CSSE 290  Homework 5   Word Search puzzle (80 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 (eight 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 the provided HW5 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 in a 1280 x 1024 browser window.

**Submitting your work.** You should add your entire HW5 folder to your Public/HTML/webProgramming folder on wwwuser.csse.rose-hulman.edu.  Be sure to test your submitted code after you submit it.  The URL should be (substitute your actual username): http://wwwuser.csse.rose-hulman.edu/~username/webProgramming/HW5/ws.php .

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grumblebabarkni
retnawhiporpull
obzlronofangdac
woifsledgsisrto
lintrvonbnstick
freezenisotrnus
ciortsbfgwrutxj
harshiwohnhgold
uzanplobutogreb
noqustuzsnwlixs
gesbprnakulerth
ezmeltdpyerjqui
riaribxlztrailv
oprnstreamcadxe
sttbxstubborntr

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