Python 3: The Python Environment

Lesson 5, Project 1

Handed in: 5 Jan 2016 05:45:54PM Graded: 6 Jan 2016 07:39:27PM

Here are your instructions:

Create a **Python3\_Homework05** project and assign it to your **Python3\_Homework** working set. In the **Python3\_Homework05/src** folder, create a program named **ccn\_safety.py** with a function that substitutes X for all but the last four digits of any credit card numbers in a string, returning the updated string as its result. Use the following text as a sample:

Text to use in ccn\_safety.py:

Have you ever noticed, in television and movies, that phone numbers and credit cards  
are obviously fake numbers like 555-123-4567 or 5555-5555-5555-5555? It is because a number  
that appears to be real, such as 1234-5678-1234-5678, triggers the attention of privacy and   
security experts.

Your project should meet the following conditions:

* For our purposes, it only needs to convert numbers of the form XXXX-XXXX-XXXX-XXXX.
* The program should return this text: "Have you ever noticed, in television and movies, that phone numbers and credit cards are obviously fake numbers like 555-123-4567 or XXXX-XXXX-XXXX-5555? It is because a number that appears to be real, such as XXXX-XXXX-XXXX-5678, triggers the attention of privacy and security experts." Note that the phone numbers should not be replaced!
* You should include a **test\_ccn\_safety.py** program in a separate file that confirms that your code functions as expected.

Submit **ccn\_safety.py** and **test\_ccn\_safety.py** when they are working to your satisfaction.

##### **Your Comment:**

*no comment given*

##### **Items Handed In**

* [Open Project Handed In](https://students.oreillyschool.com/student/project/?/.handin/147-6610-1/com.ost.mboyd.147.6610.1.Python3Homework05.zip)

### **Overall Comments:**

Good work.  
  
Below is a more conservative version of the function, in   
the sense that 3 groups of 4-digits with hypens (dashes)  
is not enough: all 4 groups of 4-digits must be matched,  
but then only the last group remains, thanks to named   
group concatenation in the replacement string. How many  
loopholes one feels a need to address versus adding   
gratuitous / unnecessary complexity to the regex is a   
judgement call and depends on the characteristics of   
the target text.  
  
  
def ccn\_safety(text):  
 """  
 Converts the first 12 digits of a credit card number to XXXX-XXXX-XXXX  
 leaving the last four digits alone for all credit card numbers in text  
 """  
   
 #Example: text = "1234-5678-9010-5555" and "XXXX-XXXX-XXXX-5555" returned   
 #\g found in python docs to make sure last four digits are visible   
 return re.sub(r"(\d{4}-){3}(?P\d{4})",  
 "XXXX-XXXX-XXXX-"+"\g",text)   
  
  
-Kirby

### **Grade:**

Great