```
// William Kelley
// SortedDictionTest.cs
// ITE365 - Lab 09(Sorted Dictionary)


using System;
using System.Collections.Generic;
using System.Text.RegularExpressions;

namespace SortedDictionaryTest
{
    class MainClass
    {
        public static void Main(string[] args)
        {
            // create sorted dictionary based on user input
            SortedDictionary<string, int> dictionary = CollectWords();
            // display sorted dictionary content
            DisplayDictionary(dictionary);
        }

        // create sorted dictionary from user input
        private static SortedDictionary<string, int> CollectWords()
        {
            // create a new sorted dictionary
            SortedDictionary<string, int> dictionary =
               new SortedDictionary<string, int>();
            Console.WriteLine("Enter a string: "); // prompt for user input
            string input = Console.ReadLine(); // get input
            // split input text into tokens
            string[] words = Regex.Split(input, @"\s+");
            // processing input words
            foreach (var word in words)
            {
                string wordKey = word.ToLower(); // get word in lowercase
                                                 // if the dictionary contains the word
                if (dictionary.ContainsKey(wordKey))
                {
                    ++dictionary[wordKey];
                } // end if
                else
                    // add new word with a count of 1 to the dictionary
                    dictionary.Add(wordKey, 1);
            } // end foreach
            return dictionary;
        } // end method CollectWords



        // display dictionary content
        private static void DisplayDictionary<K, V>(SortedDictionary<K, V> dictionary)
        {
            Console.WriteLine("\nSorted dictionary contains:\n{0,-12}{1,-12}",
               "Key:", "Value:");
            // generate output for each key in the sorted dictionary
            // by iterating through the Keys property with a foreach statement
            foreach (K key in dictionary.Keys)
                Console.WriteLine("{0,-12}{1,-12}", key, dictionary[key]);
            Console.WriteLine("\nsize: {0}", dictionary.Count);
        } // end method DisplayDictionary
    }
}
```

```
Enter a string:
Dog dog is a good good boy

Sorted dictionary contains:
Key:        Value:
a           1
boy         1
dog         2
good        2
is          1

size: 5

Press any key to continue...
```