







Keyboard Row

Given a List of words, return the words that can be typed using letters of **alphabet** on only one row's of American keyboard like the image below.

~ `	! 1	@ 2	# 3	\$ 4	% 5	^ 6	& 7	* 8	(9) 0	- _	+ =	 Backspace
Tab 	Q	W	E	R	T	Y	U	I	O	P	{ [}]	 \ ~
Caps Lock 	A	S	D	F	G	H	J	K	L	:	" '	Enter 	
Shift 	Z	X	C	V	B	N	M	< ,	> .	? /	Shift 		
Ctrl	Win Key	Alt								Alt	Win Key	Menu	Ctrl

Example 1:

Input: ["Hello", "Alaska", "Dad", "Peace"]

Output: ["Alaska", "Dad"]

Note:

1. You may use one character in the keyboard more than once.
2. You may assume the input string will only contain letters of alphabet.

Solution 1

```
public String[] findWords(String[] words) {  
    return Stream.of(words).filter(s -> s.toLowerCase().matches("[qwertyuiop]*|[a  
sdfghjkl]*|[zxcvbnm]*")).toArray(String[]::new);  
}
```

written by [lixx2100](#) original link [here](#)

Solution 2

```
public class Solution {
    public String[] findWords(String[] words) {
        String[] strs = {"QWERTYUIOP", "ASDFGHJKL", "ZXCVBNM"};
        Map<Character, Integer> map = new HashMap<>();
        for(int i = 0; i<strs.length; i++){
            for(char c: strs[i].toCharArray()){
                map.put(c, i);//put <char, rowIndex> pair into the map
            }
        }
        List<String> res = new LinkedList<>();
        for(String w: words){
            if(w.equals("")) continue;
            int index = map.get(w.toUpperCase().charAt(0));
            for(char c: w.toUpperCase().toCharArray()){
                if(map.get(c)!=index){
                    index = -1; //don't need a boolean flag.
                    break;
                }
            }
            if(index!=-1) res.add(w);//if index != -1, this is a valid string
        }
        return res.toArray(new String[0]);
    }
}
```

written by [Chidong](#) original link [here](#)

Solution 3

Just regular expressions...

Ruby

```
def find_words(words)
  words.select { |w| w =~ /^( [qwertyuiop]* [asdfghjkl]* [zxcvbnm]*)$/i }
end
```

Python

```
def findWords(self, words):
    return filter(re.compile('( ?i)( [qwertyuiop]* [asdfghjkl]* [zxcvbnm]*)$').match, words)
```

written by [StefanPochmann](#) original link [here](#)

From [LeetCoder](#).