Jurnal 12

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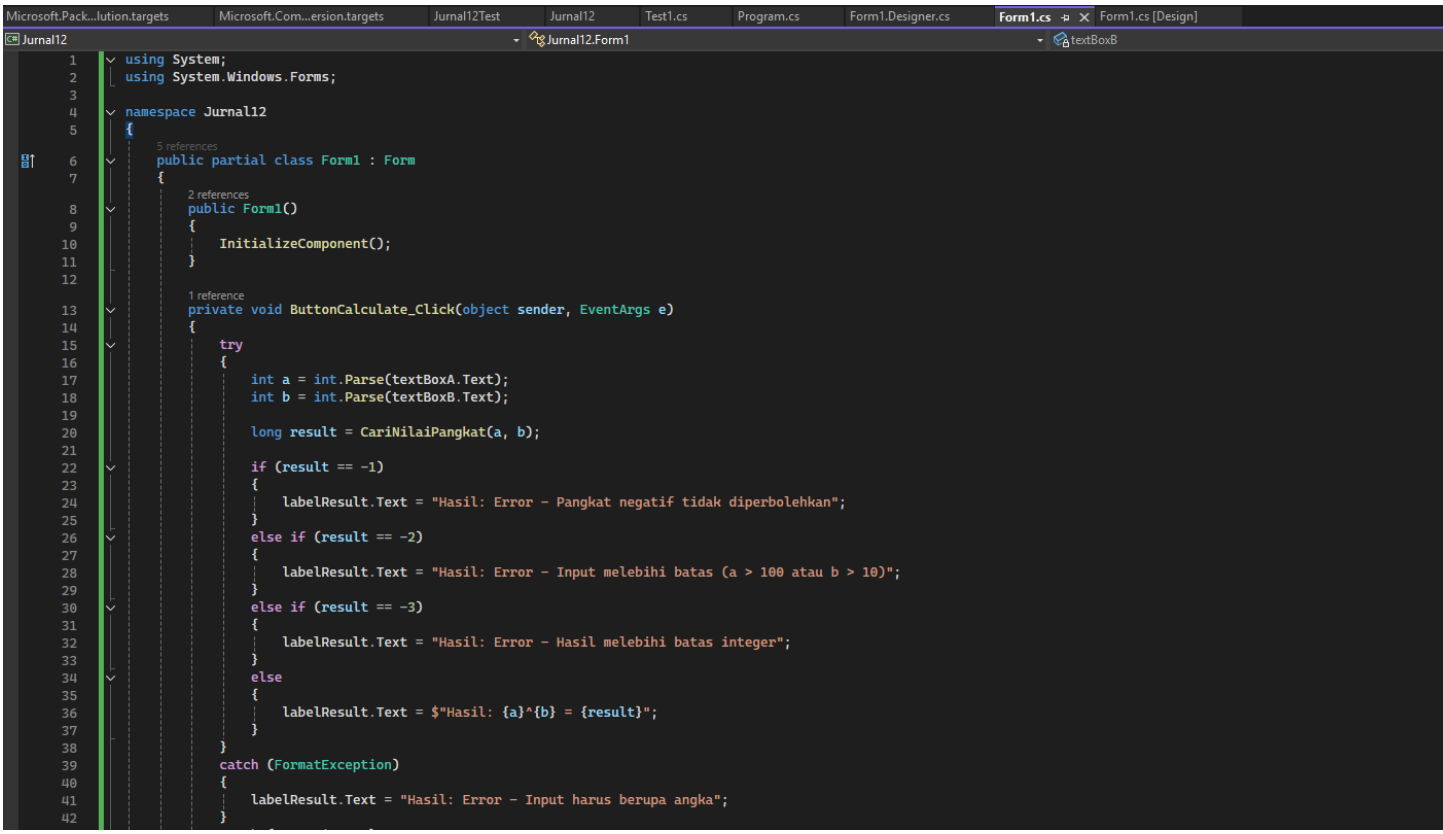
Link Repo:

