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C# LAB 01

1.
```
using System;

namespace NameAndBatchConsoleApp
{
   class Program
   {
      static void Main (string [] args)
      {
         Console.WriteLine("Welcome to the Name and Batch Console App!");

         // Read name from the user
         Console.Write("Please enter your name: ");
         string name = Console.ReadLine();

         // Read batch from the user
         Console.Write("Please enter your batch: ");
         string batch = Console.ReadLine();

         // Print the name and batch on the console
         Console.WriteLine("Your name is: " + name);
         Console.WriteLine("Your batch is: " + batch);

         Console.WriteLine("Press any key to exit...");
         Console.ReadKey();
      }
   }
}
```

2.
```
using System;

namespace CircleAreaConsoleApp
{
   class Program
   {
      static void Main (string [] args)
```

```
        {
            Console.WriteLine("Welcome to the Circle Area Calculator!");

            // Read the radius from the user
            Console.Write("Please enter the radius of the circle: ");
            string input = Console.ReadLine();

            // Parse the input string to get the radius as a double
            if (double.TryParse(input, out double radius))
    {
                // Calculate the area of the circle
                double area = CalculateCircleArea(radius);

                // Print the result
                Console.WriteLine($"The area of the circle with radius {radius} is: {area}");
            }
            else
            {
                Console.WriteLine("Invalid input. Please enter a valid number for the radius.");
            }

            Console.WriteLine("Press any key to exit...");
            Console.ReadKey();
        }

        static double CalculateCircleArea(double radius)
        {
            // Area of a circle = π * r^2
            return Math.PI * radius * radius;
        }
    }
}
```

3.

```
namespace SummationConsoleApp
{
    class Program
    {
        static void Main (string [] args)
        {
            Console.WriteLine("Welcome to the Summation Calculator!");
```

```
            // Read the first input from the user
            Console.Write("Please enter the first number: ");
            string input1 = Console.ReadLine();

            // Read the second input from the user
            Console.Write("Please enter the second number: ");
            string input2 = Console.ReadLine();

            // Parse the input strings to get the numbers as doubles
            if (double.TryParse(input1, out double number1) && double.TryParse(input2, out double
number2))
            {
               // Calculate the sum of the inputs
               double sum = number1 + number2;

               // Print the result
               Console.WriteLine($"The sum of {number1} and {number2} is: {sum}");
            }
            else
            {
               Console.WriteLine("Invalid input. Please enter valid numbers.");
            }

            Console.WriteLine("Press any key to exit...");
            Console.ReadKey();
         }
      }
   }
```

4.

```
   namespace SalaryAfterTaxConsoleApp
   {
      class Program
      {
         static void Main (string [] args)
         {
            Console.WriteLine("Welcome to the Salary After Tax Calculator!");

            // Read the salary from the user
            Console.Write("Please enter the salary of the employee: ");
            string salaryInput = Console.ReadLine();
```

```
        // Read the tax rate from the user
        Console.Write("Please enter the tax rate (in decimal form, e.g., 0.15 for 15%): ");
        string taxRateInput = Console.ReadLine();

        // Parse the input strings to get the salary and tax rate as doubles
        if (double.TryParse(salaryInput, out double salary) && double.TryParse(taxRateInput, out
doubletaxRate))
        {
            // Calculate the salary after deducting tax
            double salaryAfterTax = CalculateSalaryAfterTax(salary, taxRate);

            // Print the result
            Console.WriteLine($"The salary after tax is: {salaryAfterTax:C}");
        }
        else
        {
            Console.WriteLine("Invalid input. Please enter valid numbers.");
        }

        Console.WriteLine("Press any key to exit...");
        Console.ReadKey();
    }

    static double CalculateSalaryAfterTax(double salary, double taxRate)
    {
        // Calculate the tax amount
        double taxAmount = salary * taxRate;

        // Calculate the salary after deducting tax
        double salaryAfterTax = salary - taxAmount;

        return salaryAfterTax;
    }
  }
}
```