C# LAB 03

1.

```
using System;

public class Program
{
   public static void Main(string[] args)
   {
      // Declare a variable to store the user input number.
      int number;

      // Prompt the user to enter a number.
      Console.WriteLine("Enter a number: ");
      number = Convert.ToInt32(Console.ReadLine());

      // Check if the number is even or odd.
      if (number % 2 == 0)
      {
         Console.WriteLine("The number is even.");
      }
      else
      {
         Console.WriteLine("The number is odd.");
      }
   }
}
```

2.

```
using System;

public class Program
{
   public static void Main(string[] args)
   {
      // Declare a variable to store the user input string.
```

```csharp
        string stringInput;

        // Prompt the user to enter a string.
        Console.WriteLine("Enter a string: ");
        stringInput = Console.ReadLine();

        // Declare a variable to store the number of vowels.
        int vowelCount = 0;

        // Declare a set to store the vowels.
        string vowels = "aeiouAEIOU";

        // Iterate over the string and check if each character is a vowel.
        for (int i = 0; i < stringInput.Length; i++)
        {
            if (vowels.Contains(stringInput[i]))
            {
                vowelCount++;
            }
        }

        // Display the number of vowels.
        Console.WriteLine("The number of vowels in the string is {0}.", vowelCount);
    }
}
```

3.

```csharp
using System;

public class Program
{
    public static void Main(string[] args)
    {
        // Declare a variable to store the user input number.
        int number;

        // Prompt the user to enter a number.
        Console.WriteLine("Enter a number: ");
        number = Convert.ToInt32(Console.ReadLine());

        // Initialize a variable to store the sum of the digits.
        int sum = 0;
```

```csharp
      // Iterate over the number and add each digit to the sum.
      while (number > 0)
      {
         int digit = number % 10;
         sum += digit;
         number /= 10;
      }

      // Display the sum of the digits.
      Console.WriteLine("The sum of the digits is {0}.", sum);
   }
}
```

4.

```csharp
using System;

public class Program
{
   public static void Main(string[] args)
   {
      // Declare a variable to store the user input number.
      int number;

      // Prompt the user to enter a number.
      Console.WriteLine("Enter a positive integer: ");
      number = Convert.ToInt32(Console.ReadLine());

      // Initialize a variable to store the sum of the odd numbers.
      int sum = 0;

      // Iterate over the odd numbers from 1 to the user input number and add them to the sum.
      for (int i = 1; i <= number; i += 2)
      {
         sum += i;
      }

      // Display the sum of the odd numbers.
      Console.WriteLine("The sum of the odd numbers is {0}.", sum);
   }
}
```