Word Boggle

Given a dictionary, a method to do lookup in dictionary and a M x N board where every cell has one character. Find all possible words that can be formed by a sequence of adjacent characters. Note that we can move to any of 8 adjacent characters, but a word should not have multiple instances of same cell.

Example:

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Input: dictionary[] = {"GEEKS", "FOR", "QUIZ", "GO"};
       boggle[][]   = {{'G','I','Z'},
                       {'U','E','K'},
                       {'Q','S','E'}};
Output:  Following words of dictionary are present
         GEEKS, QUIZ
```

Input:
The first line of input contains an integer T denoting the no of test cases . Then T test cases follow. Each test case contains an integer x denoting the no of words in the dictionary. Then in the next line are x space separated strings denoting the contents of the dictinory. In the next line are two integers N and M denoting the size of the boggle. The last line of each test case contains NxM space separated values of the boggle.

Output:
For each test case in a new line print the space separated sorted distinct words of the dictionary which could be formed from the boggle. If no word can be formed print -1.

Constraints:
1<=T<=10
1<=x<=10
1<=n,m<=7

Example:

Input:

1

4

GEEKS FOR QUIZ GO

3 3

G I Z U E K Q S E

Output:

GEEKS QUIZ