

CSSE 290 Homework 4 Word Search puzzle (40 homework points)

Word search puzzles are a popular pastime. In the simplest form, the player is presented with a rectangular grid of letters and a list of words that can be found in the grid. Each word is in a straight line horizontally, vertically, or diagonally (8 possible directions).

Puzzle file format: The data for each puzzle will be contained in a single text file (extension `.ws`). The first lines will contain the grid of letters. Then an empty line, then the words to search for, one per line. All of the files will be contained in a folder named `puzzles`. The provided file (`northlands.ws`) is shown at the right.

Your code: In your HW4 folder, you should have a main page, `ws.php`, that allows the user to choose from available puzzles, then creates a page that uses JavaScript to allow the user to interact with the puzzle.

The user should be able to use the mouse to select words that she/he finds (for example, clicking on the first letter of the word, and then on the last letter). The page should show a visual indication of which words have been found (and where), and which words still need to be found. When all words have been found, a congratulatory message should appear

There should be a way for a user to get a hint (for example, clicking on a word causes a randomly-chosen letter from that word on the grid to be highlighted). In terms of appearance and other features, be creative.

For display purposes, you may assume that the grid will have at most 20 rows and 20 columns (a grid is rectangular, but is not required to be square), and that there are at most 30 words to look for. Your page should work well on a 1280 x 1024 screen.

Additional puzzles: The first ten students to submit an additional (correct) puzzle will earn 8 extra-credit points. Just email the file to me as an attachment in a message whose subject line is **290 puzzle file**.

Submitting your work. The new server, `wwwuser.csse.rose-hulman.edu`, is now set up, and we will use it for submission. It uses on THE MA/CSSE department's AFS file system, so you will need your password for that system in order to log on or to access your web pages. You should have received an email (from "root" or from Mike McLeish) containing your password on or about March 26. Right now, you should make sure that you can successfully log on using an FTP program and that you can see your `Public/HTML/webProgramming` folder. That is where you should put your entire HW4 folder when you are ready to turn it in. If you can't log in or can't see that folder, let me know immediately.

```
grumblebabarkni
retnawhiporpull
obzlrnofangdac
woifsledgsisrto
lintrvonbnstick
freezenisotrnu
ciortsbfgwrutxj
harshiwohnhgol
uzanplobutogreb
noqustuzsnwlixs
gesbprnakulerth
ezmeltcpyerjqui
riaribxlztrailv
oprnstreamcadxe
sttbxstubbornt
```

```
bark
fang
freeze
gold
growl
grumble
harsh
howl
hunger
husky
melt
pull
shiver
sled
smart
snow
stick
stream
struggle
stubborn
trail
whip
wolves
wound
```