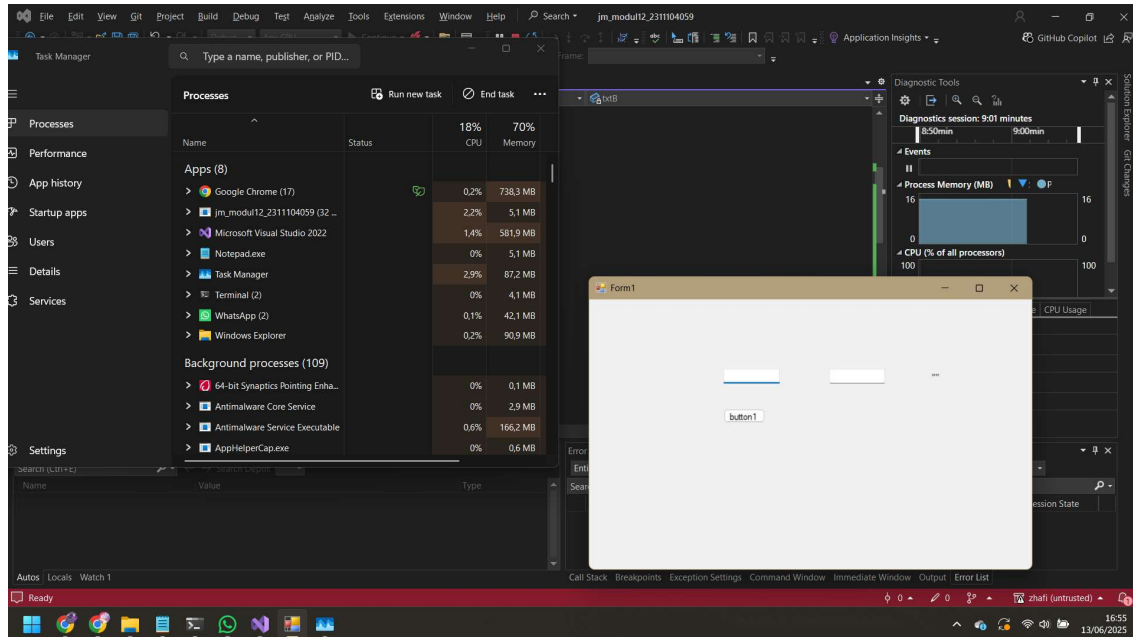# JURNAL MODUL 12

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Hasil Run:

Code Lengkap Form1.cs:

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

namespace modul12_2311104059
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void btnHitung_Click(object sender, EventArgs e)
        {
            int a = int.Parse(txtA.Text);
            int b = int.Parse(txtB.Text);
            int hasil = CariNilaiPangkat(a, b);
            lblHasil.Text = $"Hasil: {hasil}";
        }

        public int CariNilaiPangkat(int a, int b)
        {
            if (b == 0) return 1;
            if (b < 0) return -1;
            if (b > 10 || a > 100) return -2;

            try
            {
                checked
                {
                    int hasil = 1;
                    for (int i = 0; i < b; i++)
                    {
                        hasil *= a;
                    }
```

```
                    return hasil;
                }
            }
            catch (OverflowException)
            {
                return -3;
            }
        }
    }
}
```

MENAMBAHKAN UNIT TESTING:

```
using Microsoft.VisualStudio.TestTools.UnitTesting;
using modul12_2311104059;

namespace modul12_2311104059Tests
{
    [TestClass]
    public class UnitTest1
    {
        Form1 form = new Form1();

        [TestMethod]
        public void TestB0_Return1()
        {
            Assert.AreEqual(1, form.CariNilaiPangkat(100, 0));
        }

        [TestMethod]
        public void TestBNegative_ReturnMinus1()
        {
            Assert.AreEqual(-1, form.CariNilaiPangkat(5, -2));
        }

        [TestMethod]
        public void TestALebihDari100_ReturnMinus2()
        {
            Assert.AreEqual(-2, form.CariNilaiPangkat(101, 2));
        }

        [TestMethod]
        public void TestBLebihDari10_ReturnMinus2()
        {
            Assert.AreEqual(-2, form.CariNilaiPangkat(2, 11));
        }

        [TestMethod]
        public void TestValidPangkat_ReturnValue()
        {
            Assert.AreEqual(8, form.CariNilaiPangkat(2, 3));
        }

        [TestMethod]
        public void TestOverflow_ReturnMinus3()
        {
            Assert.AreEqual(-3, form.CariNilaiPangkat(100000, 5));
        }
    }
}
```