## Texting

Phones with keypads have letters associated with the buttons, allowing us to input text, as shown in the image on the right. To input a letter, you press the button with that letter. Pressing the button once produces the first letter, pressing it quickly twice produces the second letter, and so on. For example, pressing 2 gives 'a', pressing 22 gives 'b', and pressing 22 gives 'c'. If you want two 'a's in a row,



you need to press **2**, wait for half a second, then press **2** again. To input a space, press the **0** button. To input special characters or change between uppercase and lowercase, you would use the **\*** and **#** buttons (we will ignore these for this problem).

In this task, write two functions:

- text2keys (text) receives a string text and returns a string of numbers and spaces (spaces represent pauses between key presses) that would be pressed to input the text. For example, text2keys ("Ok, Python") will return "666 55 0 7 999 8 44 666 66".
  - text may contain both uppercase and lowercase letters, but treat them as the same.
  - o Ignore any non-English alphabetic characters or spaces in **text**.
- **keys2text(keys)** receives a string **keys** containing numbers and spaces and returns the corresponding text from the key presses, for example,

keys2text("666 55 0 7 999 8 44 666 66"), will return "ok python".

```
def text2keys( text ):
    def keys2text( keys ):

# The following command must be included when submiting to Grader
exec(input().strip())
```

## Input

Python command to test function behavior.

## Output

Result from executing input Python command.

## Example

Input (from keyboard)	Output (on screen)
<pre>print(text2keys("I am busy."))</pre>	444 0 2 6 0 22 88 7777 999
print(keys2text("444 0 2 6 0 22 88 7777 999"))	i am busy