



HUMAN COMPUTER INTERACTION

“LAB 3”



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TASK #1:

Design and develop Custom Calculator having these additional buttons

ON button,

OFF button, (All buttons must be disabled except ON)

AC = Clear all

M1, M2, M3 (Memory Buttons to store 3 values)

M1+, M2+, M3+ (to retrieve the stored values)

+ (For Addition)

- (For Subtraction)

** (For Multiplication)*

/ (For Division)

MOD (Remainder)

> (Greater than Ex $5 > 2 = 1/TRUE$)

< (Less than Ex $5 < 2 = 0/FALSE$)

x

2

(square of a number)

x

3

(cube of a number)

x

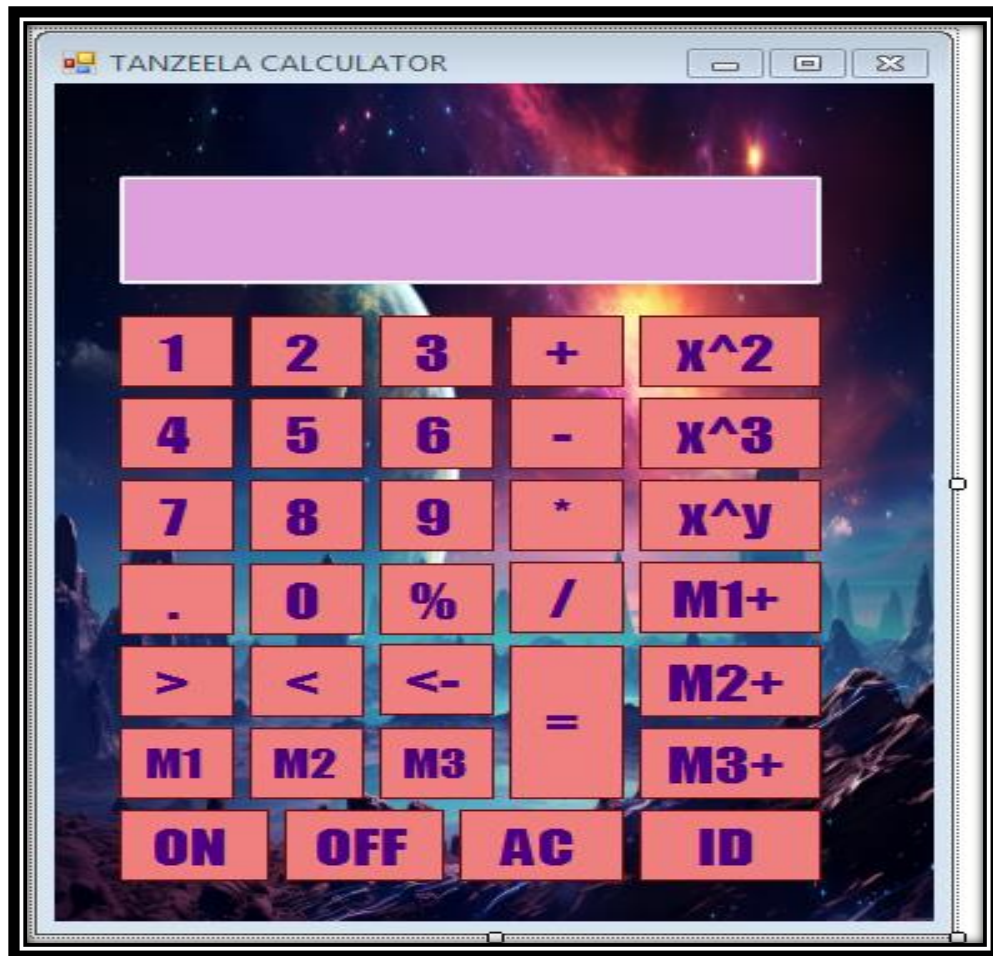
y

(power of a number)

Back space button

// Add a special button ID / ABOUT US which display your personal info (Name , Reg # , University

,email ect) in new window



PROGRAM CODE:

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
namespace calculator
{
    public partial class Form1 : Form
    {
        public double first;
        public double second;
        public double result;
```

```
public double M1;
public double M2;
public double M3;
public String operation;
public Form1()
{
    InitializeComponent();

}
void disable()
{
    button1.Enabled = false;
    button2.Enabled = false;
    button3.Enabled = false;
    button4.Enabled = false;
    button5.Enabled = false;
    button6.Enabled = false;
    button7.Enabled = false;
    button8.Enabled = false;
    button9.Enabled = false;
    button10.Enabled = false;
    button11.Enabled = false;
    button12.Enabled = false;
    button13.Enabled = false;
    button14.Enabled = false;
    button15.Enabled = false;
    button16.Enabled = false;
    button17.Enabled = false;
    button18.Enabled = false;
    button19.Enabled = false;
    button20.Enabled = false;
    button21.Enabled = false;
    button22.Enabled = false;
    button23.Enabled = false;
    button24.Enabled = false;
    button25.Enabled = false;
    button26.Enabled = false;
    button27.Enabled = false;
    button28.Enabled = false;
    button29.Enabled = false;
```

