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Some practice problems:

Question 1: Test your understanding of Structured Query Language (SQL).

Write SQL queries to answer the following questions. Ensure your queries do not give extra attributes or miss the required attributes. The output provided is for the data generated using the script "practiceQ1.sql". Your queries need to work for all instances of the relations. Do not hard code attribute values except the ones given in the questions. Your queries need to show the column heading as shown in the output examples.

a. Return the number of tweets in the database.
Output:

numTweets
81906

b. Return the number of tweets where someone is mentioned in those tweets.
Output:

numTweetsWithMention
42782

c. Return the number of unique hashtags in the database

numHashtagName
5422

d. Return the names of the states in ascending order. Exclude the empty state value denoted as ' ', as well as the 'na' value. Do not show the same name more than one time. Limit your answer to three states.

Output:

state
Alabama
Alaska
Arizona

Answer:

e. Return the total number of tweets posted by all the users who lived in Iowa. You do not need to check for the upper or lower case letters.
Output:

numTweetsByIowan
2152

Answer:

1

f. Find at most three users who have not posted any tweets. Display their screen name in ascending order of their screen names. Write one query using left-join, the second query using the exists operator, and the third query using the in operator. All the three queries give the same output.

Output:

scrname
_ashleynprice
_beavercreeknc
_BScarb

Answer:

g. Find at most three users who have posted at least 100 tweets in descending order of the number of tweets the user posted. For each row, display the values of the screen name, the state the user lived in, and the number of tweets the user posted.

Output:

scrname	state	numTweets
ajc	Georgia	3132
BryanLowry3	Kansas	2863
BKcolin	North Carolina	2709

Answer:

h. Find users who were mentioned in tweets posted by users who lived in the state of Iowa. These mentioned users must also be mentioned in tweets posted by users who lived in Minnesota. Display the screen name of the users. Do not list the same screen name more than one time. According to the schema, each user lived in only one state.

Output:

scrname
USATODAY
StarTribune

Answer: