Lab9: LINQ

Name: Gondrala Mani Sai

Id num: 2100031545

At the Low level, you need to solve the following five tasks:

TASK 1: The character C and a sequence of non-empty strings stringList are given. Get a new sequence of strings with more than one character from the stringList, starting and ending with C.

TASK 2: A sequence of non-empty strings stringList is given. Get a sequence of ascending sorted integer values equal to the lengths of the strings included in the stringList sequence.

TASK 3: A sequence of non-empty strings stringList is given. Get a new sequence of strings, where each string consists of the first and last characters of the corresponding string in the stringList sequence.

TASK 4: A positive integer K and a sequence of non-empty strings stringList are given. Strings of the sequence contain only numbers and capital letters of the Latin alphabet. Get from stringList all strings of length K ending in a digit and sort them in ascending order.

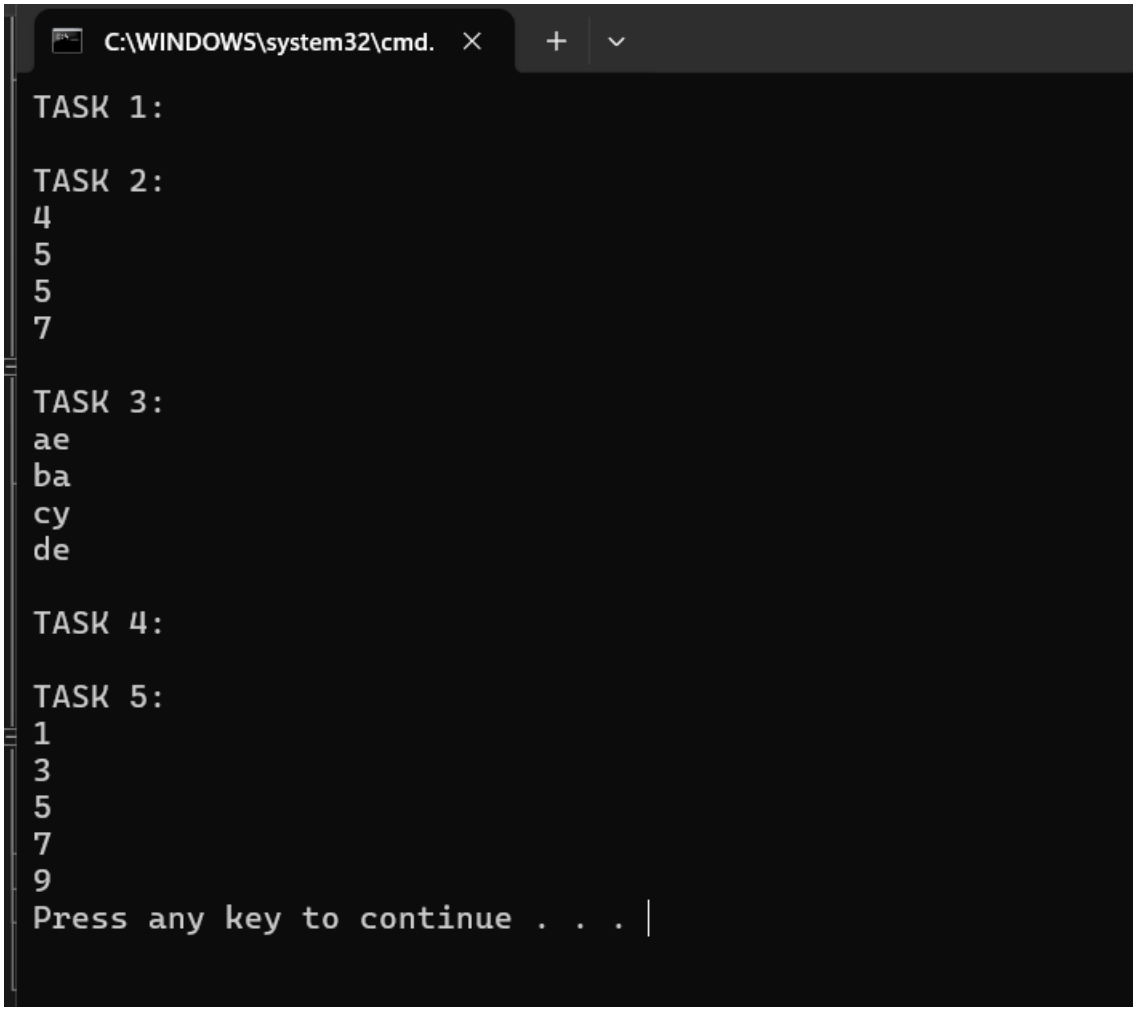
TASK 5: A sequence of positive integer values integerList is given. Get sequence of string representations of only odd integerList values and sort in ascending order.

Solution:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Lab_9
{
    internal class Program
    {
        public static void Main(string[] args)
        {
            // TASK 1
            char c = 'C';
            List<string> stringList1 = new List<string> { "Ctest", "Cat", "Dog",
"Car", "Cabbage" };

            var result1 = stringList1.Where(s => s.Length > 2 &&
s.StartsWith(Convert.ToString(c)) && s.EndsWith(Convert.ToString(c)));
            Console.WriteLine("TASK 1:");
            foreach (var item in result1)
            {
                Console.WriteLine(item);
            }
            Console.WriteLine();

            // TASK 2
```

```
            List<string> stringList2 = new List<string> { "test", "hello",
"world", "example" };

            var result2 = stringList2.Select(s => s.Length).OrderBy(n => n);
            Console.WriteLine("TASK 2:");
            foreach (var item in result2)
            {
                Console.WriteLine(item);
            }
            Console.WriteLine();

            // TASK 3
            List<string> stringList3 = new List<string> { "apple", "banana",
"cherry", "date" };

            var result3 = stringList3.Select(s => s.First().ToString() +
s.Last());
            Console.WriteLine("TASK 3:");
            foreach (var item in result3)
            {
                Console.WriteLine(item);
            }
            Console.WriteLine();

            // TASK 4
            int K = 3;
            List<string> stringList4 = new List<string> { "ABC1", "1234", "ABCD",
"XY12", "ABC2" };

            var result4 = stringList4.Where(s => s.Length == K &&
Char.IsDigit(s.Last())).OrderBy(s => s);
            Console.WriteLine("TASK 4:");
            foreach (var item in result4)
            {
                Console.WriteLine(item);
            }
            Console.WriteLine();

            // TASK 5
            List<int> integerList = new List<int> { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
};

            var result5 = integerList.Where(n => n % 2 != 0).Select(n =>
n.ToString()).OrderBy(s => s);
            Console.WriteLine("TASK 5:");
            foreach (var item in result5)
            {
                Console.WriteLine(item);
            }
        }
    }

}
```

Output:


C:\WINDOWS\system32\cmd.
TASK 1:
TASK 2:
4
5
5
7
TASK 3:
ae
ba
cy
de
TASK 4:
TASK 5:
1
3
5
7
9
Press any key to continue . . .