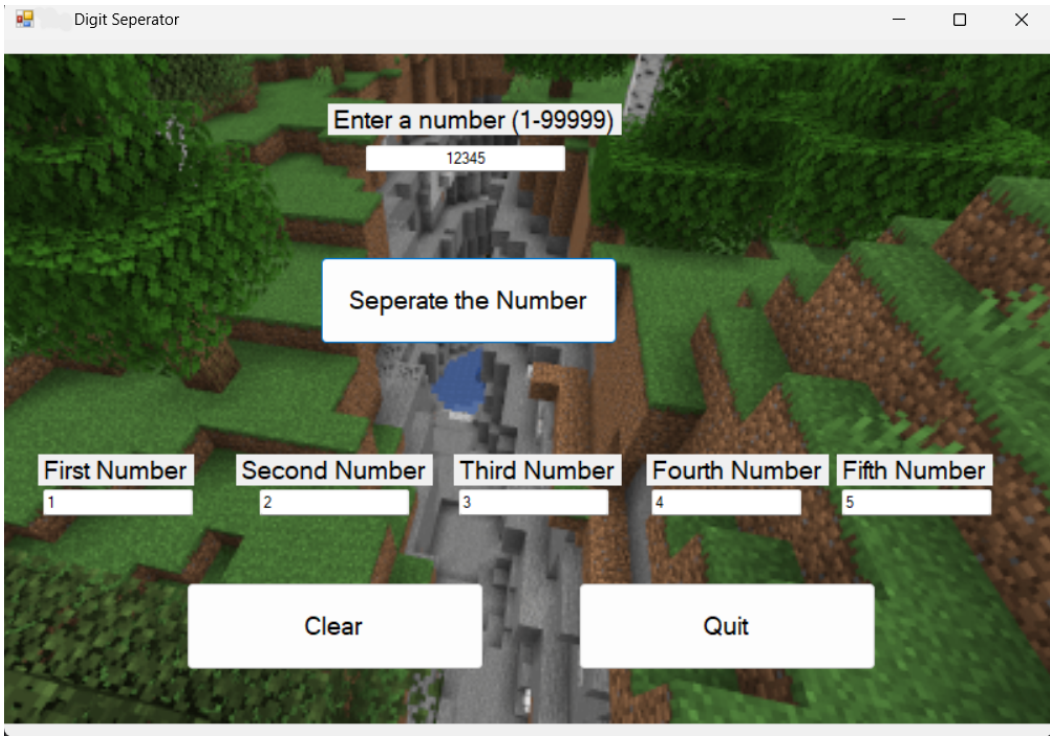
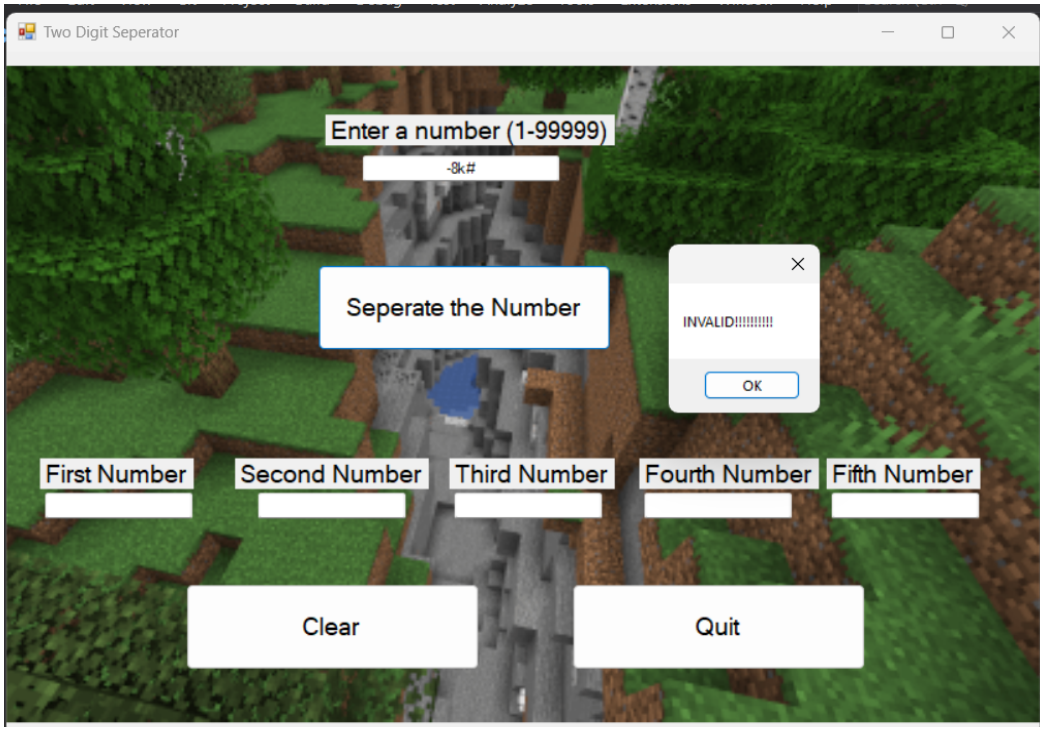
1. (Digits of an integer) Write a C# Windows Forms App that reads from a textbox a five-digit integer, separates the integer into its digits and displays the digits in 5 textboxes. Please include 3 buttons: separate, clear, and exit

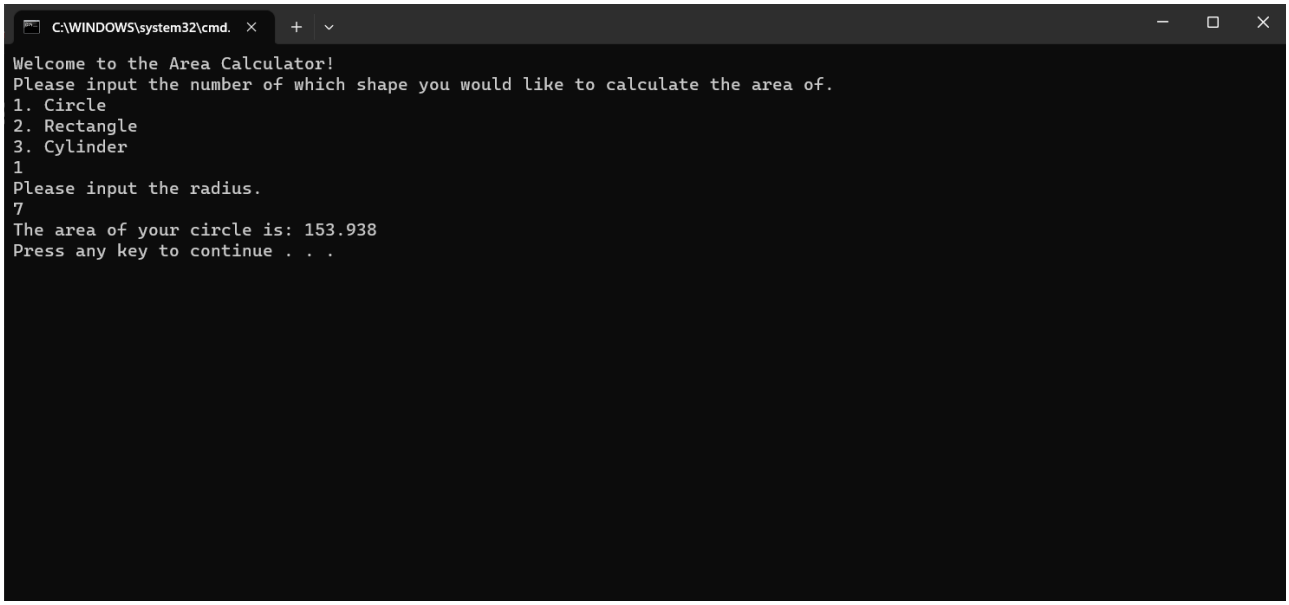


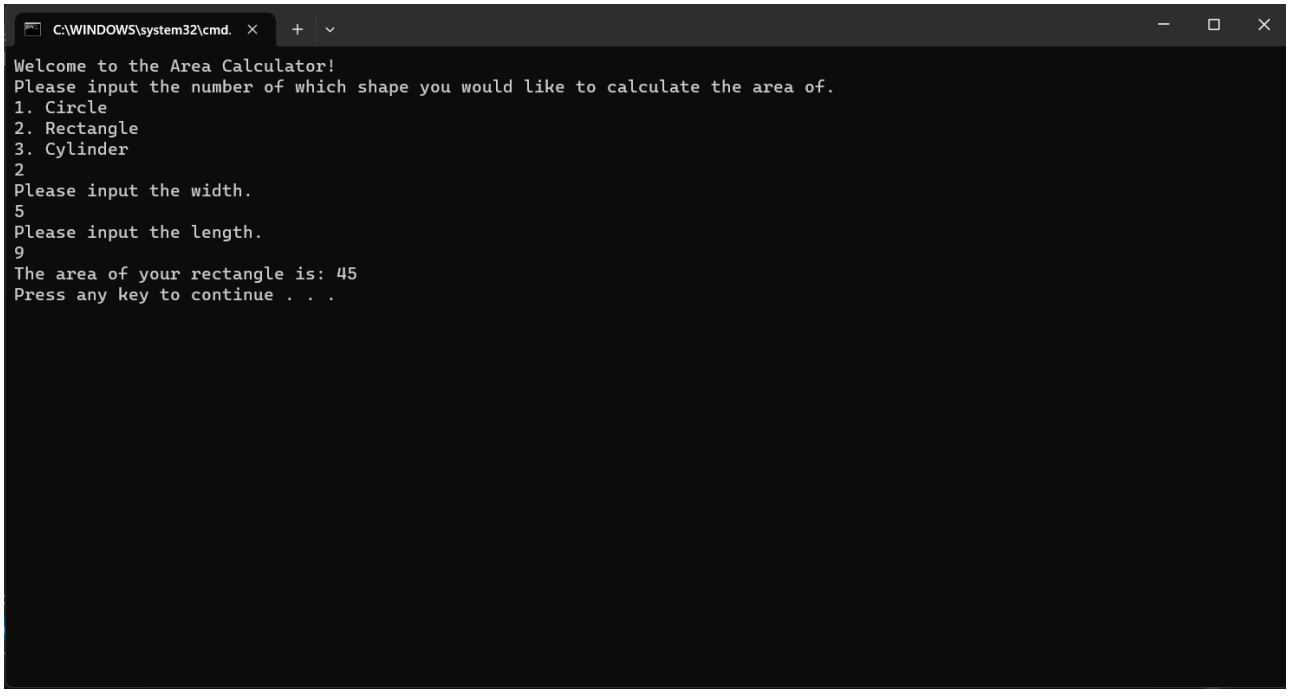


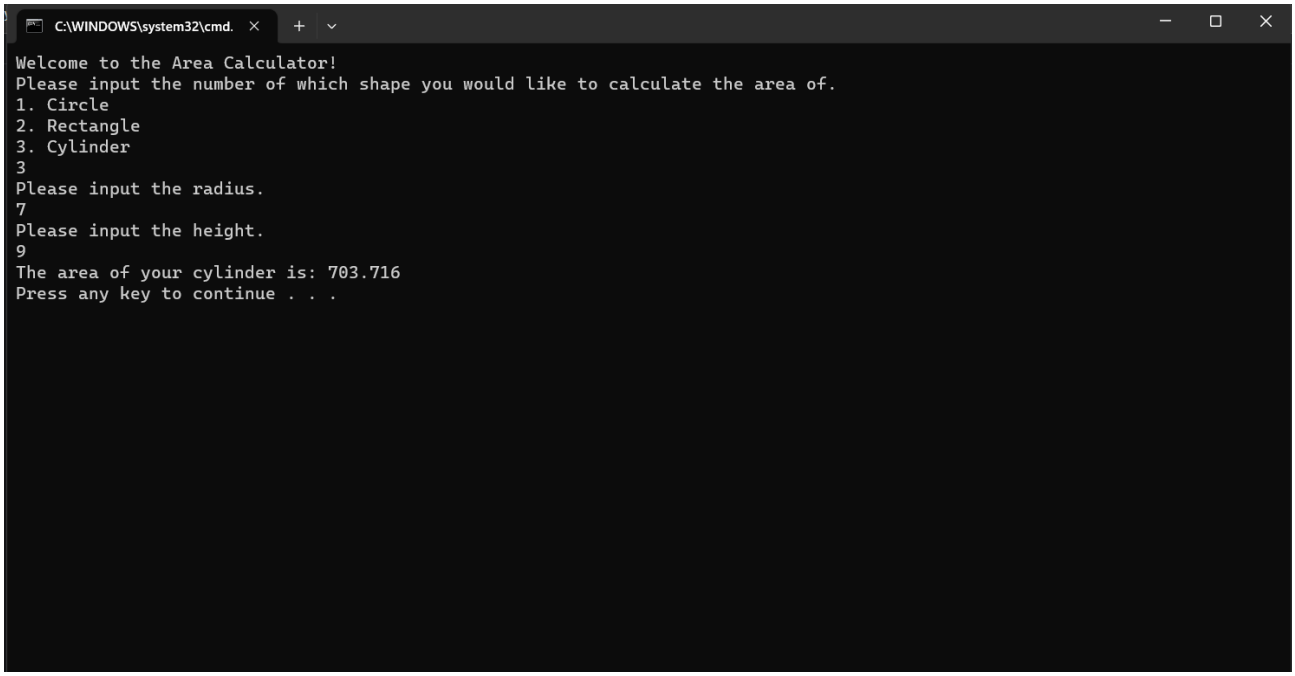
```
namespace seperates_integer_thingy
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void buttonSeperate_Click(object sender, EventArgs e)
        {
