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managewords.php

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1  <?php
2  /**
3   * @author Jon Beck
4   * @version 17 Feb 2022
5   */
6  error_reporting(E_ALL);
7  ini_set('display_errors', '1');
8
9  define('DEFINITION_FILENAME', 'words.txt');
10 const PARTS = array('adjective', 'adverb', 'noun', 'verb');
11 define('WORD_PATTERN', '/^[A-Za-z]+$/');
12 define('DEF_PATTERN', '/^[A-Za-z,; -]+$/');
13
14 /**
15  * read a file tab-separated lines into an array of arrays
16  * @param $filename the name of the file to read
17  * @return an array of arrays with the contents of the file
18  */
19 function read_file_into_array($filename)
20 {
21     $file = fopen($filename, 'r');
22     $array = array();
23     while (($line = fgets($file)) !== false)
24     {
25         $array[] = explode("\t", rtrim($line));
26     }
27     return $array;
28 }
29
30 /**
31  * convert an array of 3-element arrays into tab-separated
32  * strings and output the result to a file
33  * @param $filename the name of the file to write
34  * @param $array the array of arrays
35  */
36 function put_a_file($filename, $array)
37 {
38     $file = fopen($filename, 'w');
39     foreach ($array as $row)
40     {
41         fwrite($file, implode("\t", $row) . PHP_EOL);
42     }
43     fclose($file);
44 }
45
46 /**
47  * add a three-element array to an array, in alphabetic order
48  * by concatenation of the first two elements
49  * @param $words the original array, passed by reference
50  * @param $word the first element to add
51  * @param $part the second element to add
52  * @param $definition the third element to add
53  * @return true if the add was successful; false otherwise
54  */
55 function add_an_entry(&$words, $word, $part, $definition)
56 {
57     $word_and_part = $word . $part;
58     if (strcmp($word_and_part, end($words)[0] . end($words)[1]) > 0)
59     {
60         $words[] = [$word, $part, $definition];
61         return true;
62     }
63
64     if (strcmp($word_and_part, $words[0][0] . $words[0][1]) < 0)
65     {
66         array_unshift($words, [$word, $part, $definition]);
67         return true;
68     }
69
70     $spot_to_insert = 0;
71     while ($spot_to_insert < count($words) &&
72           strcmp($word_and_part,
73                $words[$spot_to_insert][0] . $words[$spot_to_insert][1]) > 0)

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74     {
75         $spot_to_insert++;
76     }
77
78     if (strcmp($word, $words[$spot_to_insert][0]) == 0 &&
79         strcmp($part, $words[$spot_to_insert][1]) == 0)
80     {
81         return false; // duplicate
82     }
83
84     for ($index = count($words) - 1; $index >= $spot_to_insert; $index--)
85     {
86         $words[$index + 1] = $words[$index];
87     }
88
89     $words[$spot_to_insert] = [$word, $part, $definition];
90     return true;
91 }
92
93 /**
94  * remove an entry from an array of arrays, in which the first
95  * two elements match the arguments
96  * @param $words the array, passed by reference
97  * @param $word the first element to match
98  * @param $part the second element to match
99  * @return true if the deletion was successful; false otherwise
100 */
101 function delete_an_entry(&$words, $word, $part)
102 {
103     $found = false;
104     $index = 0;
105     $word_and_part = $word . $part;
106
107     while ($index < count($words) && !$found)
108     {
109         if (strcmp($word_and_part, $words[$index][0] . $words[$index][1]) == 0)
110         {
111             $found = true;
112         }
113         else
114         {
115             $index++;
116         }
117     }
118
119     if ($found)
120     {
121         unset($words[$index]);
122         return true;
123     }
124     return false;
125 }
126
127 $deleting = false;
128 $adding = false;
129 $wordlist = read_file_into_array(DEFINITION_FILENAME);
130 $success = false;
131
132 if (isset($_POST))
133 {
134     if (isset($_POST['submit']) && $_POST['submit'] == 'add' &&
135         isset($_POST['word']) && preg_match(WORD_PATTERN, $_POST['word']) &&
136         isset($_POST['part']) && in_array($_POST['part'], PARTS, true) &&
137         isset($_POST['definition']) &&
138         preg_match(DEF_PATTERN, $_POST['definition']))
139     {
140         $adding = true;
141         $word = strtolower($_POST['word']);
142         $success = add_an_entry($wordlist,
143                                $word,
144                                $_POST['part'],
145                                $_POST['definition']);
146     }

