7. Build a Windows Form application that performs arithmetic operations on two numbers. Use Textbox controls to input and display the numbers, Label controls to describe each field, and Button controls to perform the arithmetic operations. Use a Combo Box control to select the operator (+, -, *, /). Use an Array class to store the history of the arithmetic operations performed. Add a menu to the form with options to clear the history and exit the application.

Code: Form1.cs

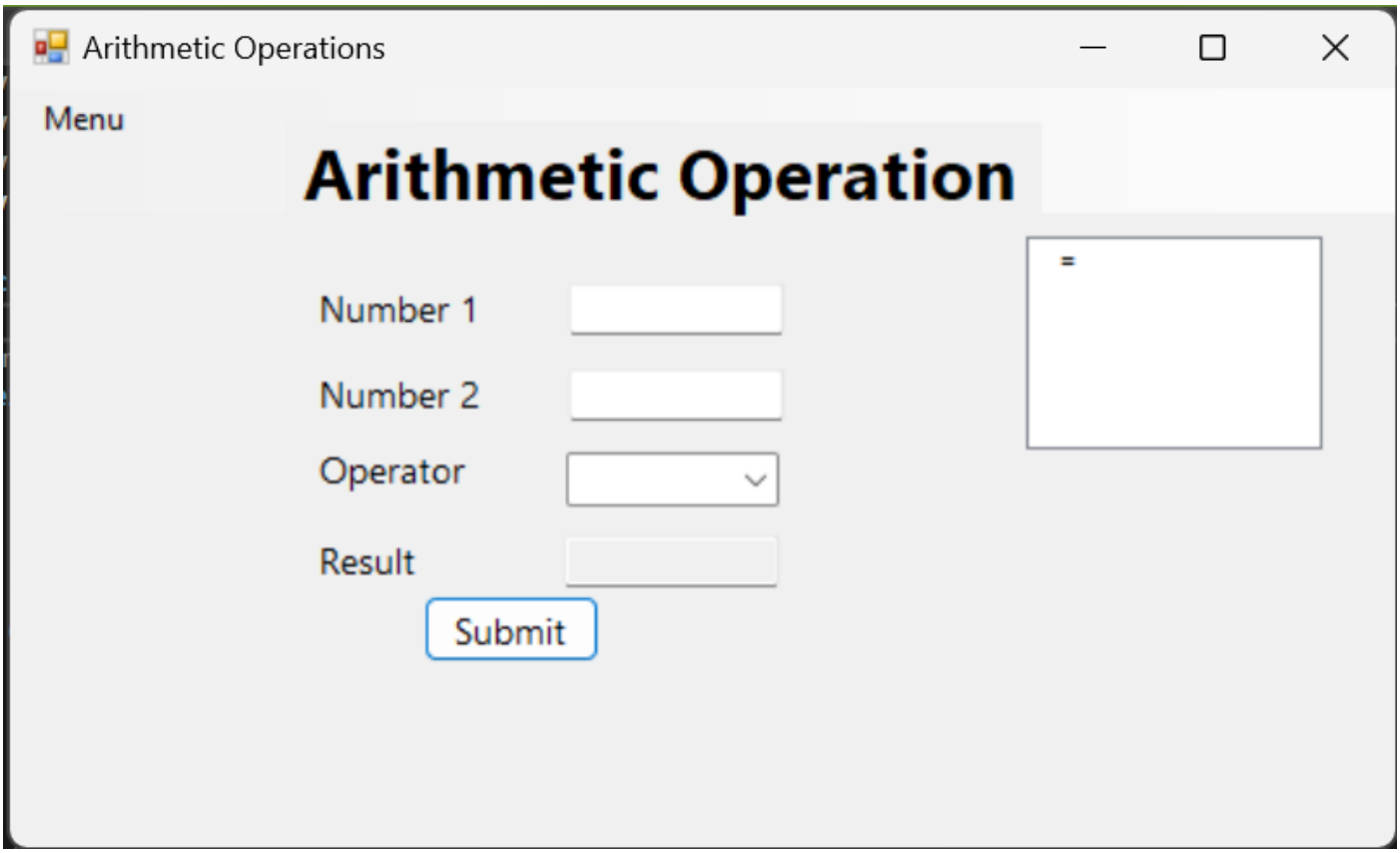
```
using System;
using System.Collections.Generic;
using System.Windows.Forms;
using static System.Windows.Forms.VisualStyles.VisualStyleElement;

namespace Arithmetic_Operation
{
    public partial class Form1 : Form
    {
        private readonly List<string> history;

        public Form1()
        {
            InitializeComponent();
            history = new List<string>();
            InitializeUI();
        }

        private void InitializeUI()
        {
            comboBox1.Items.Add("+");
