



# Validating Email Addresses With a Filter ★

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Problem

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You are given an integer  $N$  followed by  $N$  email addresses. Your task is to print a list containing only valid email addresses in lexicographical order.

Valid email addresses must follow these rules:

- It must have the username@websitename.extension format type.
- The username can only contain letters, digits, dashes and underscores  $[a-z]$ ,  $[A-Z]$ ,  $[0-9]$ ,  $[-]$ .
- The website name can only have letters and digits  $[a-z]$ ,  $[A-Z]$ ,  $[0-9]$ .
- The extension can only contain letters  $[a-z]$ ,  $[A-Z]$ .
- The maximum length of the extension is **3**.

## Concept

A filter takes a function returning True or False and applies it to a sequence, returning a list of only those members of the sequence where the function returned True. A Lambda function can be used with filters.

Let's say you have to make a list of the squares of integers from **0** to **9** (both included).

```
>> l = list(range(10))
>> l = list(map(lambda x:x*x, l))
```

Now, you only require those elements that are greater than **10** but less than **80**.

```
>> l = list(filter(lambda x: x > 10 and x < 80, l))
```

Easy, isn't it?

## Example

Complete the function fun in the editor below.

fun has the following parameters:

- string s: the string to test

## Returns

- boolean: whether the string is a valid email or not

## Input Format

The first line of input is the integer  $N$ , the number of email addresses.

$N$  lines follow, each containing a string.

**Constraints**

Each line is a non-empty string.

**Sample Input**

```
3
lara@hackerrank.com
brian-23@hackerrank.com
britts_54@hackerrank.com
```

**Sample Output**

```
['brian-23@hackerrank.com', 'britts_54@hackerrank.com', 'lara@hackerrank.com']
```

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Language

Python 3



```
1 import re
2
3 def fun(s):
4     # return True if s is a valid email, else return False
5     # username@websiteName.extension
6     pattern = r'^[a-zA-Z0-9_-]+@[a-zA-Z0-9]+\.[a-zA-Z]{1,3}$'
7     return bool(re.fullmatch(pattern, s))
8
9 def filter_mail(emails):...
```

EMACS

Line: 1 Col: 1



Upload Code as File



Test against custom input

**Run Code**

Submit Code

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76/115 challenges solved.

66%



## Congratulations

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Next Challenge

✔ Test case 0

Compiler Message

✔ Test case 1

Success

✔ Test case 2

Input (stdin)

Download

```
1 3
2 lara@hackerrank.com
3 brian-23@hackerrank.com
4 britts_54@hackerrank.com
```

✔ Test case 3

✔ Test case 4

✔ Test case 5

Expected Output

Download

✔ Test case 6

```
1 ['brian-23@hackerrank.com', 'britts_54@hackerrank.com', 'lara@hackerrank.com']
```