**TUTORIAL 03**

1. Write a C# program that takes an integer as input and checks whether it is even or odd. Display the result “Even” or “Odd” accordingly.

using System;

namespace EvenOddChecker

{

class Program

{

static void Main(string[] args)

{

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

string input = Console.ReadLine();

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

{

if (IsEven(number))

{

Console.WriteLine("Even");

}

else

{

Console.WriteLine("Odd");

}

}

else

{

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

}

Console.ReadLine(); // To prevent the console from closing immediately

}

static bool IsEven(int number)

{

return number % 2 == 0;

}

}

}

2. Write a C# program that counts the number of vowels in a given string. Consider both uppercase and lowercase vowels.

namespace VowelCounter

{ class Program

{

static void Main(string[] args)

{

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

string input = Console.ReadLine();

int vowelCount = CountVowels(input);

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

Console.ReadLine(); // To prevent the console from closing immediately

}

static int CountVowels(string input)

{

int count = 0;

foreach (char c in input)

{

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';

}

}

}

3. Write a C# program to find the sum of the digits of a given number using a for loop.

namespace SumOfDigits

{

class Program

{

static void Main(string[] args)

{

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

string input = Console.ReadLine();

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

{

int sum = SumOfDigits(number);

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

}

else

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

} Console.ReadLine(); // To prevent the console from closing immediately

} static int SumOfDigits(int number)

{

int sum = 0;

while (number != 0)

{

int digit = number % 10;

sum += digit;

number /= 10;

}

return sum;

}

}

}

4. Write a C# program to calculate the sum of all the odd numbers from to a given positive integer.

namespace SumOfOddNumbers

{

class Program

{

static void Main(string[] args)

{

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

string input = Console.ReadLine();

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

{

int sum = CalculateSumOfOddNumbers(number);

Console.WriteLine("Sum of odd numbers from 1 to " + number + " is: " + sum);

}

else

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

} Console.ReadLine(); // To prevent the console from closing immediately

} static int CalculateSumOfOddNumbers(int n)

{

int sum = 0;

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

{

sum += i;

}

return sum;

}

}

}