            int inp, d1, d2, d3, d4, d5;
            string input = textBoxEnteredNum.Text;

            bool valid = int.TryParse(input, out inp);
            if (valid)
            {
                inp = Convert.ToInt32(input);


                d1 = inp / 10000;
                d2 = inp % 10000 / 1000;
                d3 = inp % 1000 / 100;
                d4 = inp % 100 / 10;
                d5 = inp % 10;

                string digit1 = Convert.ToString(d1);
                string digit2 = Convert.ToString(d2);
                string digit3 = Convert.ToString(d3);
                string digit4 = Convert.ToString(d4);
                string digit5 = Convert.ToString(d5);
                textBoxNumber1.Text = digit1;
                textBoxNumber2.Text = digit2;
                textBoxNumber3.Text = digit3;
                textBoxNumber4.Text = digit4;
                textBoxNumber5.Text = digit5;
            }
            else
            {
                MessageBox.Show("INVALID!!!!!!!!!!");
            }
        }

        private void button1_Click(object sender, EventArgs e)
```

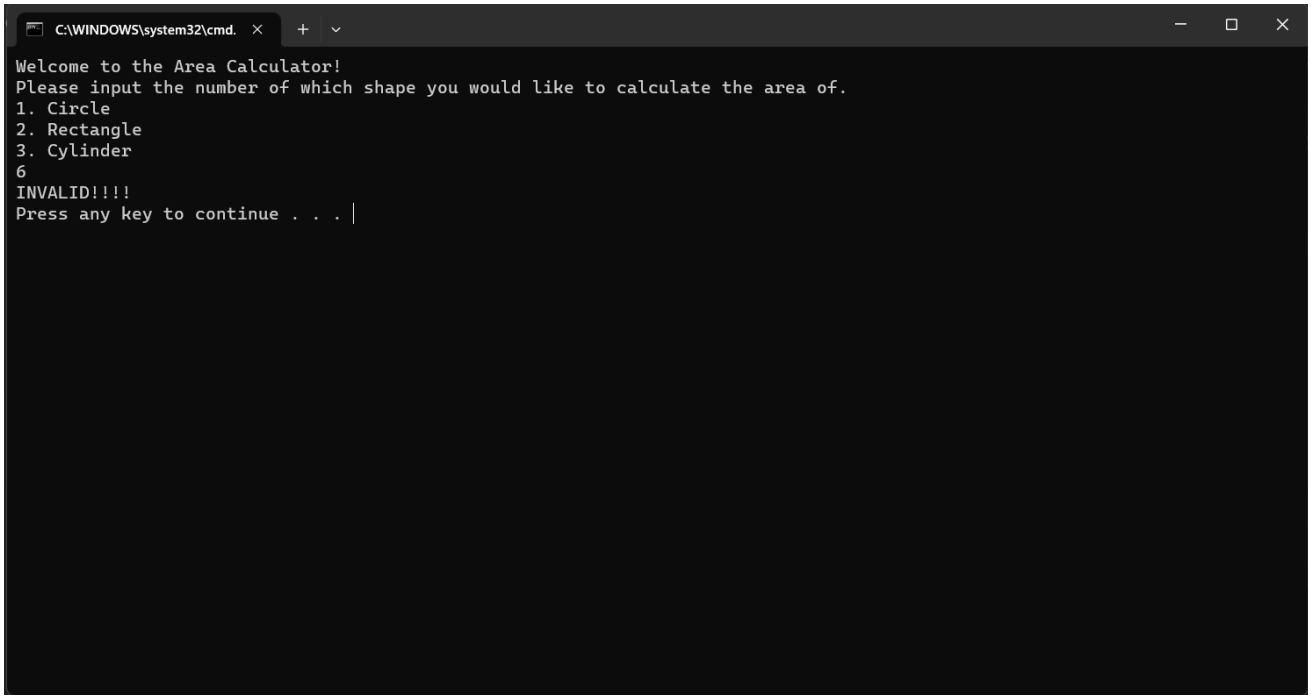
```
        {
            textBoxEnteredNum.Clear();
            textBoxNumber1.Clear();
