**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);

}

}

}