            comboBox1.Items.Add("-");
            comboBox1.Items.Add("*");
            comboBox1.Items.Add("/");

            // Button for calculation
            button1.Click += Button1_Click;


            clearToolStripMenuItem.Click += ClearMenuItem_Click;
            exitToolStripMenuItem.Click += ExitMenuItem_Click;
            // Add the operation to the history
            string operation = $"{textBox1.Text} {comboBox1.SelectedItem} {textBox2.Text} =
{textBox3.Text}";
            history.Add(operation);

            // Update the history list
            UpdateHistoryListBox();
        }


        private void Button1_Click(object sender, EventArgs e)
        {
            try
            {
                // Get the inputs
                decimal num1 = decimal.Parse(textBox1.Text);
                decimal num2 = decimal.Parse(textBox2.Text);
                string selectedOperator = comboBox1.SelectedItem.ToString();

                // Perform arithmetic operation
                decimal result = PerformArithmeticOperation(num1, num2, selectedOperator);

                // Display the result
                textBox3.Text = $"{result}";

                // Add the operation to the history
                string operation = $"{num1} {selectedOperator} {num2} = {result}";
                history.Add(operation);
```

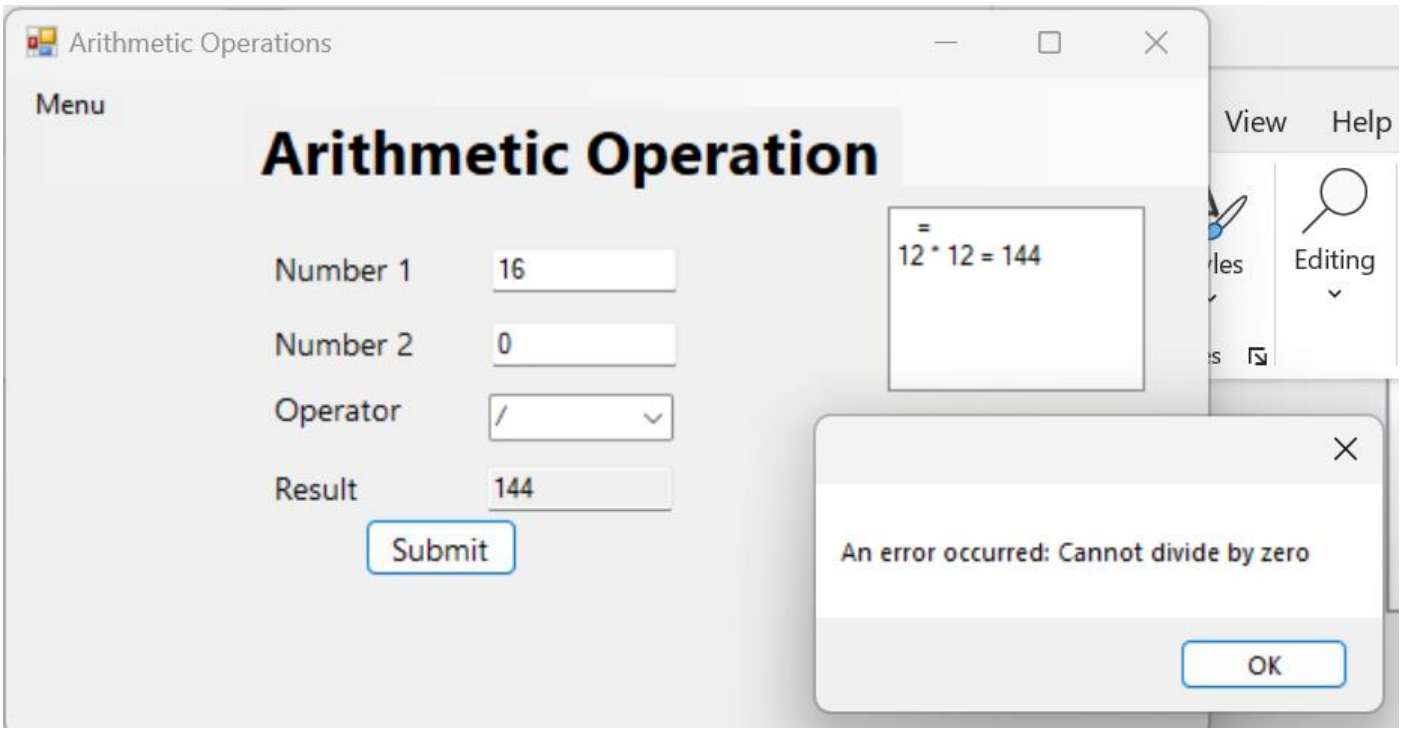
```
                // Update the history list
                UpdateHistoryListBox();
            }
            catch (Exception ex)
            {
                MessageBox.Show($"An error occurred: {ex.Message}");
            }
        }

        private decimal PerformArithmeticOperation(decimal num1, decimal num2, string
operation)
        {
            switch (operation)
            {
                case "+":
                    return num1 + num2;
                case "-":
                    return num1 - num2;
                case "*":
                    return num1 * num2;
                case "/":
                    if (num2 != 0)
                        return num1 / num2;
                    else
