Word Search Jumble

Summary

A popular puzzle format consists of random letters situated in a grid of rows and columns called a jumble. Inside the jumble there are words that are hidden that you can find.

Objective

The objective of this word search task is to be given a target word and a jumble of letters stored in a 2D string array and determine if the word is in the jumble. The 2D array contains the grid of characters stored as type string (see example below).

Guidelines

A word search should occur in 3 directions:

1. Horizontal (left to right) ➡️
2. Vertical (top to bottom) ⬇️
3. Diagonal (top-left to bottom-right) ↘️

If the word is in the jumble in any direction provided above, return the position of the word's starting letter as X, Y coordinates (starting from 0, 0).

If the word is not in the jumble, return -1, -1

Example

T	Y	N	A	U	U	H	T	W	G	C	O	D	E
U	C	G	D	P	H	G	E	F	Y	Z	X	U	D
Y	O	S	E	A	P	E	S	I	W	E	B	E	E
P	M	Q	V	L	P	L	T	L	E	K	F	G	P
T	P	P	E	K	A	P	I	E	Z	E	O	V	L
M	I	B	L	V	U	C	N	C	Z	M	H	S	O
A	L	J	O	A	K	P	G	H	A	M	N	Z	Y
A	E	W	P	R	O	G	I	K	P	T	G	S	S
R	R	S	E	Y	P	Y	H	L	Q	B	I	R	F
S	Q	W	R	Y	O	X	J	V	Z	P	G	O	J
E	J	V	M	O	D	U	L	E	N	E	L	E	N
O	E	N	V	I	R	O	N	M	E	N	T	X	L
G	W	C	Q	P	Z	M	W	A	J	K	Y	R	R
R	U	G	G	X	Z	M	O	Q	Y	C	M	W	L

Data format:

jumble[0][0] == "T"
jumble[0][1] == "Y"
jumble[0][2] == "N"
jumble[1][0] == "U"
jumble[1][1] == "C"
jumble[1][2] == "G"
....

INPUT
word = "CODE"
jumble = (2D array pictured above)

OUTPUT
arr = [10, 0]

Returns:

int array: The x, y coordinates of the start letter of the word in any search direction provided above

Notes

If you're not sure of an optimized solution then consider a brute force approach.