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

namespace PA02
{

    /// <summary>
    /// Implements PA02 functionality
    /// </summary>
    class Program
    {

        /// <summary>
        /// Executes the following:
        /// 1. Reads .txt file into a list
        /// 2. Prints all words
        /// 3. Gets word ending from user, then prints all words that end with the same string
        /// 4. Gets random letters from user, prints all word containing those letters. All letters in each
word have to be provided by the user
        /// 5. Gets a word from the user, prints all words that are different by only 1 letters, from anywhere
in the word
        /// </summary>
        /// <param name="args">command-line args</param>
        static void Main(string[] args)
        {

            int i = 0;
            int x = 0;
            string s;

            //This block is to put the file into a list
            List<string> wordList = new List<string>();
            using (StreamReader reader = new
StreamReader(@"C:\Users\benja\OneDrive\Documents\Visual Studio
2015\Projects\PA02\WordList.txt"))
            {
                while (!reader.EndOfStream)
                {
                    string line = reader.ReadLine();
                    wordList.Add(line);
                }
            }

            while (x != 5)
            {
                Console.WriteLine("[1] All Words");
                Console.WriteLine("[2] Rhyming Words");
                Console.WriteLine("[3] Scrabble Words");
                Console.WriteLine("[4] Morph Words");
                Console.WriteLine("[5] Quit");
                Console.Write("Your choice: ");

                s = Console.ReadLine();
                x = int.Parse(s);
                int count = wordList.Count;
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if (x == 1)
{
   Console.WriteLine("\n\n");
   for (i = 0; i < count; i++)
   {

      //print wordlist 1, 2, 3.....
      Console.WriteLine("{0}", wordList[i]);
   }
   Console.WriteLine("");
}

if (x == 2)
{
   Console.WriteLine("\n\n");

   //read string from user into desired string
   string desired;
   Console.Write("Enter desired ending string: ");
   desired = Console.ReadLine();

   for (i = 0; i < count; i++)
   {
      if (wordList[i].EndsWith(desired))
      {
         Console.WriteLine("{0}", wordList[i]);
      }
   }
   Console.WriteLine("");
}

if (x == 3)
{
   Console.WriteLine("\n\n");
   string scrabble;
   int z, y;
   Console.Write("Enter scrabble letters: ");
   scrabble = Console.ReadLine();

   //convert scrabble array into char array so letters can be read individually
   char[] scrabble2 = scrabble.ToCharArray();

   for (i = 0; i < count; i++)
   {
      char[] word2 = wordList[i].ToCharArray();
      int check = 0;

      if (scrabble.Length >= wordList[i].Length && wordList[i].Length >= 3)
      {

         //search through all scrabble cells
         for (z = 0; z < scrabble.Length; z++)
         {

            //search through all wordlist cells
            for (y = 0; y < wordList[i].Length; y++)
            {
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                        //compare scrabble cell 0, to wordlist cell 0. Then scrabble 1, to wordlist 0....
                        if (word2[y] == scrabble2[z])
                        {
                            check = check + 1;
                            word2[y] = '0';
                            break;
                        }
                    }
                }

                //if letters matched equal letter of wordlist word, print. Means every letter appeared
once in wordlist word
                if (check == wordList[i].Length)
                {
                    Console.WriteLine("{0}", wordList[i]);
                }
            }
        }
        Console.WriteLine("");
    }


    if (x == 4)
    {
        Console.WriteLine("\n\n");
        int y;
        string start;
        Console.Write("Enter start word: ");
        start = Console.ReadLine();

        //cycle through all the words
        for (i = 0; i < count; i++)
        {
            int ctr = 0;

            //we only want words that are the same length, so check to make sure. If not, move on
            if (start.Length == wordList[i].Length)
            {

                // changing word from wordlist and scrabble string into char array to compare letters
individually
                char[] word = wordList[i].ToCharArray();
                char[] array = start.ToCharArray();

                //cycle through as many times as long as the string is, compare the two characters,
and add 1 to counter to keep track of how many characters match
                for (y = 0; y < start.Length; y++)
                {
                    if (word[y] == array[y])
                    {
                        ctr = ctr + 1;
                    }
                }

                //if there are atleast two letters that match, print the word
                if (ctr == (start.Length - 1))
                {
                    Console.WriteLine("{0}", wordList[i]);
                }
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                }
            }
            Console.WriteLine("");
        }
    }
}
}
}
```