

Cross Word Puzzle

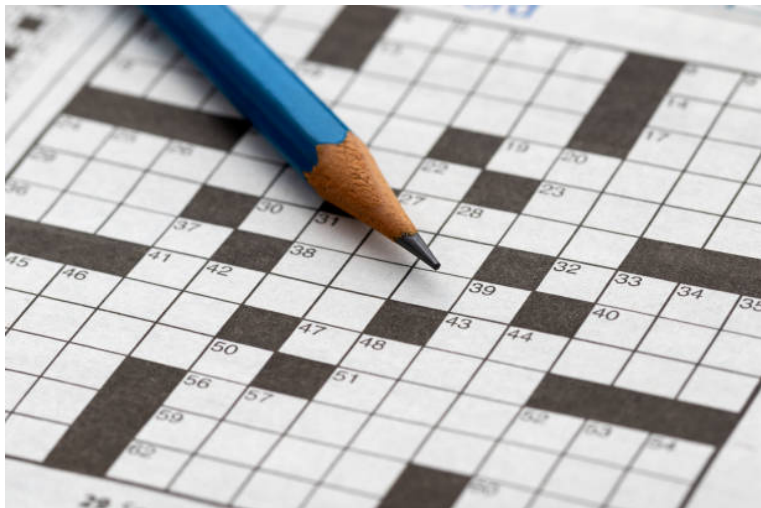
Team : 02

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Introduction

- Crossword puzzle, popular form of word puzzle.
- It was first published in England on December 21, 1913 by Arthur Wynne.



- A crossword is a word puzzle that usually form of a square or a rectangular grid of white- and black-shaded squares.
- The answer words and phrases are placed in the grid from left to right ("Across") and from top to bottom ("Down").

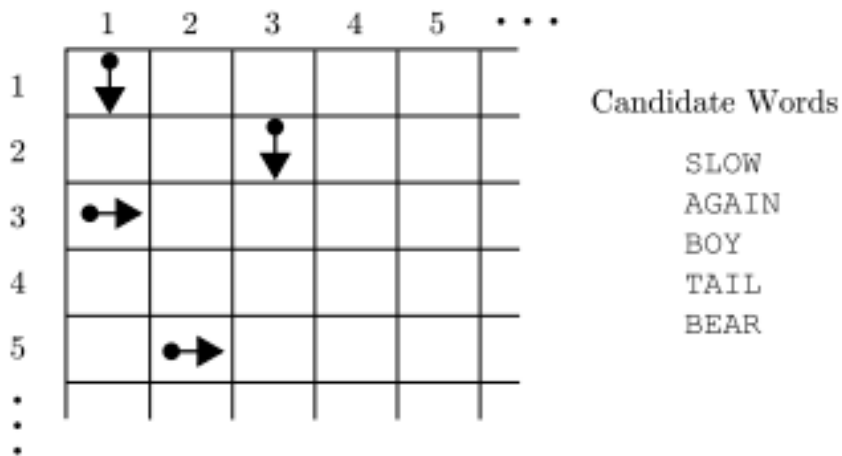


Figure 1: Corner of Example Puzzle

Problem statement

- The puzzle has a certain number of "slots" where a word can be placed. Each slot is represented by the row and column number of the square where the slot begins, and the direction in which the slot extends from its initial square.

	1	2	3	4	5	...
1	B					
2	E		T			
3	A	G	A	I	N	
4	R		I			
5		S	L	O	W	
...						

Extra word:

BOY

Figure 2: Example Solution

Approach

- The game's goal is to fill the white squares with letters, forming words or phrases, by solving clues, which lead to the answers.

Procedure

- Sort all the words by length, descending.
- Take the first word and place it on the board.
- Take the next word.

- Search through all the words that are already on the board and see if there are any possible intersections with this word.
- If there is a possible location for this word, loop through all the words that are on the board and check to see if the new word interferes..

- If this word doesn't break the board, then place it there and go to step 3, otherwise, continue searching for a place .
- Continue this loop until all the words are either placed or unable to be placed.

Learnings

- Team Work.
- Time management.
- Dividing and knowing their own abilities.
- Writing the piece of code.

Challenges

- Challenge 1 : Finding the Algorithm
- Challenge 2 : Importing the libraries.
- Challenge 3 : Sorting the words.
- Challenge 4 : Intersection of words in random.

- Challenge 5 : Generating the grid with empty spaces.
- Challenge 6 : Inserting of words in the grid in random.
- Challenge 7 : Cropping the grid with respective input.
- Challenge 8 : Subtracting of list to get impossible words.

Git Repository

The screenshot shows a GitHub repository page for 'vaishnavibilla / cross-word-code'. The repository is private and has 1 branch (main) and 0 tags. The page displays a list of files and their commit history.

Repository: **vaishnavibilla / cross-word-code** (Private) Unwatch

Navigation: [Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Security](#) [Insights](#) [Settings](#)

Branches: [main](#) 1 branch 0 tags [Go to file](#) [Add file](#) [Code](#)

Commit history:

File	Commit Message	Time Ago
.gitignore	Initial commit	5 days ago
LICENSE	Initial commit	5 days ago
README.md	Create README.md	4 minutes ago
image 1.jpg	Add files via upload	17 minutes ago
image 2.jpg	Add files via upload	17 minutes ago
image 3.png	Add files via upload	17 minutes ago
image 4.png	Add files via upload	17 minutes ago
project code	Update project code	4 minutes ago
project description	Update project description	11 minutes ago
project presentation	Create project presentation	3 minutes ago

Packages

- Numpy
- Math
- Random
- Itertools

Platforms used

- Operating System : Linux
- Programming Languages : Pycharm , Python(3.2), Latex
- Hosting Platform : Git lab and Git hub.

Statistics

- Number of lines : 188
- Number of functions : 21
- Number of libraries : 5

References



<https://github.com/vaishnavibilla/cross-word-code>.



<https://en.wikipedia.org/wiki/Crossword>



<https://www.youtube.com/watch?v=bSZMj>

THANK YOU