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147 elseif (isset($_POST['submit']) && $_POST['submit'] == 'delete' &&
148           isset($_POST['delword'])) &&
149           preg_match('/^[A-Za-z]+$/', $_POST['delword']) &&
150           isset($_POST['delpart']) &&
151           preg_match('/^[a-z]+$/', $_POST['delpart']))
152 {
153     $deleting = true;
154     $delword = strtolower($_POST['delword']);
155     $delpart = $_POST['delpart'];
156     $success = delete_an_entry($wordlist,
157                               $delword,
158                               $delpart);
159 }
160
161 if ($success)
162 {
163     put_a_file(DEFINITION_FILENAME, $wordlist);
164 }
165 }
166 ?>
167 <!DOCTYPE html>
168 <html>
169     <head lang="en">
170         <title>Manage Vocab</title>
171         <meta name="author" content="Jon Beck" />
172         <meta charset="utf-8" />
173         <link rel="stylesheet" href="managewords.css" />
174     </head>
175
176     <body>
177         <h1>Manage GRE Vocabulary Word File</h1>
178
179         <?php if ($adding && $success): ?>
180             <p class="success"><?= $word ?> successfully added</p>
181
182         <?php elseif ($adding && !$success): ?>
183             <p class="fail">Failed to add <?= $word ?></p>
184
185         <?php elseif ($deleting && $success): ?>
186             <p class="success">
187                 <?= $delword ?>: <?= $delpart ?> successfully deleted
188             </p>
189
190         <?php elseif ($deleting && !$success): ?>
191             <p class="fail">
192                 Failed to delete <?= $delword ?>: <?= $delpart ?>
193             </p>
194         <?php endif; ?>
195
196         <form method="post" action="managewords.php">
197             <div id="add_delete_grid">
198                 <div>
199                     <label for="word">Word: </label>
200                 </div>
201                 <div>
202                     <input type="text" id="word" name="word" placeholder="word" />
203                 </div>
204             </div>
205
206             <div>
207                 <label for="delword">Word: </label>
208             </div>
209             <div>
210                 <input type="text" id="delword" name="delword" placeholder="word" />
211             </div>
212
213             <div>
214                 <label for="part">Part of Speech: </label>
215             </div>
216             <div>
217                 <select id="part" name="part">
218                     <?php foreach (PARTS as $value) : ?>

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220         <option value="<?= $value ?>"><?= $value ?></option>
221     <?php endforeach; ?>
222     </select>
223 </div>
224
225 </div></div>
226
227 <div>
228     <label for="delpart">Part of Speech: </label>
229 </div>
230 <div>
231     <select id="delpart" name="delpart">
232         <?php foreach (PARTS as $value) : ?>
233             <option value="<?= $value ?>"><?= $value ?></option>
234         <?php endforeach; ?>
235     </select>
236 </div>
237
238 <div>
239     <label for="definition">Definition: </label>
240 </div>
241 <div>
242     <input type="text" id="definition" name="definition"
243           placeholder="definition" />
244 </div>
245
246 </div></div> </div></div> </div></div>
247
248 <div id="add_button_cell">
249     <button type="submit" name="submit" value="add">
250         Add
251     </button>
252 </div>
253
254 <div id="del_button_cell">
255     <button type="submit" name="submit" value="delete">
256         Delete
257     </button>
258 </div>
259 </div> <!-- end of add-delete grid -->
260
261 <hr />
262
263 <dl>
264     <?php
265         $line_count = 0;
266         $wordlist = read_file_into_array(DEFINITION_FILENAME);
267         foreach ($wordlist as $row): ?>
268             <dt>
269                 <?= $row[0] ?>:
270                 <span class="partofspeech"><?= $row[1] ?></span>
271             </dt>
272
273             <dd>
274                 <?= $row[2] ?>
275             </dd>
276
277             <?php $line_count++;
278             endforeach; ?>
279
280         </dl>
281     </form>
282 </body>
283 </html>

```