LAB-6

Q1)Task1,2,3 2100030723

```
using System;
using System.Collections.Generic;
using System.Linq;

public static class MyExtension
{
  // Extension method to calculate the sum of the digits of an integer
  public static int SummaDigit(this int number)
  {
    int sum = 0;
    while (number != 0)
    {
      sum += number % 10;
      number /= 10;
    }
    return sum;
  }

  // Extension method to calculate the sum of a number with its reverse
  public static uint SummaWithReverse(this uint number)
  {
    uint reverseNumber = 0;
    uint n = number;

    while (n > 0)
```

```
    {
        reverseNumber = reverseNumber * 10 + n % 10;
        n /= 10;
    }

    return number + reverseNumber;
}

// Extension method to count non-letter characters in a string
public static int CountNotLetter(this string str)
{
    int count = 0;
    foreach (char c in str)
    {
        if (!char.IsLetter(c))
        {
            count++;
        }
    }
    return count;
}

// Extension method to check if a day is a weekend
public static bool IsDayOff(this DayOfWeek day)
{
    return day == DayOfWeek.Saturday || day == DayOfWeek.Sunday;
}

// Extension method to filter even positive elements from a sequence of integers
```

```
    public static IEnumerable<int> EvenPositiveElements(this IEnumerable<int> source)
    {
        return source.Where(num => num > 0 && num % 2 == 0);
    }
}

class Program
{
    static void Main(string[] args)
    {
        // Example usage of extension methods
        int n1 = 1274;
        Console.WriteLine($"Sum of digits of {n1}: {n1.SummaDigit()}");

        uint n2 = 132;
        Console.WriteLine($"Sum of {n2} with its reverse: {n2.SummaWithReverse()}");

        string s = "I like C#";
        Console.WriteLine($"Number of non-letter characters in \"{s}\":
{s.CountNotLetter()}");

        DayOfWeek day = DayOfWeek.Sunday;
        Console.WriteLine($"Is {day} a day off? {day.IsDayOff()}");

        int[] arr = { 2, -2, 3, 4, 0, 6, 1, 9 };
        Console.WriteLine("Even positive elements in array: " + string.Join(", ",
arr.EvenPositiveElements()));

        List<int> list = new List<int> { 2, 3, -4, 8, 5, 4 };
```

```
        Console.WriteLine("Even positive elements in list: " + string.Join(", ",
list.EvenPositiveElements()));

    }

}
```

OUTPUT :