**Task No. 1:** Create basic calculator application on Console Application that

perform basic arithmetic operations

like(add,subtract,multiply,divide ….)

**Solution:**

using System;

namespace CalculatorApp

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine(@"░█▀▀░█▀█░█░░░█▀▀░█░█░█░░░█▀█░▀█▀░█▀█░█▀▄░░░█▀█░█▀█░█▀█░█░░░▀█▀░█▀▀░█▀█░▀█▀░▀█▀░█▀█░█▀█

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while (true)

{

Console.Write("Enter the first number: ");

double num1 = Convert.ToDouble(Console.ReadLine());

Console.Write("Enter the second number (if applicable): ");

double num2 = Convert.ToDouble(Console.ReadLine());

Console.WriteLine("Select the operation to perform:");

Console.WriteLine("\t1. Addition (+)");

Console.WriteLine("\t2. Subtraction (-)");

Console.WriteLine("\t3. Multiplication (\*)");

Console.WriteLine("\t4. Division (/)");

Console.WriteLine("\t5. Modulus (%)");

Console.WriteLine("\t6. Square Root (√)");

Console.WriteLine("\t7. Power (^)");

Console.WriteLine("\t8. Exponent (e^)");

Console.WriteLine("\t9. Sine (sin)");

Console.WriteLine("\t10. Cosine (cos)");

Console.WriteLine("\t11. Tangent (tan)");

Console.Write("Enter your choice: ");

int choice = Convert.ToInt32(Console.ReadLine());

double result = 0;

switch (choice)

{

case 1:

result = num1 + num2;

break;

case 2:

result = num1 - num2;

break;

case 3:

result = num1 \* num2;

break;

case 4:

result = num1 / num2;

break;

case 5:

result = num1 % num2;

break;

case 6:

result = Math.Sqrt(num1);

break;

case 7:

result = Math.Pow(num1, num2);

break;

case 8:

result = Math.Exp(num1);

break;

case 9:

result = Math.Sin(num1);

break;

case 10:

result = Math.Cos(num1);

break;

case 11:

result = Math.Tan(num1);

break;

default:

Console.WriteLine("Invalid choice.");

break;

}

Console.WriteLine("Result: " + result);

Console.Write("Do you want to perform another calculation? (Y/N) ");

string response = Console.ReadLine();

if (response.ToLower() != "y")

{

break;

}

Console.Clear();

}

Console.WriteLine("Thank you for using Calculator App!");

Console.ReadLine();

}

}

}

**Text

Description automatically generatedOutput:**

**Task No. 2:** Create Winform application that authenticate user with hardcoded

username and password if user authenticated new form will be

open that takes user information as an input and on button click all

information will be displayed in dialog box.

**Solution:**

**Login Form Code**

using System;

using System.Windows.Forms;

namespace WindowsFormsApp1

{

public partial class loginForm : Form

{

public loginForm()

{

InitializeComponent();

}

static Form1 form1 = new Form1();

private void checkBox1\_CheckedChanged(object sender, EventArgs e)

{

if (checkBox1.Checked)

{

textBox2.UseSystemPasswordChar = false;

}

else

{

textBox2.UseSystemPasswordChar = true;

}

}

private void button1\_Click(object sender, EventArgs e)

{

if (textBox1.Text.ToLower()=="admin" && textBox2.Text.ToLower()=="admin")

{

form1.Show();

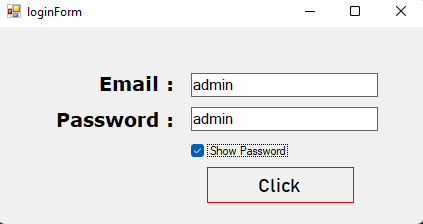
this.Hide();

}

else

{

MessageBox.Show("Incorrect Passwor", "Failed", MessageBoxButtons.OK, MessageBoxIcon.Error);}}}}

**Output:**

**User Details Code**

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace WindowsFormsApp1

{

public partial class Form1 : Form

{

public Form1()

{

InitializeComponent();

}

private void button1\_Click(object sender, EventArgs e)

{

string firstName = textBox1.Text;

string email = textBox2.Text;

string phoneNumber = textBox3.Text;

string address = textBox4.Text;

string message = $"Name: {firstName} \n" +

$"Email: {email}\n" +

$"Phone Number: {phoneNumber}\n" +

$"Address: {address}";

MessageBox.Show(message, "User Information",MessageBoxButtons.OK,MessageBoxIcon.Information);

}

}

}

**Graphical user interface, text, application

Description automatically generatedOutput:**