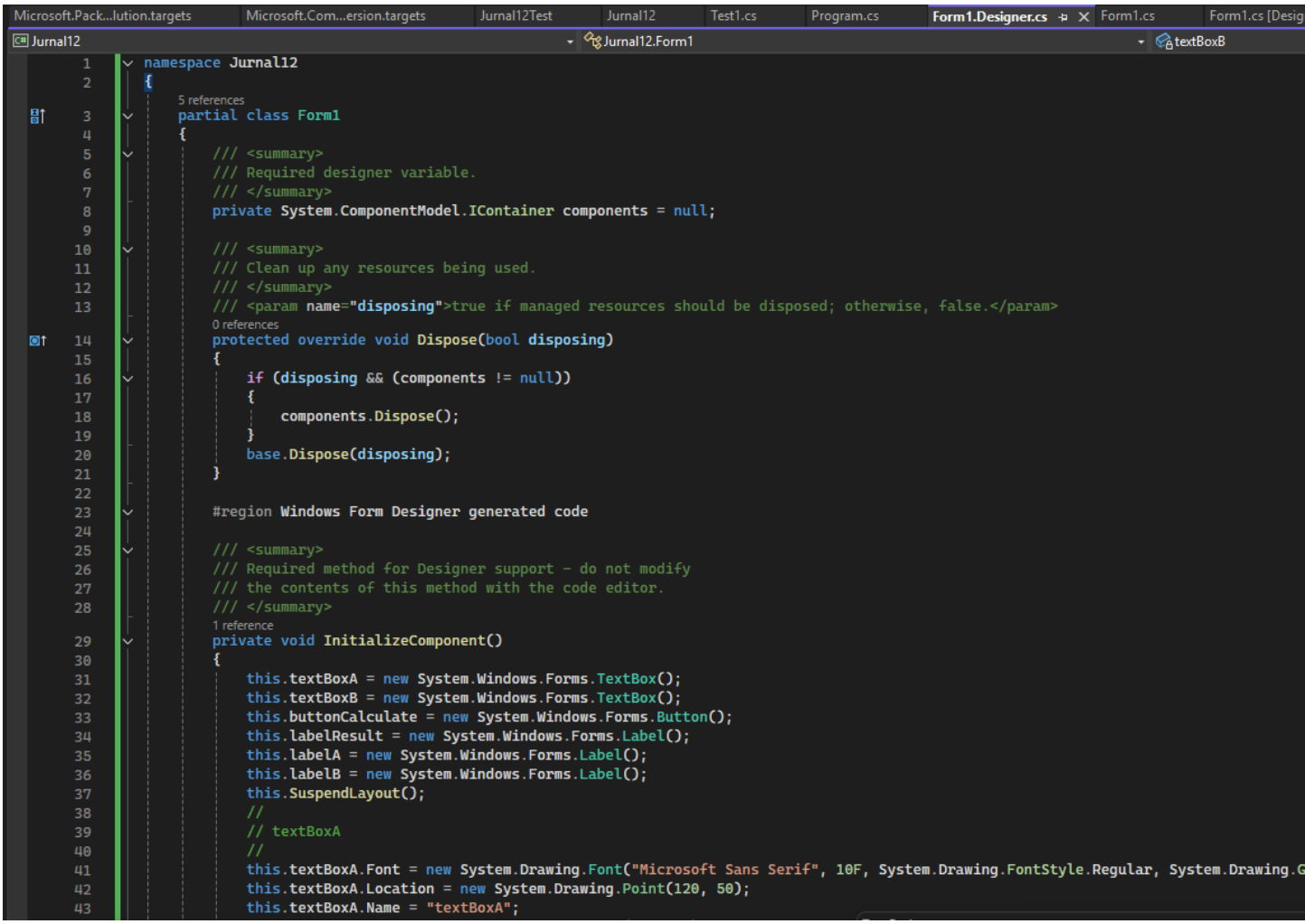
https://github.com/fahmihasanasagaf/KPL_2311104074_SE0702/tree/main/12_Performance_Analysis_Unit_Testing_dan_Debugging

