Source Code for Use NUnit and Moq to Test an OOP Based System for Storing School

Class Library(.Net Framework):

Class.cs:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PracticeProject_Section2
{
   public class Class
   {
      public int Id { get; set; }

      public string Name { get; set; }
   }
}
```

Student.cs:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PracticeProject_Section2
{
   public class Student
   {
      public int Id { get; set; }

      public string Name { get; set; }

      public string Address { get; set; }

      public string Email { get; set; }

      public string Class { get; set; }
   }
}
```

Subject.cs:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PracticeProject_Section2
{
   public class Subject
   {
      public int Id { get; set; }

      public string Name { get; set; }
```

```
    }
}
```

NUnit Test Project:

ClassTest.cs:

```
using PracticeProject_Section2;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PracticeProject1_sec
{

    [TestFixture]
    public class ClassTest
    {
        [Test]
        public void TestClassName()
        {
            // Arrange
            Class myClass = new Class();
            myClass.Name = "Math";

            // Act
            string className = myClass.Name;

            // Assert
            Assert.AreEqual("Math", className);
        }

        [Test]
        public void TestClassId()
        {
            // Arrange
            Class myClass = new Class();
            myClass.Id = 1;

            // Act
            int classId = myClass.Id;

            // Assert
            Assert.AreEqual(1, classId);
        }
    }
}
```

StudentTest.cs:

```
using PracticeProject_Section2;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PracticeProject1_sec
{
    [TestFixture]
    public class StudentTest
    {

        [Test]
            public void TestStudentName()
            {
                // Arrange
```

```
            Student student = new Student();
            student.Name = "John Doe";

            // Act
            string studentName = student.Name;

            // Assert
            Assert.AreEqual("John Doe", studentName);
        }

        [Test]
        public void TestStudentAddress()
        {
            // Arrange
            Student student = new Student();
            student.Address = "123 Main St";

            // Act
            string studentAddress = student.Address;

            // Assert
            Assert.AreEqual("123 Main St", studentAddress);
        }
    }
}
```

SubjectTest.cs:

```
using PracticeProject_Section2;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PracticeProject1_sec
{


    [TestFixture]
    public class SubjectTest
    {
        [Test]
        public void TestSubjectName()
        {
            // Arrange
            Subject subject = new Subject();
            subject.Name = "Science";

            // Act
            string subjectName = subject.Name;

            // Assert
            Assert.AreEqual("Science", subjectName);
        }

        [Test]
        public void TestSubjectId()
        {
            // Arrange
            Subject subject = new Subject();
            subject.Id = 2;

            // Act
            int subjectId = subject.Id;

            // Assert
            Assert.AreEqual(2, subjectId);
        }
    }
```

}