ob.Max("", "5"));
34     }
35
36     [Test]
37     public void CharacterCheck()
38     {
39         //int result = ob.Max("", "5");
40         Assert.Throws<FormatException>(() => ob.Max("Abc", "5"));
41     }
42 }
```

There will be four test cases for this max function.

- Test Case 1: First Number Max
- Test Case 2: Second Number Max
- Test Case 3: Null Input
- Test Case 4: Non-Number Input

For Test Case 3 & 4, we need to use exception as its unusual case.

For writing Test Case we need some test function. Follow the given link for details view.

- Assertions: <http://nunit.org/docs/2.2.6/assertions.html>
- Exception: <https://airbrake.io/blog/dotnet-exception-handling/exception-class-hierarchy>

Full Test Case for our Max Function:

```
[Test]
public void FirrtNumberMax()
{
    int result = ob.Max("10", "5");
    Assert.AreEqual(10, result);
}

[Test]
public void SecondNumberMax()
{
    int result = ob.Max("8", "11");
    Assert.AreEqual(10, result);
}

[Test]
public void FirstNumberBlank()
{
    Assert.Throws<NullReferenceException>(() => ob.Max("", "5"));
}

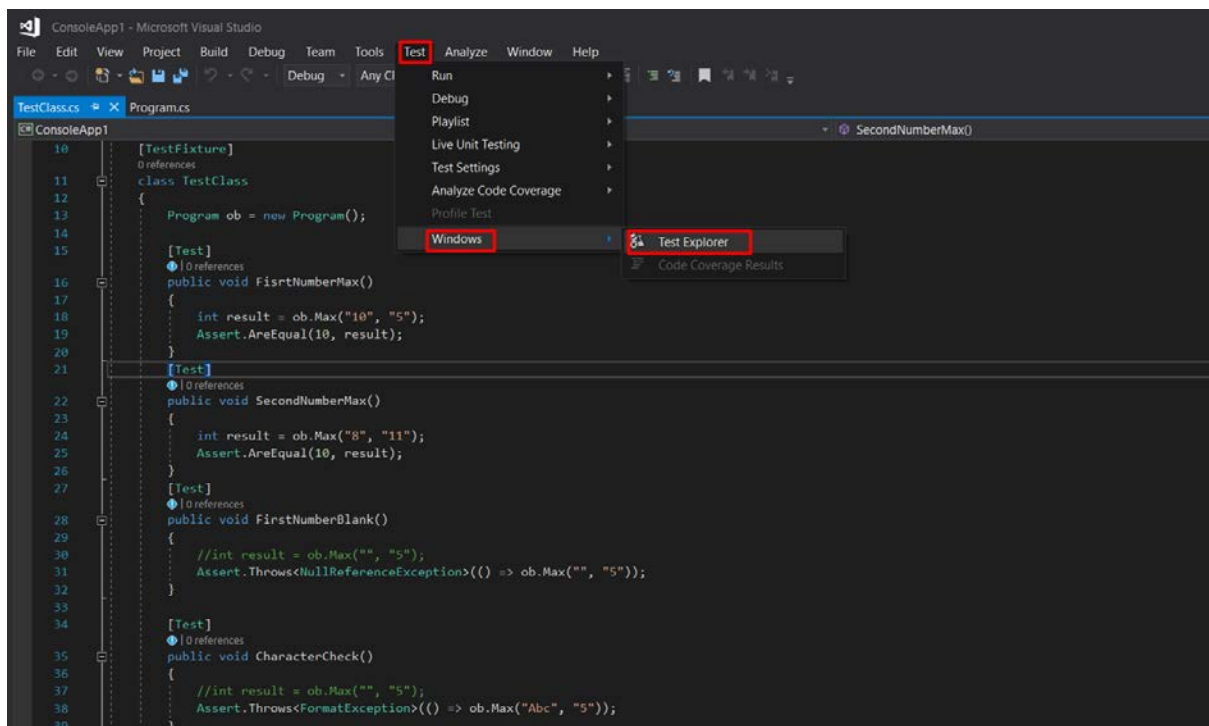
[Test]
public void CharacterCheck()
{
    Assert.Throws<FormatException>(() => ob.Max("Abc", "5"));
}
```

Step_07:

Now we have to build our project.

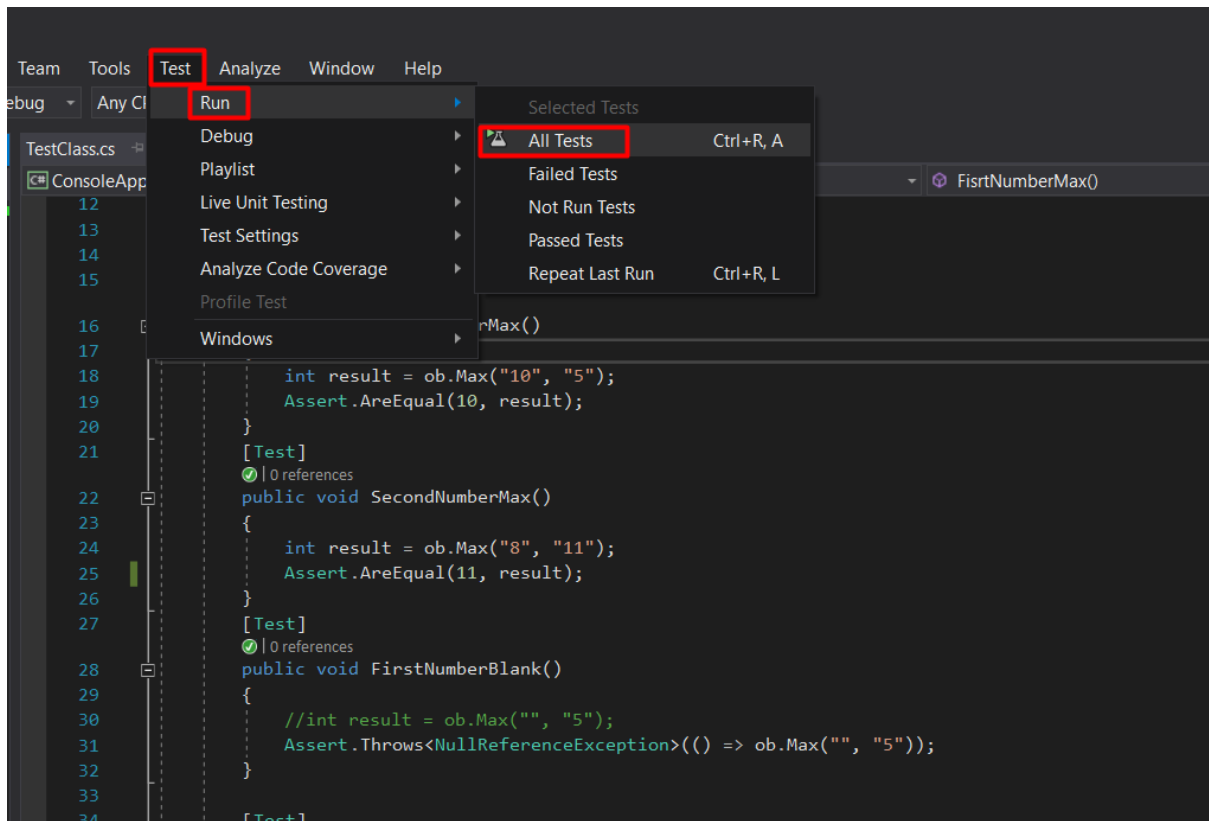
Then we need to open our **Test Explorer**.

Test>Windows>Test Explorer



Now Hit the Run All Tests.

Test>Run>All Tests



Now you can see how many test cases are passed or not.

