**Practice Project-1**

**Use NUnit and Moq to Test an OOP Based System for Storing School Data**

**Source Code:**

**Student.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PracticePro1

{

public class Student

{

public int SId { get; set; }

public string SName { get; set; }

public string Address { get; set; }

}

}

**Subject.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PracticePro1

{

public class Subject

{

public int SubId { get; set; }

public string SubName { get; set; }

}

}

**Teacher.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PracticePro1

{

public class Teacher

{

public int TeacherId { get; set; }

public string Name { get; set; }

}

}

**NUnit Test Cases**

**UnitTest1.cs**

namespace PracPro1Test

{

public class Tests

{

[SetUp]

public void Setup()

{

}

[Test]

public void Test1()

{

Assert.Pass();

}

}

}

**StudTest.cs**

using PracticePro1;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PracPro1Test

{

[TestFixture]

public class StudTest

{

[Test]

public void TestStudentName()

{

// Arrange

Student student = new Student();

student.SName = "Varshithaa";

// Act

string studentName = student.SName;

// Assert

Assert.AreEqual("Varshithaa", studentName);

}

[Test]

public void TestStudentAddress()

{

// Arrange

Student student = new Student();

student.Address = "10 Nehru Street";

// Act

string studentAddress = student.Address;

// Assert

Assert.AreEqual("10 Nehru Street", studentAddress);

}

}

}

**SubTest.cs**

using PracticePro1;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PracPro1Test

{

[TestFixture]

public class SubTest

{

[Test]

public void TestSubjectName()

{

// Arrange

Subject subject = new Subject();

subject.SubName = "English";

// Act

string subjectName = subject.SubName;

// Assert

Assert.AreEqual("English", subjectName);

}

[Test]

public void TestSubjectId()

{

// Arrange

Subject subject = new Subject();

subject.SubId = 2;

// Act

int subjectId = subject.SubId;

// Assert

Assert.AreEqual(2, subjectId);

}

}

}

**TeachTest.cs**

using PracticePro1;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PracPro1Test

{

[TestFixture]

public class TeachTest

{

[Test]

public void Test\_CreateTeacher()

{

// Arrange

var teacher = new Teacher();

teacher.TeacherId = 104;

teacher.Name = "Mrs. Lakshmi";

// Act & Assert

Assert.AreEqual(104, teacher.TeacherId);

Assert.AreEqual("Mrs. Lakshmi", teacher.Name);

}

}

}