            textBoxNumber2.Clear();
            textBoxNumber3.Clear();
            textBoxNumber4.Clear();
            textBoxNumber5.Clear();
        }

        private void button2_Click(object sender, EventArgs e)
        {
            Application.Exit();
        }
    }
}
```

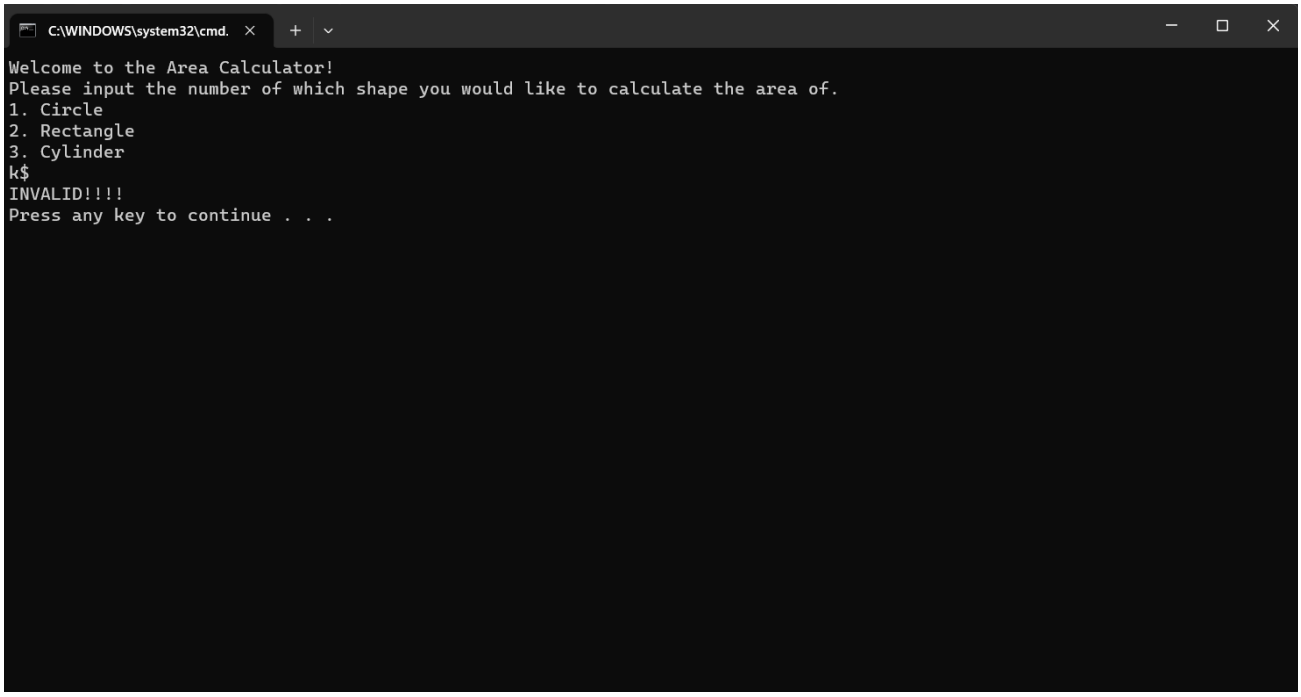
2. Write a C# console application that computes the area of a circle, rectangle, and cylinder. Display a menu showing the three options. Allow users to input which figure they want to see calculated. Based on the value inputted, prompt for appropriate dimensions and perform the calculations and display the result accordingly (Round the result to 3 decimal places).






C:\WINDOWS\system32\cmd.
Welcome to the Area Calculator!
Please input the number of which shape you would like to calculate the area of.
1. Circle
2. Rectangle
3. Cylinder
3
Please input the radius.
7
Please input the height.
9
The area of your cylinder is: 703.716
Press any key to continue . . .


C:\WINDOWS\system32\cmd.
Welcome to the Area Calculator!
Please input the number of which shape you would like to calculate the area of.
1. Circle
2. Rectangle
3. Cylinder
6
INVALID!!!!
Press any key to continue . . .

