# Validating Email Addresses With a Filter



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.
- The website name can only have letters and digits.
- 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?

**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.

**Output Format**

Output a list containing the valid email addresses in lexicographical order. If the list is empty, just output an empty list, [].

**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.c
```

Author harsh_beria93
Difficulty Medium
Max Score 20
Submitted By 28777

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```python
import re
def fun(s):
    # return True if s is a valid email, else return False"
    s1= re.match(r'[a-zA-Z0-9-_]+@[a-zA-Z0-9]+\.[a-zA-Z]{1,3}$',s)
    return s1
def filter_mail(emails):
    return list(filter(fun, emails))

if __name__ == '__main__':
    n = int(input())
    emails = []
    for _ in range(n):
        emails.append(input())

filtered_emails = filter_mail(emails)
filtered_emails.sort()
print(filtered_emails)
```

Line: 17 Col: 23

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