

**Problem Statement:**

Given a 3X3 matrix of letters, write a program to find all the possible words that can be formed where each pair of consecutive letters in the word are in adjacent cells (horizontal or vertical).

In order to solve the problem, implement and utilize the two following methods:

1. IsValidWord, that checks if a given string is a word in the dictionary.
2. IsPrefix, that checks if a sequence of characters is the beginning of any word in the dictionary

For purposes of this problem, assume a rudimentary dictionary that contains the words "art", "nut" and "hut".

Utilize the following matrix to prove your algorithm:

r	t	t
a	y	u
i	n	h

In this instance, your program should return/output the words "art" and "hut."

Below are example outputs of calling the required methods on some words:

IsValidWord("art") = true;

IsValidWord("any") = false;

IsPrefix("hu") = true;

IsPrefix("hut") = false;

IsPrefix("n") = true;