                        throw new ArgumentException("Cannot divide by zero");
                default:
                    throw new ArgumentException("Invalid operation");
            }
        }

        private void ClearMenuItem_Click(object sender, EventArgs e)
        {
            // Clear the history
            history.Clear();
            UpdateHistoryListBox();
        }

            private void ExitMenuItem_Click(object sender, EventArgs e)
            {
                // Exit the application
                Application.Exit();
            }

            private void UpdateHistoryListBox()
        {
            listBox1.Items.Clear();
            listBox1.Items.AddRange(history.ToArray());
        }

        }
    }
```

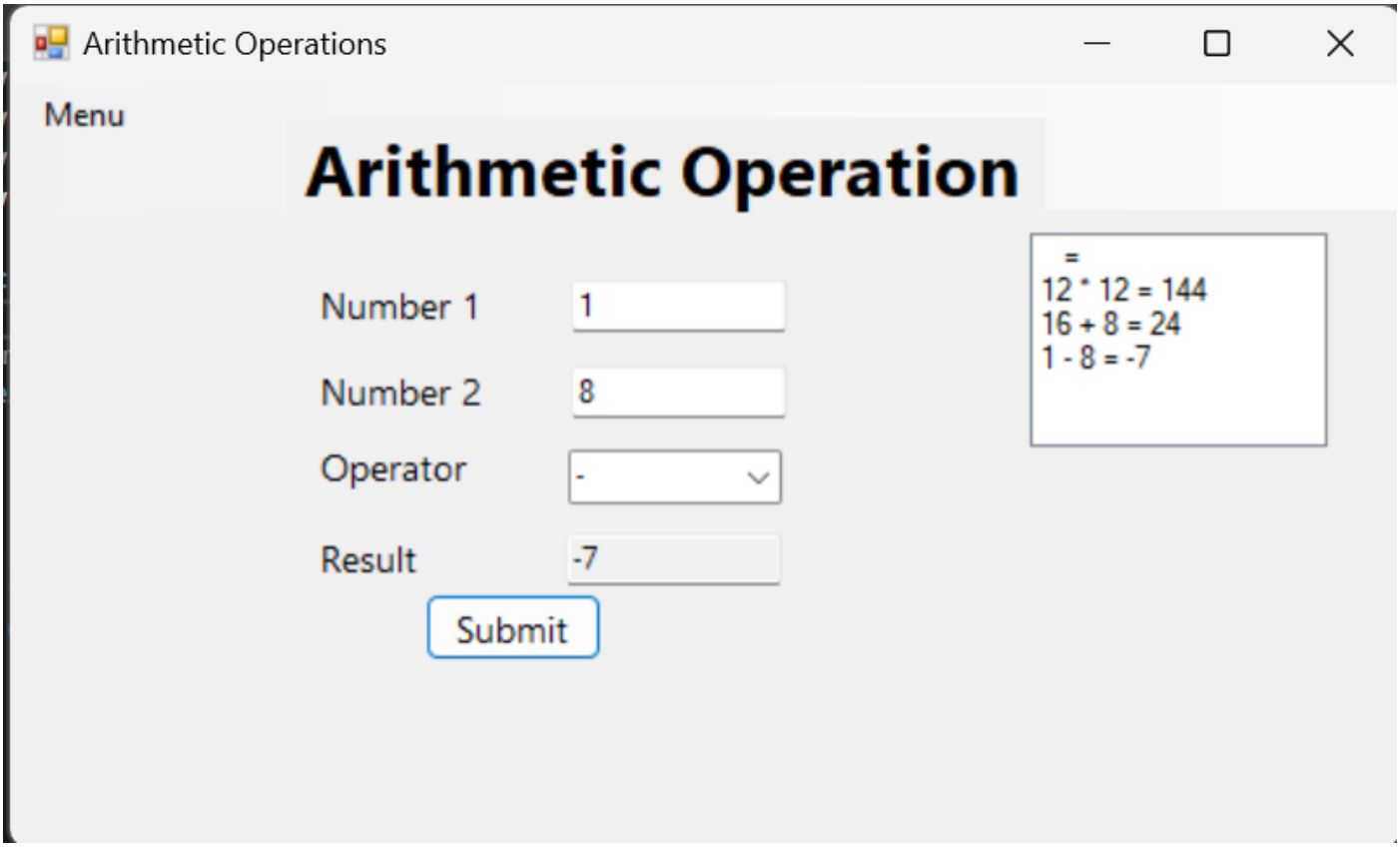
Program.cs

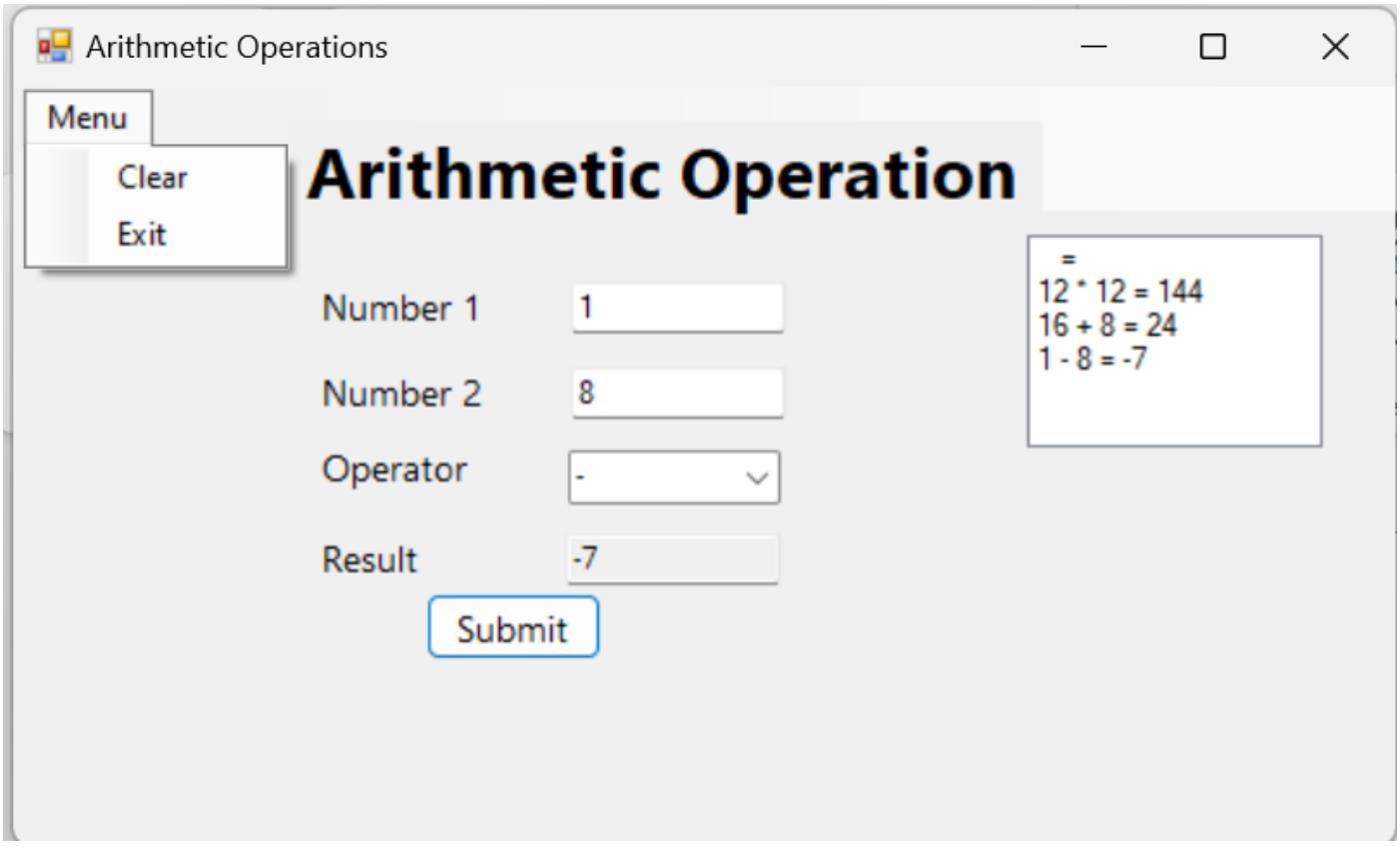
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace Arithmetic_Operation
{
    internal static class Program
    {
        /// <summary>
        /// The main entry point for the application.
