

Word-Find

A popular diversion in the United States, 'Word-Find', asks the player to find each of a given set of words in a square table filled with single letters. A word can read horizontally, vertically, or diagonally in any direction. Design a brute-force algorithm for this game and implement it as a computer program.

Use the **Cashiers, North Carolina** example as a test case.

The input should be some word (or phrase) from the word/phrase list.

The output should specify the location of the first letter and direction that indicates the word's orientation.

Example Input/Output:

Search for: HIKING

HIKING was found starting at 9, 6 and oriented South.

Search for: MAPLE

MAPLE was not found.

Search for: RIVER

RIVER was found starting at 5, 7 and oriented Southwest.

Modify the program so that it reads a datafile which contains the word/phrase list and outputs a table with the appropriate location information for each item in the datafile.

CASHIERS, NORTH CAROLINA

The Cashiers region of western North Carolina, on Lake Glenville, lies at 3,500 feet above sea level, guaranteeing cool summers and mild winters.

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

GROCERY STORE

HIKING

HONEY

INN

JAM

JELLY

LAKE

LODGE

MARKET

MOUNTAIN

POND

PRESERVES

RELAXATION

RESORT

RIVER

SCENERY

SERENITY

SPA

STREAM

TROUT

VACATION

VALLEY

VIEW

WALLEYE

WILDERNESS

ANTIQUE

BASS

BOAT

BREAM

CABIN

CAFE

CAMPSITE

CRAFTS

CROQUET

DOWNTOWN

DUCK

FISHING

GEESE

GOLF