# Validating Email Addresses With a Filter \*\*



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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  $[{m a}-{m z}], [{m A}-{m Z}].$
- 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 paramters:

• 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.

 $oldsymbol{N}$  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

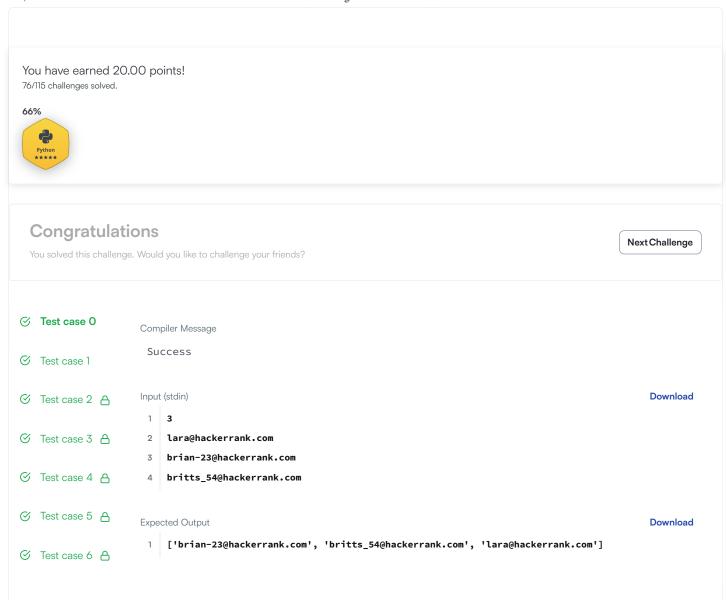
```
['brian-23@hackerrank.com', 'britts_54@hackerrank.com', 'lara@hackerrank.com']
```

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

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