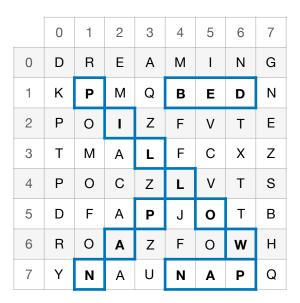
## Search words in a grid

Given a 2D grid of characters and a word, find all occurrences of the given word in the grid. A word can be matched in all 8 directions at any point. Word is said be found in a direction if all characters match in this direction (not in zig-zag form).

The 8 directions are left right up, down and 4 diagonal directions.

## **Example:**



In the grid with bold font we can find the words: {DREAMING, PILLOW, BED, NAP}

Input	Output
NAP	Pattern found at (7,1) at North-East direction Pattern found at (7,4) at East direction
PILLOW	Pattern found at (1,1) at South-East direction
BED	Pattern found at (1, 4) at East direction
REST	No such word found in the given grid