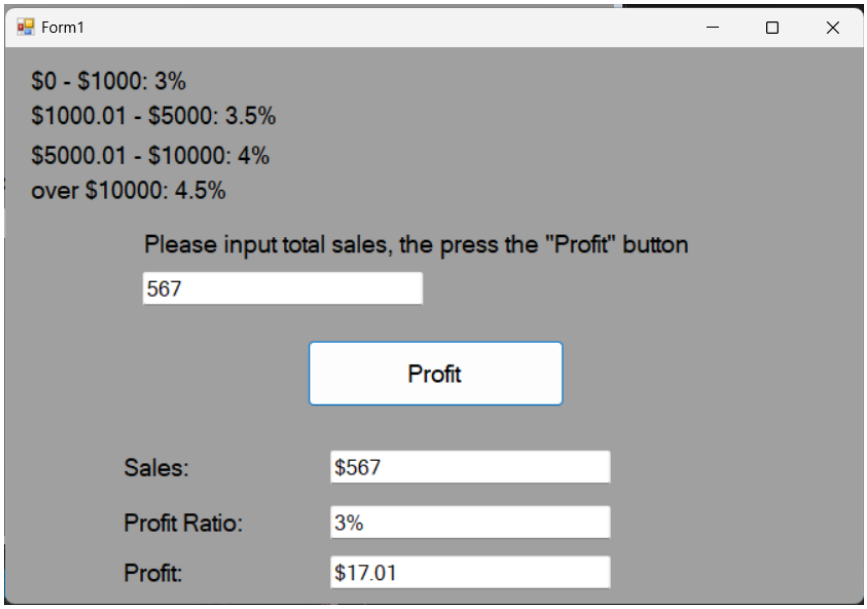


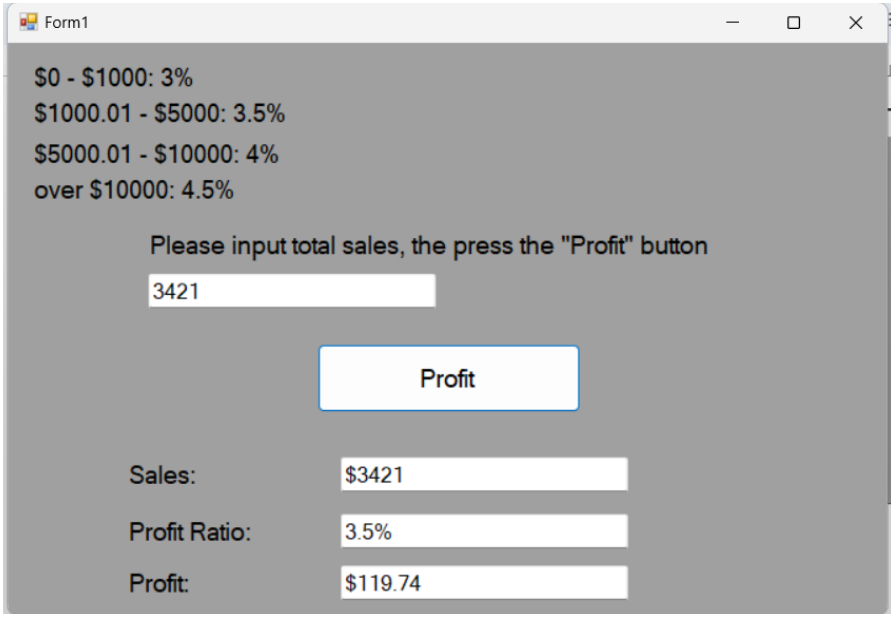

```
namespace Area_of_shapes
{
   class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Welcome to the Area Calculator!");
         Console.WriteLine("Please input the number of which shape you would like to calculate
the area of.");
         Console.Write("1. Circle \n2. Rectangle \n3. Cylinder \n");

         int input;
         string inpoot = Console.ReadLine();

         bool valid = int.TryParse(inpoot, out input);
         if (valid)
         {
            input = Convert.ToInt32(inpoot);

            switch (input)
            {
               case (1):
                  Console.WriteLine("Please input the radius.");
                  double radius = double.Parse(Console.ReadLine());
                  double area = 3.14159 * Math.Pow(radius, 2);
                  area = Math.Round(area, 3);
```

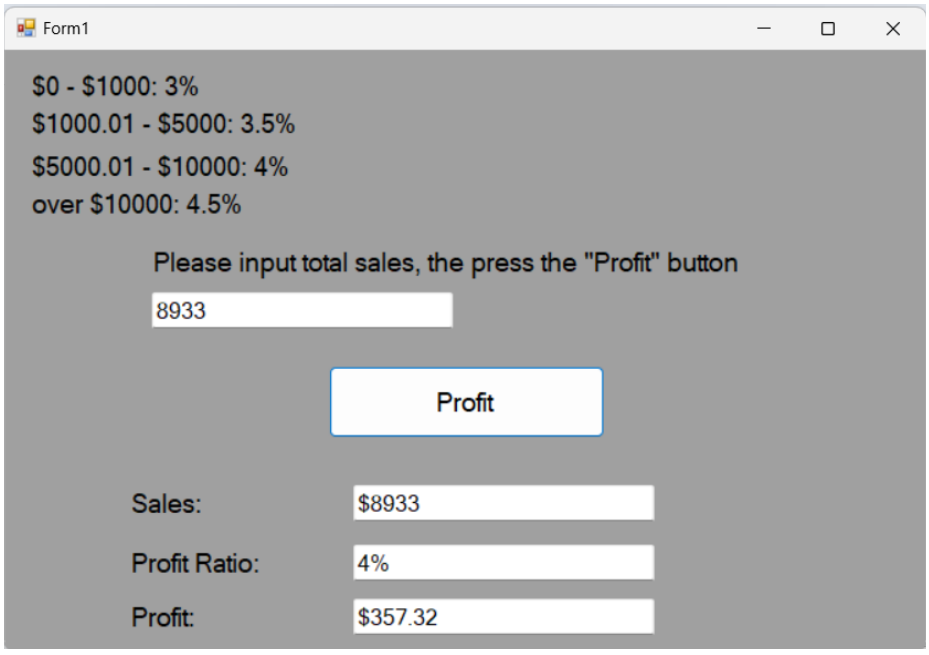
```
                Console.WriteLine("The area of your circle is: " + area);
                break;
            case (2):
                Console.WriteLine("Please input the width.");
                double width = double.Parse(Console.ReadLine());
                Console.WriteLine("Please input the length.");
                double length = double.Parse(Console.ReadLine());
