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1  /**
2  * Hangman.java
3  * for Adventure Time
4  * Created by: Jessenia Aguilar-Hernandez
5  *
6  * Mimics a game of hangman. This class is used in the final room of the game map.
7  * Beating this minigame allows the user to save the don in distress and win the
8  game.
9  * Constructor reads in a number of phrases from a text file and randomly chooses
10 one
11 * for this game.
12 */
13 import java.io.*;
14 import java.util.*;
15
16 public class Hangman{
17     //instance variable
18     private String phrase;
19     //takes in a file of hangman phrases
20     //chooses random phrase each time the constructor is called
21     public Hangman(String fileIn) {
22         phrase = "";
23         try {
24             Scanner sc = new Scanner(new File(fileIn));
25             String[] phrases = new String[10];
26             int count = 0;
27             while(sc.hasNextLine()) {
28                 phrases[count++] = sc.nextLine().toLowerCase().trim();
29             }
30             int ran = (int)(Math.random()*count);
31             phrase = phrases[ran];
32             sc.close();
33         } catch (IOException ex) {
34             System.out.println("error in reading hangman phrases file");
35         }
36     }
37 }
38
39 /**
40 * can be removed if we have graphics take the place but meanwhile it will show
41 these little figures
42 * @return Returns a graphic according to how many mistakes the player has made
43 */
44 public String hangmanGraphics(int w){
45     String[] hG = {
46         "\n" +
47         "  |  \n" +
48         "  |  \n" +
49         "  |  \n" +
50         "  |  \n" +
51         "  |  ,
52
53         "\n" + "  |  \n" +
54         "  |  0 \n" +
55         "  |  \n" +
56         "  |  \n" +
57         "  |  ,
58
59         "\n" + "  |  \n" + "  |  \n" +
60         "  |  0 \n" +
61         "  |  / \n" +
62         "  |  \n" +
63         "  |  ,
64
65         "\n" + "  |  \n" + "  |  \n" +
66         "  |  0 \n" +
67         "  |  / \n" +
68         "  |  \n" +
69         "  |  ,
70
71         "\n" + "  |  \n" + "  |  \n" +
72         "  |  0 \n" +
73         "  |  / \n" +
74         "  |  \n" +
75         "  |  ,
76
77         "\n" + "  |  \n" + "  |  \n" +
78         "  |  0 \n" +
79         "  |  / \n" +
80         "  |  \n" +
81         "  |  ,
82
83         "\n" + "  |  \n" + "  |  \n" +
84         "  |  0 \n" +
85         "  |  / \n" +
86         "  |  \n" +
87         "  |  ,
88
89         "\n" + "  |  \n" + "  |  \n" +
90         "  |  0 \n" +
91         "  |  / \n" +

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92         "\n" / \ \ \n"+
93         "\n"+
94         "GAME OVER!\n"
95
96
97     };
98     return (hG[w]);
99 }
100
101
102 /**
103  * @return Returns a new Linked List of each unique letter in the phrase
104  * */
105 public LinkedList<String> makeUniqueLetters(){
106     LinkedList<String> uqLetters = new LinkedList<String>();
107
108     //makes sure no spaces are considered a character that needs to be guesses
109     String temp = phrase.replace(" ", "");
110
111     int i = 0;
112
113     while (temp.length() > 0 ){
114         //gets the first character always and turns it into a string
115         String ch = Character.toString(temp.charAt(0));
116
117         uqLetters.add(ch);
118
119         //gets rid of all characters that equal the first character
120         //so that there will not be duplicates
121         temp = temp.replace(ch, "");
122
123         i++;
124     }
125     return uqLetters;
126 }
127
128 /**
129  * @return Returns a string that again is for aesthetic purposes that can be
130  * changed in gui
131  * string represents the letters that have been guessed correctly and letters
132  * that need to be guessed still
133  * */
134 public String displayDisguise(LinkedList<String> foundLetters){
135     String s = "";
136
137     for (int i = 0; i < phrase.length(); i++){
138         String charact = Character.toString(phrase.charAt(i));
139
140         if (foundLetters.contains(charact)){
141             s += charact;
142         }else if (phrase.charAt(i) == ' '){
143             s += " ";
144         }else{
145             s += "_";
146         }
147     }
148
149     return s;
150 }
151
152 /**
153  * @return Returns the boolean so if at the end of the game if the person did not
154  * pass
155  * they can not enter the final room and will return true if they have and so the
156  * will be able to finally enter
157  * */
158 public boolean playHangman(){
159     int i = 0;
160
161     boolean wonLost = false;
162     LinkedList<String> uniqueLetters = makeUniqueLetters();
163     LinkedList<String> guesses = new LinkedList<String>();
164     LinkedList<String> correctGuesses = new LinkedList<String>();
165     String gueDisplay = displayDisguise(guesses);
166
167     System.out.println("You are almost there! All you have to do now is win this
168     game by guessing the"+
169         " correct letters in the phrase"+
170         " Your boo's life hangs on a thread. Hurry" +
171         " up and save him!");
172
173     //prints out the aesthetics
174
175     /Users/sl60540/Desktop/FINALPROJECT_lluo_jaguilar_avalles/FinalProject/Hangman.java

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183     System.out.println(hangmanGraphics(i));
184     System.out.println(gueDisplay);
185
186     //7 is the number of failed guesses they are allowed to have
187     while (i < 7){
188
189         System.out.println("What is your guess? ");
190         Scanner sc = new Scanner(System.in);
191         String gue = sc.next();
192
193         //stops user from inputting an already guesses letter, other character or more
194         //than one character
195         if (guesses.contains(gue.toLowerCase()) || !Character.isLetter(gue.charAt(0))
196         || gue.length() > 1){
197             System.out.println("*** Invalid input. Make sure to check that the input is
198             one letter and has not been used before.");
199             continue;
200         }else{
201             gue = gue.toLowerCase();
202             guesses.add(gue);
203
204             //checks if the inputted char is in the phrase and updates aesthetics
205             if(uniqueLetters.contains(gue)){
206                 correctGuesses.add(gue);
207                 gueDisplay = displayDisguise(correctGuesses);
208             }else{
209                 i++;
210             }
211             //prints updated aesthetics
212             System.out.println(hangmanGraphics(i));
213             System.out.println(gueDisplay);
214             System.out.println("Guesses : "+ guesses);
215         }
216
217         if(gueDisplay.equals(phrase)){
218             wonLost = true;
219             sc.close();
220             break;
221             //i dont think this one is needed???-----
222         }else if(i == 6){
223             sc.close();
224             break;
225         }
226     }
227
228     return wonLost;
229 }
230
231 public static void main(String[] args){
232     Hangman ugh = new Hangman("hello world");
233     /*
234     ugh.makeUniqueLetters();
235     ugh.displayDisguise();
236
237     ugh.addGuess("a");
238     ugh.addGuess("b");
239     ugh.addGuess("c");
240     ugh.addGuess("d");
241
242     ugh.displayDisguise();
243     ugh.addGuess("d");
244     ugh.addGuess("o");
245     ugh.addGuess("l");
246     System.out.println("\nSecond time\n");
247     ugh.displayDisguise();
248     */
249     //hangmanGraphics();
250     System.out.println(ugh.playHangman());
251 }
252 }
253 }
254 }

```