Code form 1.cs

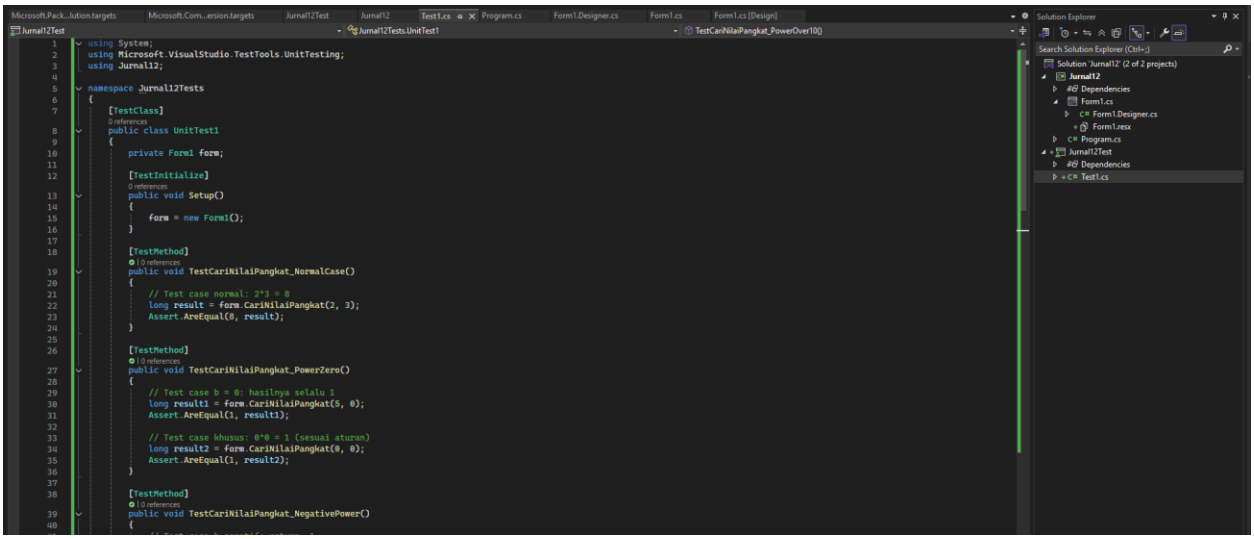


```
using System;
using System.Windows.Forms;

namespace Jurnal12
{
    5 references
    public partial class Form1 : Form
    {
        2 references
        public Form1()
        {
            InitializeComponent();
        }

        1 reference
        private void ButtonCalculate_Click(object sender, EventArgs e)
        {
            try
            {
                int a = int.Parse(textBoxA.Text);
                int b = int.Parse(textBoxB.Text);

                long result = CariNilaiPangkat(a, b);

                if (result == -1)
                {
                    labelResult.Text = "Hasil: Error - Pangkat negatif tidak diperbolehkan";
                }
                else if (result == -2)
                {
                    labelResult.Text = "Hasil: Error - Input melebihi batas (a > 100 atau b > 10)";
                }
                else if (result == -3)
                {
                    labelResult.Text = "Hasil: Error - Hasil melebihi batas integer";
                }
                else
                {
                    labelResult.Text = $"Hasil: {a}^{b} = {result}";
                }
            }
            catch (FormatException)
            {
                labelResult.Text = "Hasil: Error - Input harus berupa angka";
            }
```

