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package holding;

import java.io.File;
import java.io.FileWriter;
import java.io.IOException;
import java.nio.file.Path;
import java.nio.file.Paths;
import java.util.ArrayList;
import java.util.Scanner;
/*
 * Keegan Grottodden
 * CS245-001
 * Holds methods which complete the assigned tasks, to be run in the main.
 *
 */
public class reader {
	//the story
	ArrayList<String> story = new ArrayList<String>();
	// a "new" unchanging copy of the story.
	ArrayList<String> n = new ArrayList<String>();
	//list of morocco-esq words
	ArrayList<String> toremove = new ArrayList<String>();
	static String fileoutput = "Assignment_1_Output.txt";
	ArrayList<String> finalout = new ArrayList<String>();
	static String file = "writingsample-1.txt";


	/*
	 * Method that reads in the file, filtering words for improper characters
	 * and adding them to the arraylist
	 */
	public void read() throws IOException {
		Path path = Paths.get(file);
		Scanner scanner = new Scanner(path);
		while(scanner.hasNext()) {
			String nword = scanner.next();
		    nword = nword.replace(",", "");
		    nword = nword.replace("™", "");
		    nword = nword.replace("'", "");
		    nword = nword.replace("œ", "");
		    nword = nword.replace(".", "");
		    nword = nword.replace("?", "");
		    nword = nword.replace("“", "");
		    nword = nword.replace("’", "");
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                nword = nword.replace("”", "");
                nword = nword.replace(",", "");
                nword = nword.replace("-", "");
                nword = nword.toLowerCase();
                        story.add(nword);
                        n.add(nword);
                }
                scanner.close();
        }
        /*
         * creates a string with has the number of words in the main story array
         * and is added to the printing array
         *
         */
        public void length() {
                finalout.add("Number of words: " + story.size());
        }
        /*
         * counts the number of both true unique and unique strings in the story,
         * creating syntax and the frequency for each word and adding it to the display array.
         */
        public void uniques() {
                int count = 1;
                int uncount =0;
                int uncount2 =0;
                finalout.add("Words and their frequency:");
                for(int i=0;i<story.size();i++) {
                        count = 1;
                        for(int j=i+1;j<story.size();j++) {
                                if(story.get(i).equals(story.get(j))){
                                        story.remove(j);
                                        count++;
                                }
                        }
                        String spacing = "-";
                        for(int k=14-story.get(i).length();k>=0;k--) {
                                spacing = spacing + "-";
                        }
                        finalout.add(story.get(i)+ spacing+ "| " + count);


                        if(count==1) {

                                uncount++;
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                }
                if(count!=1) {

                        uncount2++;
                }
        }
        int comb = uncount2+uncount;
        finalout.add("Number of true unique words: " + uncount);
        finalout.add("Number of unique words: " + comb + " (Words used at least once)");
}
/*
 * method removes and counts words having to do with morocco and its derivatives
 */
public void sp() {
        int num =0;
        toremove.add("morocco");
        toremove.add("moroccan");
        toremove.add("moroccans");
        for(int i=0;i<n.size();i++) {
                for(int j=0;j<3;j++) {
                        if(n.get(i).equals(toremove.get(j))){
                                num++;
                                n.remove(i);
                        }
                }
        }
        finalout.add("Number of Morocco-esq words removed: " + num);
}
/*
 * method creates a file, and loops through the print array, printing its contents
 * as a string in the created file.
 */
public void filewriter() throws IOException{
        //generating file
        File newfile = new File(fileoutput);

        try{

                newfile.createNewFile();
        }
        catch(Exception e) {
                System.out.println("File Already Exists");
        }
        FileWriter writer = new FileWriter(fileoutput);
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                for(int i=0;i<finalout.size();i++) {
                        writer.write( finalout.get(i)+ "\n");
                }
                writer.close();
        }
}
```