

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.
    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.

```
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;

// 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.

```
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)
```

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