```
button30.Enabled = false;
button31.Enabled = false;
button32.Enabled = false;
button33.Enabled = false;
}
void enable()
{
button1.Enabled = true;
button2.Enabled = true;
button3.Enabled = true;
button4.Enabled = true;
button5.Enabled = true;
button6.Enabled = true;
button7.Enabled = true;
button8.Enabled = true;
button9.Enabled = true;
button10.Enabled = true;
button11.Enabled = true;
button12.Enabled = true;
button13.Enabled = true;
button14.Enabled = true;
button15.Enabled = true;
button16.Enabled = true;
button17.Enabled = true;
button18.Enabled = true;

button19.Enabled = true;
button20.Enabled = true;
button21.Enabled = true;
button22.Enabled = true;
button23.Enabled = true;
button24.Enabled = true;
button25.Enabled = true;
button26.Enabled = true;
button27.Enabled = true;
button28.Enabled = true;
button29.Enabled = true;
button30.Enabled = true;
button31.Enabled = true;
button32.Enabled = true;
```

```
button33.Enabled = true;
}

private void button1_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "1";
}
private void button2_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "2";
}
private void button3_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "3";
}
private void button4_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "4";
}
private void button6_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "5";
}
private void button5_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "6";
}
private void button7_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "7";
}
private void button8_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "8";
}
private void button9_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "9";
}
```

```
private void button10_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + "0";
}
private void button11_Click(object sender, EventArgs e)
{
    textBox1.Text = textBox1.Text + ".";
}
private void button12_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = "%";
}
private void button13_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = ">";
}
private void button14_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = "<";
}
private void button15_Click(object sender, EventArgs e)
{
    if
    }
private void button16_Click(object sender, EventArgs e)
{
    M1 = double.Parse(textBox1.Text);
    textBox1.Text = null;
}
private void button17_Click(object sender, EventArgs e)
{
    M2 = double.Parse(textBox1.Text);
    textBox1.Text = null;
}
```

```
private void button18_Click(object sender, EventArgs e)
{
    M3 = double.Parse(textBox1.Text);
    textBox1.Text = null;
}
private void button19_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = "+";
}
private void button20_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = "-";
}
private void button21_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = "*";
}
private void button22_Click(object sender, EventArgs e)
{
    first = double.Parse(textBox1.Text);
    textBox1.Text = null;
    operation = "/";
}
private void button26_Click(object sender, EventArgs e)
{
    enable();
}
private void button25_Click(object sender, EventArgs e)
{
    disable();
}
private void button24_Click(object sender, EventArgs e)
{

```



```

textBox1.Text = null;
}
private void button28_Click(object sender, EventArgs e)
{
double x;
x = double.Parse(textBox1.Text);
x = Math.Pow(x, 2);
textBox1.Text = x.ToString();
}
private void button27_Click(object sender, EventArgs e)

{
double x;
x = double.Parse(textBox1.Text);
x = Math.Pow(x, 3);
textBox1.Text = x.ToString();
}
private void button29_Click(object sender, EventArgs e)
{
textBox1.Text = M1.ToString();
}
private void button31_Click(object sender, EventArgs e)
{
textBox1.Text = M2.ToString();
}
private void button33_Click(object sender, EventArgs e)
{
textBox1.Text = M3.ToString();
}
private void textBox1_TextChanged(object sender, EventArgs e)
{
String n = "laiba";
textBox1.Text = n.ToString();
}
private void button23_Click(object sender, EventArgs e)
{
second = double.Parse(textBox1.Text);
if (operation == "+")
{
result = first + second;

```

```
}  
else if (operation == "-")  
{  
result = first - second;  
}  
else if (operation == "*")  
{  
result = first * second;  
}  
else if (operation == "/")  
{  
result = first / second;  
}  
else if (operation == "%")  
{  
result = first % second;  
}  
else if (operation == "^")  
{  
result= Math.Pow(first,second);  
}  
else if (operation == ">")  
{  
if (first > second)  
{  
  
result = 1;  
}  
else {  
result = 0;  
}  
}  
else if (operation == "<")  
{  
if (first < second)  
{  
result = 0;  
}  
else {  
result = 1;
```

```
}  
}  
textBox1.Text = result.ToString();  
}
```

OUTPUT:

