



# Validating Credit Card Numbers ★



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You and Fredrick are good friends. Yesterday, Fredrick received N credit cards from ABCD Bank. He wants to verify whether his credit card numbers are valid or not. You happen to be great at regex so he is asking for your help!

A valid credit card from ABCD Bank has the following characteristics:

- ▶ It must start with a 4, 5 or 6.
- ▶ It must contain exactly 16 digits.
- ► It must only consist of digits (0-9).
- ▶ It may have digits in groups of 4, separated by one hyphen "-".
- ▶ It must NOT use any other separator like ' ', '\_', etc.
- ▶ It must NOT have **4** or more consecutive repeated digits.

#### Examples:

#### Valid Credit Card Numbers

4253625879615786 4424424424442444 5122-2368-7954-3214

### Invalid Credit Card Numbers

42536258796157867 #17 digits in card number → Invalid 4424444244444 #Consecutive digits are repeating 4 or more times → Invalid

5122-2368-7954 - 3214 #Separators other than '-' are used → Invalid #Contains non digit characters → Invalid 44244x4424442444 0525362587961578 #Doesn't start with 4, 5 or 6 → Invalid

#### Input Format

The first line of input contains an integer N.

The next  $oldsymbol{N}$  lines contain credit card numbers.

# Constraints

# 0 < N < 100

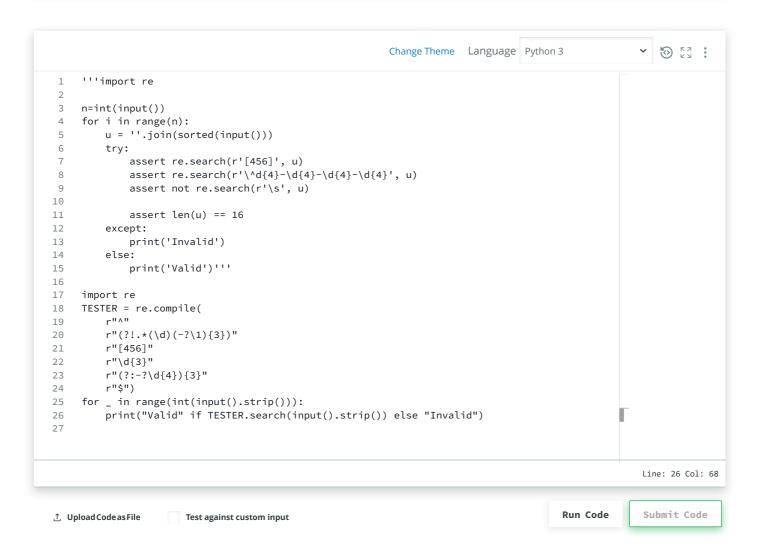
#### **Output Format**

Print 'Valid' if the credit card number is valid. Otherwise, print 'Invalid'. Do not print the quotes.

# Sample Input

4123456789123456 5123-4567-8912-3456 61234-567-8912-3456 4123356789123456 5133-3367-8912-3456 5123 - 3567 - 8912 - 3456

```
Valid
Valid
Invalid
Valid
Invalid
Inva
```

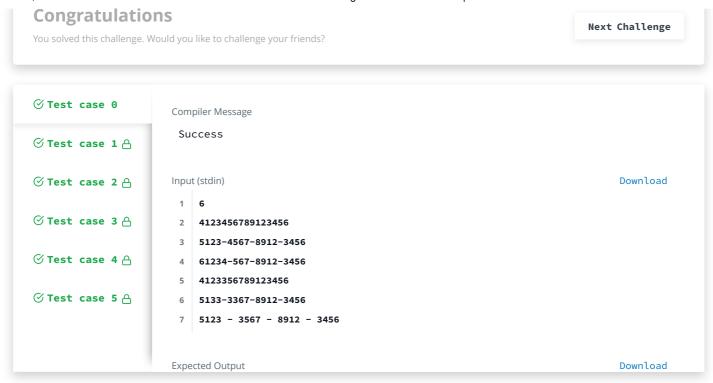


# You have earned 40.00 points!

You are now 35 points away from the 4th star for your python badge.



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