**LAB 3**

**Question 1**

using System;

class Program

{

static void Main()

{

Console.WriteLine("Welcome to the Even-Odd Number Checker!");

Console.Write("Enter an integer: ");

string input = Console.ReadLine();

if (int.TryParse(input, out int number))

{

if (number % 2 == 0)

{

Console.WriteLine("The number is Even.");

}

else

{

Console.WriteLine("The number is Odd.");

}

}

else

{

Console.WriteLine("Invalid input. Please enter a valid integer.");

}

Console.WriteLine("\nPress any key to exit.");

Console.ReadKey();

}

}

**Question 2**

using System;

class Program

{

static void Main()

{

Console.WriteLine("Welcome to the Vowel Counter!");

Console.Write("Enter a string: ");

string input = Console.ReadLine();

int vowelCount = CountVowels(input);

Console.WriteLine("Number of vowels: " + vowelCount);

Console.WriteLine("\nPress any key to exit.");

Console.ReadKey();

}

static int CountVowels(string text)

{

int count = 0;

foreach (char c in text)

{

if (IsVowel(c))

{

count++;

}

}

return count;

}

static bool IsVowel(char c)

{

char lowerC = char.ToLower(c);

return lowerC == 'a' || lowerC == 'e' || lowerC == 'i' || lowerC == 'o' || lowerC == 'u';

}

}

**Question 3**

using System;

class Program

{

static void Main()

{

Console.WriteLine("Welcome to the Digit Sum Calculator!");

Console.Write("Enter a number: ");

string input = Console.ReadLine();

if (int.TryParse(input, out int number))

{

int sum = CalculateDigitSum(number);

Console.WriteLine("Sum of digits: " + sum);

}

else

{

Console.WriteLine("Invalid input. Please enter a valid integer number.");

}

Console.WriteLine("\nPress any key to exit.");

Console.ReadKey();

}

static int CalculateDigitSum(int number)

{

int sum = 0;

// Convert the number to its absolute value to handle negative numbers

number = Math.Abs(number);

while (number > 0)

{

int digit = number % 10; // Get the last digit

sum += digit; // Add the digit to the sum

number /= 10; // Remove the last digit from the number

}

return sum;

}

}

**Question 4**

using System;

class Program

{

static void Main()

{

Console.WriteLine("Welcome to the Odd Number Sum Calculator!");

Console.Write("Enter a positive integer: ");

string input = Console.ReadLine();

if (int.TryParse(input, out int n) && n > 0)

{

int sum = CalculateOddNumberSum(n);

Console.WriteLine("Sum of odd numbers: " + sum);

}

else

{

Console.WriteLine("Invalid input. Please enter a valid positive integer.");

}

Console.WriteLine("\nPress any key to exit.");

Console.ReadKey();

}

static int CalculateOddNumberSum(int n)

{

int sum = 0;

for (int i = 1; i <= n; i += 2)

{

sum += i;

}

return sum;

}

}