





Neo has a complex matrix script. The matrix script is a  $\textbf{\textit{N}} \times \textbf{\textit{M}}$  grid of strings. It consists of alphanumeric characters, spaces and symbols (!,@,#,\$,%,&).

# 

Matrix Decoded

This\$#is% Matrix# %!

To decode the script, Neo needs to read each column and select only the alphanumeric characters and connect them. Neo reads the column from top to bottom and starts reading from the leftmost column.

If there are symbols or spaces between two alphanumeric characters of the decoded script, then Neo replaces them with a single space ' ' for better readability.

Neo feels that there is no need to use 'i f' conditions for decoding.

Alphanumeric characters consist of: [A-Z, a-z, and 0-9].

#### Input Format

The first line contains space-separated integers  $m{N}$  (rows) and  $m{M}$  (columns) respectively.

The next  $oldsymbol{N}$  lines contain the row elements of the matrix script.

### Constraints

# 0 < N, M < 100

Note: A  $\mathbf{0}$  score will be awarded for using 'i f' conditions in your code.

# **Output Format**

Print the decoded matrix script.

# Sample Input 0

73

Tsi

h%x

i #

sM

\$a

Privacy - Terms

Matrix Script | HackerRank

#t% ir!

# Sample Output O

This is Matrix# %!

# **Explanation 0**

The decoded script is:

```
This$#is% Matrix# %!
```

Neo replaces the symbols or spaces between two alphanumeric characters with a single space '' for better readability.

So, the final decoded script is:

This is Matrix# %!

```
Change Theme Language Python 3
                                                                                                     1
     #!/bin/python3
 1
 2
 3
     import math
    import os
 4
    import random
    import re
 6
    import sys
 7
 8
 9
10
11
12
     first_multiple_input = input().rstrip().split()
13
14
     n = int(first_multiple_input[0])
15
    m = int(first_multiple_input[1])
16
17
    matrix = []
18
19
20
     for _ in range(n):
         matrix_item = input()
21
22
         matrix.append(matrix_item)
23
24
25
     # Read columns top to bottom, left to right
     decoded = ''.join([matrix[j][i] for i in range(m) for j in range(n)])
26
27
28
     # Replace symbols/spaces between alphanumeric characters with single space
29
     final = re.sub(r'(?<=\w)([^\w]+)(?=\w)', '', decoded)
30
31
     print(final)
32
```

EMACS

Line: 32 Col: 1

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