                area = width * length;
                area = Math.Round(area, 3);
                Console.WriteLine("The area of your rectangle is: " + area);
                break;
            case (3):
                Console.WriteLine("Please input the radius.");
                radius = double.Parse(Console.ReadLine());
                Console.WriteLine("Please input the height.");
                double height = double.Parse(Console.ReadLine());
                area = 2 * 3.14159 * radius * height + 2 * 3.14159 * Math.Pow(radius, 2);
                area = Math.Round(area, 3);
                Console.WriteLine("The area of your cylinder is: " + area);
                break;
            default:
                Console.WriteLine("INVALID!!!!");
                break;

        }

    }
    else
    {
        Console.WriteLine("INVALID!!!!");
    }

  }
 }
}
```

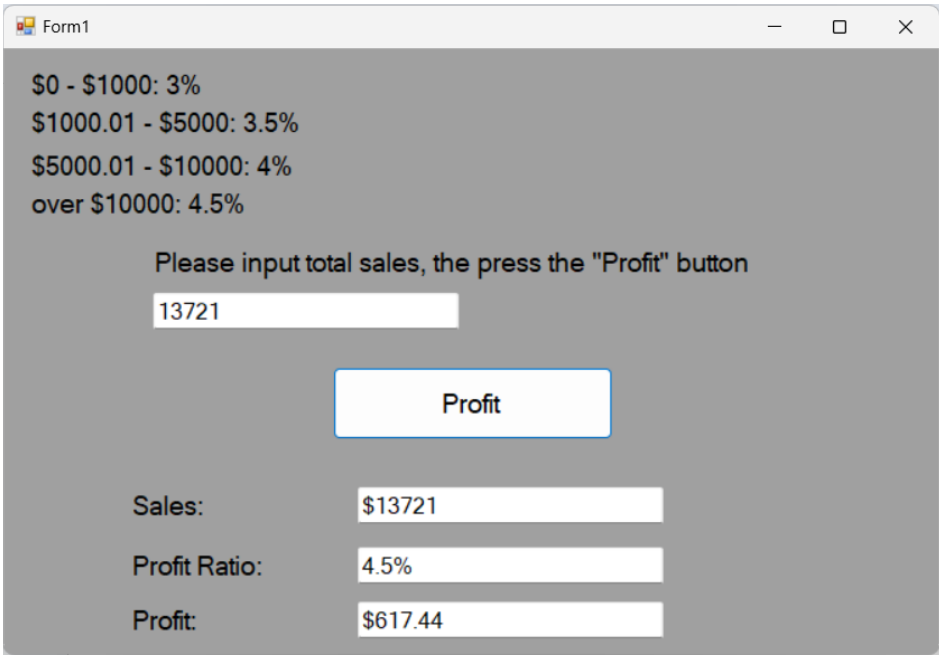
3. Design a C# Windows Forms Application that calculates the amount of profit an organization receives based on its sales. The more sales documented, the larger the profit ratio. Allow the user to input the total sales figure for the organization. Compute the profit based on the following table. Display the sales, the profit ratio and profit. Your solution should validate the entered sales information.