        /// </summary>
        [STAThread]
        static void Main()
```

```
        {
            Application.EnableVisualStyles();
            Application.SetCompatibleTextRenderingDefault(false);
            Application.Run(new Form1());
        }
    }
}
```






Arithmetic Operations
Menu
Arithmetic Operation
Number 1
1
Number 2
8
Operator
-
Result
-7
Submit
=
12 * 12 = 144
16 + 8 = 24
1 - 8 = -7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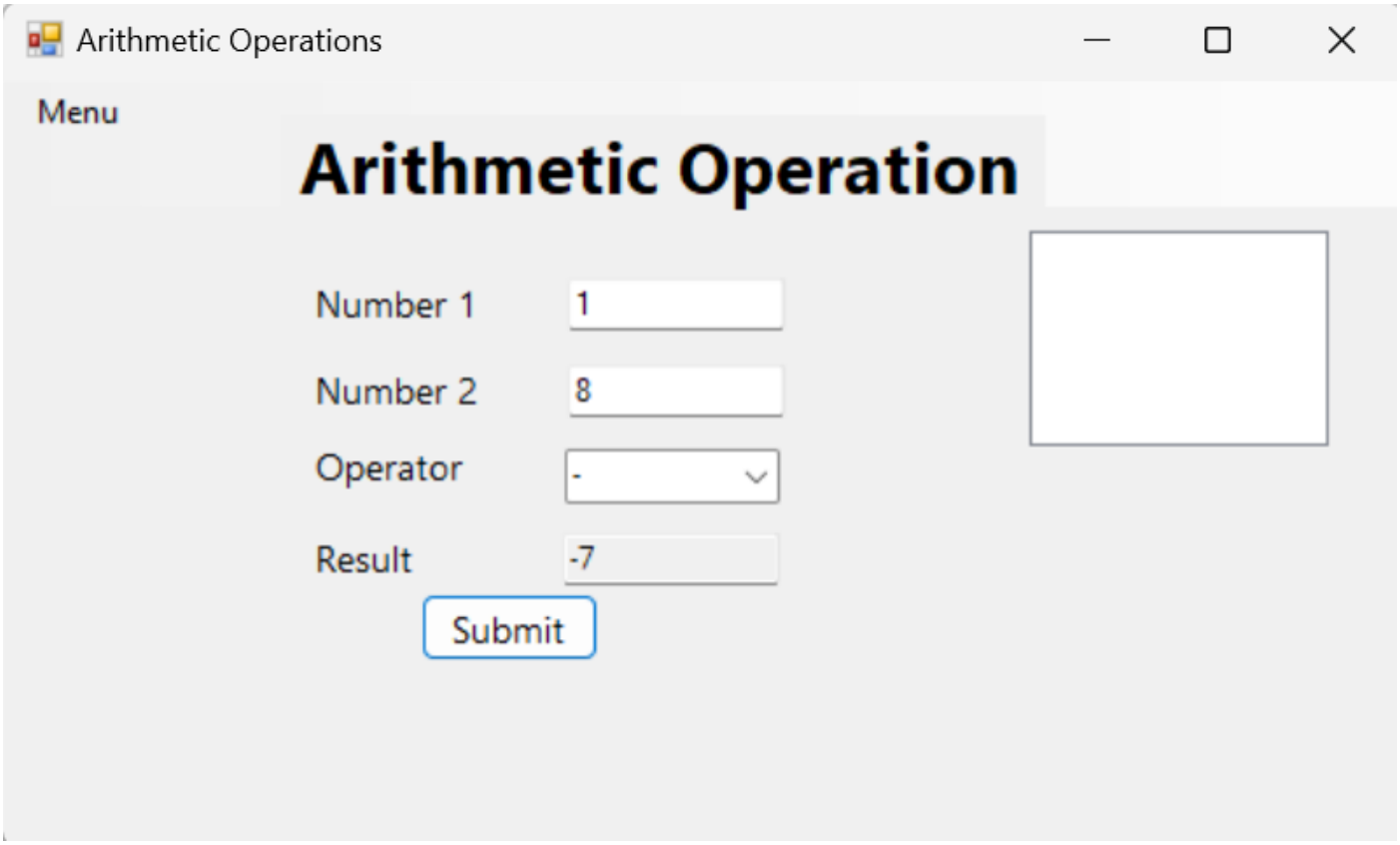
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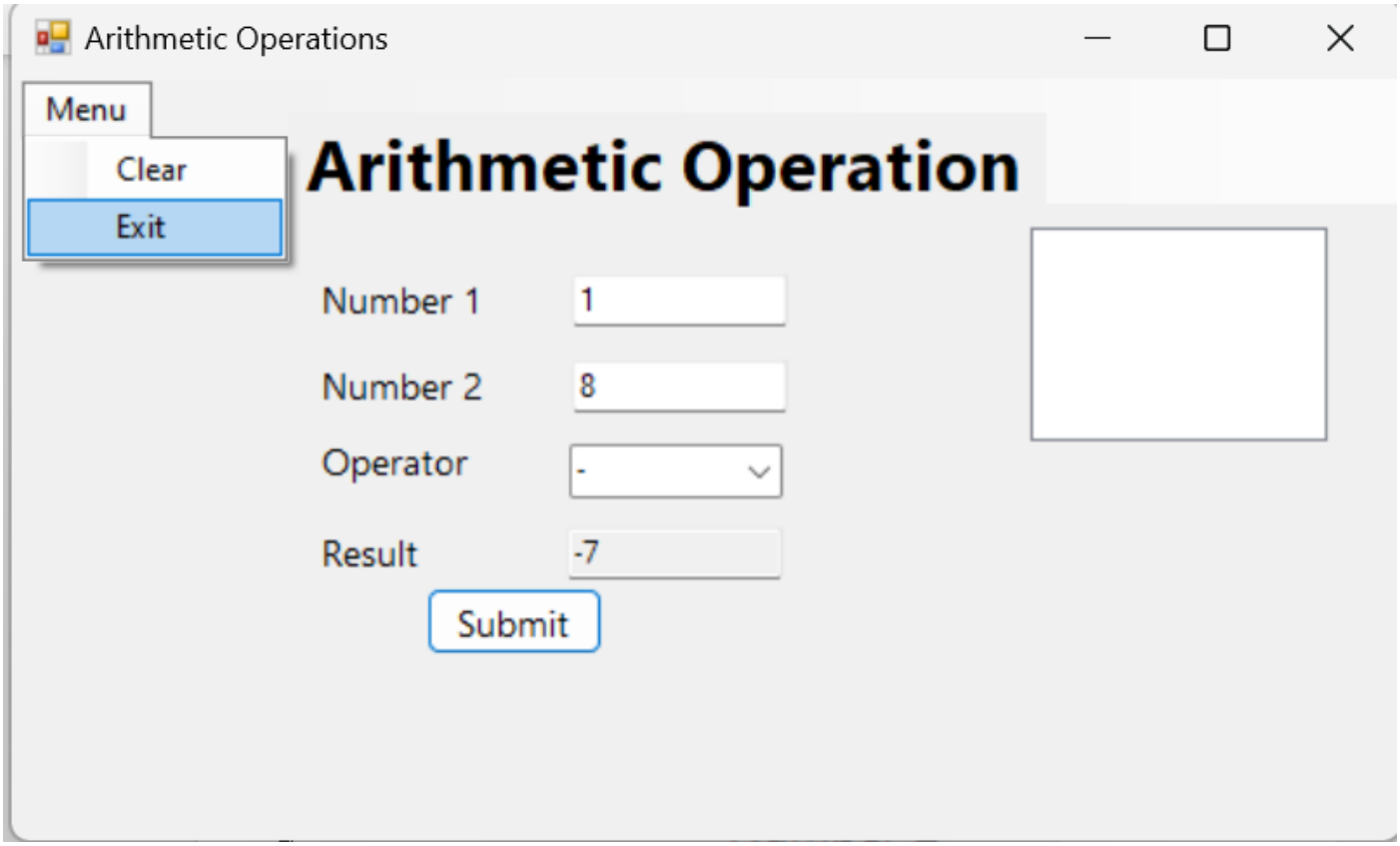
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