

## LAB-6

### Q1)Task1,2,3

2100030408

```
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 :

The screenshot shows the Microsoft Visual Studio IDE with a C# program being debugged. The code in the editor is as follows:

```
int n1 = 1274;  
Console.WriteLine($"Sum of digits of {n1}: {n1.SummaDigit()}");
```

The output window displays the following results:

```
Sum of digits of 1274: 14  
Sum of 132 with its reverse: 363  
Number of non-letter characters in "I like ?#": 3  
Is Sunday a day off? True  
Even positive elements in array: 2, 4, 6  
Even positive elements in list: 2, 8, 4  
  
D:\bloggie mvc\sample\sample\bin\Debug\net8.0\sample.exe (process 20956) exited with code 0.  
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.  
Press any key to close this window . . .|
```

The interface also shows the Solution Explorer on the right, the Output window at the bottom, and the status bar at the bottom left indicating 'Ready'.