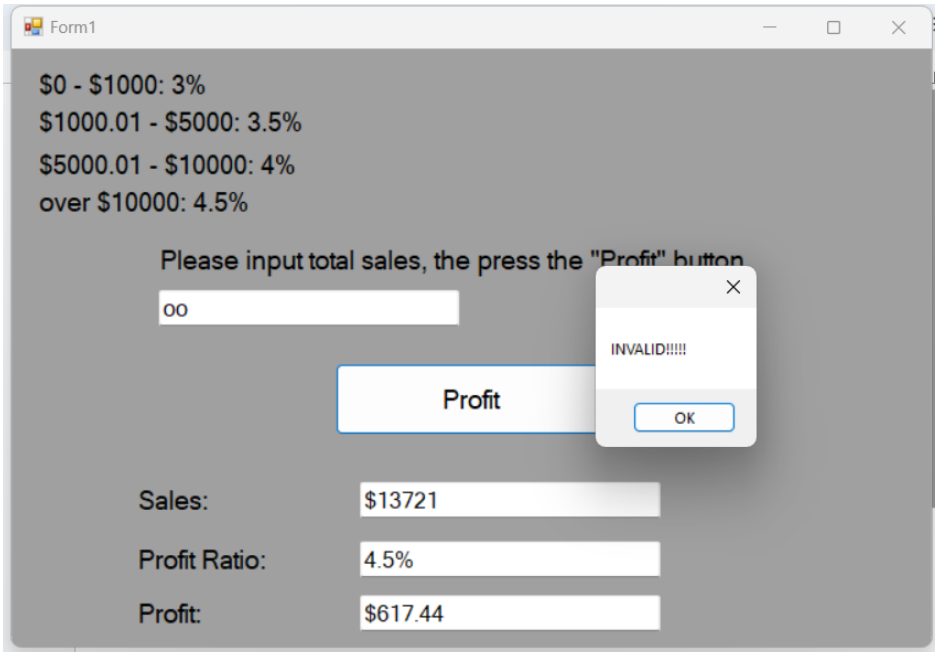
   $0 - $1000: 3%
   $1000.01_$5000: 3.5%
   $5000.01_$10000: 4%
   over $10000: 4.5%






Form1
$0 - $1000: 3%
$1000.01 - $5000: 3.5%
$5000.01 - $10000: 4%
over $10000: 4.5%
Please input total sales, the press the "Profit" button
8933
Profit
Sales:
$8933
Profit Ratio:
4%
Profit:
$357.32


Form1
$0 - $1000: 3%
$1000.01 - $5000: 3.5%
$5000.01 - $10000: 4%
over $10000: 4.5%
Please input total sales, the press the "Profit" button
13721
Profit
Sales:
$13721
Profit Ratio:
4.5%
Profit:
$617.44




```
namespace WindowsFormsApp1
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void buttonProfit_Click(object sender, EventArgs e)
        {

            double total_sales;

            bool valid = double.TryParse(textBoxInpSales.Text, out total_sales);
            if (valid)
            {
                total_sales = double.Parse(textBoxInpSales.Text);


                if ((total_sales >= 0) && (total_sales <= 1000))
                {
                    textBoxOutSales.Text = "$" + total_sales;
                    textBoxOutPR.Text = "3%";
                    double profit = total_sales * 0.03;
                    profit = Math.Round(profit, 2);
```

```
                string profitz = Convert.ToString(profit);
                textBoxOutProfit.Text = "$" + profitz;
            }
            else if ((total_sales >= 1000.01) && (total_sales <= 5000))
            {
                textBoxOutSales.Text = "$" + total_sales;
                textBoxOutPR.Text = "3.5%";
                double profit = total_sales * 0.035;
                profit = Math.Round(profit, 2);
                string profitz = Convert.ToString(profit);
                textBoxOutProfit.Text = "$" + profitz;
            }
            else if ((total_sales >= 5000.01) && (total_sales <= 10000))
            {
                textBoxOutSales.Text = "$" + total_sales;
                textBoxOutPR.Text = "4%";
                double profit = total_sales * 0.04;
                profit = Math.Round(profit, 2);
                string profitz = Convert.ToString(profit);
                textBoxOutProfit.Text = "$" + profitz;
            }
            else if (total_sales >= 10000.01)
            {
                textBoxOutSales.Text = "$" + total_sales;
                textBoxOutPR.Text = "4.5%";
                double profit = total_sales * 0.045;
                profit = Math.Round(profit, 2);
                string profitz = Convert.ToString(profit);
                textBoxOutProfit.Text = "$" + profitz;
            }
            else
            {
                textBoxOutPR.Text = "INVALID!";
                textBoxOutProfit.Text = "INVALID!";
                textBoxOutSales.Text = "INVALID!";
            }
        }
        else
        {
            MessageBox.Show("INVALID!!!!!");
        }
    }
  }
}
```