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| **Write a Program in Python. Please submit your code in MS word or PDF** | |
|  | John likes to travel. He has visited a lot of cities over many years. Whenever he visits a city, he takes a few photos and saves them on his computer. Each photo has a name with an extension ("jpg , "png or "jpeg") and there is a record of the name of the city where the photo was taken and the time and date the  photo; for example: "photo. jpg, Warsaw, 2013—09—05 14 : 08: 15". John notices that his way of filing photos on his computer has become a mess. He wants to reorganize the photos. First he decides to group the photos by city, then, within each such group, sort the photos by the time they were taken and finally assign consecutive natural numbers to the photos, starting from 1. Afterwards he intends to rename all the photos. The new name of each photo should begin with the name of the city followed by the number already assigned to that photo. The number of every photo in each group should have the same length (equal to the length of the largest number in this group); thus, John needs to add some leading zeros to the numbers. The new name of the photo should end with the extension, which should remain the same. Your task is to help John by finding the new name of each photo. Each of John's photos has the format:  “<<photoname>>.<<extension>>, <<city\_name>>, yyyy—mm—dd hh:n-m: ss , where  "<<photoname>>", "<<extension>>" and "<<city\_name>>"  consist only of letters of the English alphabet  and supply the name of the photo, the file name extension and the city name, respectively.  Write a program such that given a string representing the list of M photos, returns the string representing the list of the new names of all photos (the order of photos should stay the same).  For example, given a string:  photo. jpg, Warsaw, 2013-09-05 14:08:15 john.png,  London, 2015-06-20 15:13:22 my-Friends.png,  Warsaw, 2013-09-05 14:07:13 Eiffel.jpg,  Paris, 2015-07-23 08:03:02 pisatower.jpg,  Paris, 2015-07-22 23:59:59 BOB.ipg,  London, 2015-08-05 00:02:03 notredame.png,  Paris, 2015-09-01 12:00:00 me.jpg,  Warsaw, 2013-09-06 15:40: 22 a.png,  Warsaw, 2016-02-13 13:33:50 b.jpg,  Warsaw, 2016-01-02 15:12:22 c.jpg,  Warsaw, 2016-01-02 14:34:30 d.jpg,  Warsaw, 2016-01-02 15:15:01 e.png,  Warsaw, 2016-01-02 09:49:09 f.png,  Warsaw, 2016-01-02 10:5:32 g.jpg,  Warsaw, 2016-02-29 22:13:11  **Output should be:**  Warsaw02.jpg  London01.png  Warsaw01.png  Paris02.jpg  Paris01.jpg  London02.jpg  Paris03.jpg  Warsaw03.jpg  Warsaw09.jpg  Warsaw07.jpg  Warsaw06.jpg  Warsaw08.jpg  Warsaw04.jpg  Warsaw05.jpg  Warsaw10.jpg  The new names of the photos are returned in the same order as in the given string.  Assume that:  • M is an integer within the range [1 .. 100];  • Each year is an integer within the range [2000..2020];  • Each line of the input string is of the format <<photoname>>.<<extension>> , yyyy-mm-dd hh:n-  m:ss" and lines are separated with newline characters;  • Each photo name (without extension}) and city name consists only of at least 1 and at most 20 letters  from the English alphabet;  • Each name of the city starts with a capital letter and is followed by lower case letters; • No two photos  share the same date and time;  • Each extension is "jpg", “png" or “jpeg” |
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