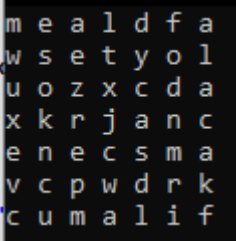


Homework Description: Word Puzzle

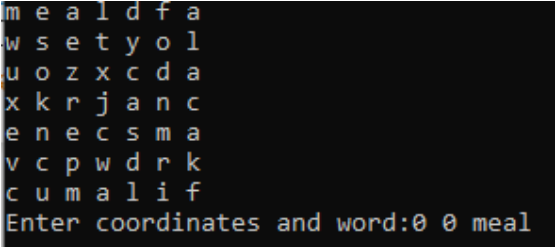
A **word** puzzle is a word game that consists of the letters of words placed in a grid, which usually has a rectangular or square shape. The objective of this puzzle is to find and mark all the words hidden inside the box. The words may be placed horizontally, vertically, or diagonally. Many word search puzzles have a theme related to all the hidden words, such as food, animals, or colors.

	<p>Example Founded Words:</p> <p>Meal [0,0] -> [0,3]</p> <p>Scene [4,4] -> [4,0]</p> <p>Row [3,2] -> [1,1]</p>
7x7 Example board	

Part 1 (Board Build Part): Build a 15x15 board randomly chosen from given “wordlist.txt” file. You need to take random 7 words. The words may be placed horizontally, vertically, or diagonally (8 directions). It should be changed each run. Fill the gaps with random characters.

Part 2 (Game Part):

- The player should enter the first coordinates of a word and word that the player found.


- If a word is founded in this coordinate, you need to replace the word with X and give 2 points to the user. If the word is not founded, you need to give a warning message like “Wrong choice! You have only 2 lefts.” The player can only make three mistakes.

```
X X X X d f a
w s e t y o l
u o z x c d a
x k r j a n c
e n e c s m a
v c p w d r k
c u m a l i f
Founded! You got 2 points. Your total points: 2
Enter coordinates and word:
```

- The player can terminate the game by writing the ":q" command, three mistakes, or finding all the words. If the game is terminated, you need to write the total points that the player got.
- A common strategy for finding all the words is to go through the puzzle left to right (or right to left) and look for the word's first letter. After finding the letter, one should look at the eight surrounding letters to see whether the following letter of the word is there. One can then continue this method until the entire word is found.