T9

DiPS CodeJam 23

Prompt

T9 s a predictive text technology for mobile phones, specifically those that contain a 3×4 numeric keypad. Letters are typed by pressing corresponding keys repeatedly. For example, pressing $222, 666, 3, 33$ results in the string "code". Given a sequence of numbers $n[]$, find the string that corresponds to n. Assume the following character set:

Key	Character
1	–
2	abc
3	def
4	ghi
5	jkl
6	mno
7	pqrs
8	tuv
9	wxyz
0	␣

Input Format

The first and only line of input contains a space-separated list of presses.

Output Format

Your output should contain one line that contains the resultant string.

Constraints

$1 \leq n \leq 10^5$

Sample Input/Output

Input	Output
`222 666 3 33`	`code`

Solution

Analysing the input $n[222, 666, 3, 33]$, we can translate the input into characters. For example:
222:

- 2 corresponds to the character set "abc".
- The digit is repeated 3 times, referring to the 3rd character in the sequence.

- Return “abc”[2] = c

Sample Program

```
presses=input().strip().split(" ")

res=""

chars=["abc", "def", "ghi", "jkl", "mno", "pqrs", "tuv", "wxyz"]

for i in presses:
  char=" "
  if int(i[0])>0:
    char=chars[ (int(i[0])-2) ][ (len(i)-1) ]
  res+=char

print(res)
```