Code Designer1.cs

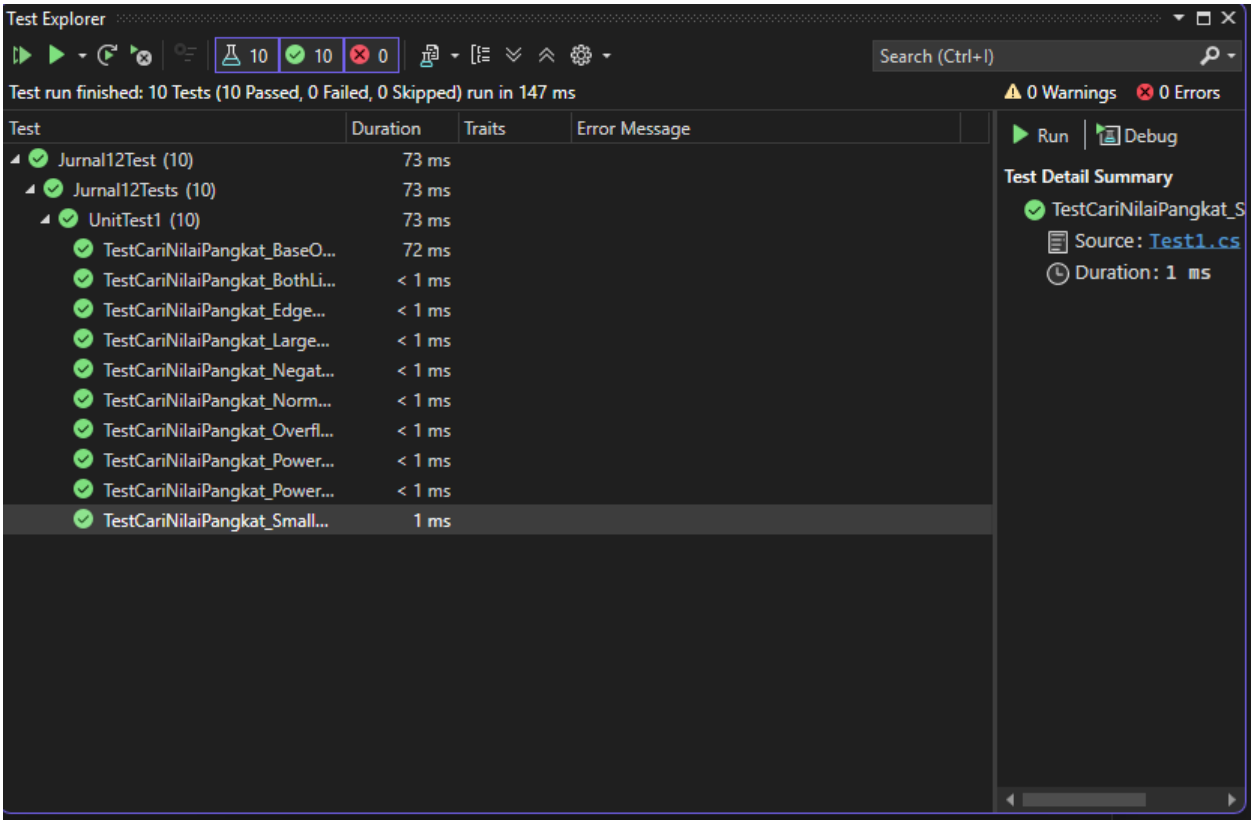
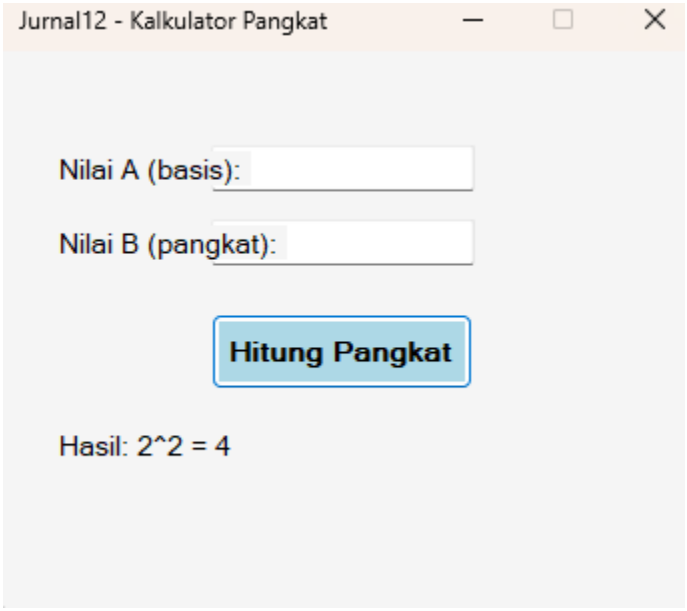
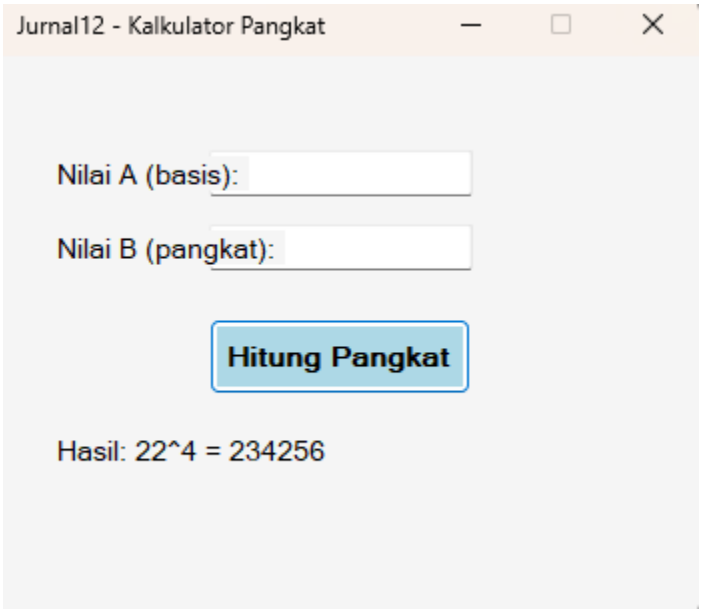


Mstest code



```
using System;
using Microsoft.VisualStudio.TestTools.UnitTesting;
using Jurnal12;

namespace Jurnal12Tests
{
    [TestClass]
    public class UnitTest1
    {
        private Form1 form;

        [TestInitialize]
        public void Setup()
        {
            form = new Form1();
        }

        [TestMethod]
        public void TestCariNilaiPangkat_NormalCase()
        {
            // Test case normal: 2^3 = 8
            long result = form.CariNilaiPangkat(2, 3);
            Assert.AreEqual(8, result);
        }

        [TestMethod]
        public void TestCariNilaiPangkat_PowerZero()
        {
            // Test case b = 0: hasilnya selalu 1
            long result1 = form.CariNilaiPangkat(5, 0);
            Assert.AreEqual(1, result1);

            // Test case khusus: 0^0 = 1 (sesuai aturan)
            long result2 = form.CariNilaiPangkat(0, 0);
            Assert.AreEqual(1, result2);
        }

        [TestMethod]
        public void TestCariNilaiPangkat_NegativePower()
        {
```

Ms Test Hasil



Output Hitung Pangkat