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

namespace LongestWord
{
    internal class Program
    {
        public static List<string> LongestWords(string[] listOfWords)
        {
            if (listOfWords == null) throw new ArgumentException("listOfWords");
            var sortedWords = listOfWords.OrderByDescending(word => word.Length).ToList();
            var dict = new HashSet<string>(sortedWords);
            var Words = new List<string>();
            foreach (var word in sortedWords)
            {
                if (isWords(word, dict))
                {
                    Words.Add(word);
                }
            }
            return Words;
        }

        private static bool isWords(string word, HashSet<string> dict)
        {
            if (string.IsNullOrEmpty(word)) return false;
```

```
    if (word.Length == 1)
    {
        if (dict.Contains(word)) return true;
        else return false;
    }
    foreach (var pair in generatePairs(word))
    {
        if (dict.Contains(pair.Item1))
        {
            if (dict.Contains(pair.Item2))
            {
                return true;
            }
            else
            {
                return isWords(pair.Item2, dict);
            }
        }
    }
    return false;
}

private static List<Tuple<string, string>> generatePairs(string word)
{
    var output = new List<Tuple<string, string>>();
    for (int i = 1; i < word.Length; i++)
    {
        output.Add(Tuple.Create(word.Substring(0, i), word.Substring(i)));
    }
```

```
        return output;
    }

    private static void Main(string[] args)
    {
        string[] listOfWords = File.ReadAllLines("C:\\Users\\nelaval\\Desktop\\NET Test 00.txt");
        List<string> Words = LongestWords(listOfWords);
        Words = Words.OrderBy(s => s.Length).ToList();
        Console.WriteLine("------- 1st Longest Word --------");
        Console.WriteLine(Words[Words.Count - 1] + " - " + Words[Words.Count - 1].Length + " letters");
        Console.WriteLine("\n");
        Console.WriteLine("------- 2nd Longest Word --------");
        Console.WriteLine(Words[Words.Count - 2] + " - " + Words[Words.Count - 2].Length + " letters");
        Console.WriteLine("\n");
        Console.WriteLine("------- Total Count of Words ---------");
        Console.WriteLine(Words.Count);
        Console.ReadLine();
    }
  }
}
```