q.1: write code on ‘result’ in order to match all the years in the string .

Regex:

import re

s = "Bitcoin was born on Jan 3rd 2009 as an alternative to the failure of the current financial system. In 2017, the price of 1 BTC reached $20000, with a market cap of over $300B."

result =

solution:

1. result = re.findall(r"\s(\d{4})", s)

q.2: Pandas Dataframe to be taken as input and as output expected.

csv: with data of guest id,date of interaction and host id of hotel.

Question: Guests have been having chats with the hotel hosts. Need to provide rank to the guests based on the number of messages they've exchanged with the hosts. If the total no of messages of the guests are same, they would have the same rank.

Output: The output should contain rank, guest id, and number of total messages they've sent.

Test case 1: Do not skip rankings if the preceding rankings are identical.

Q.2: https://platform.stratascratch.com/coding/10182-number-of-streets-per-zip-code

For each postal code, find the different number of streets names. The first part of the street name should be counted for a longer/multiple street name. The result should display the postal code and the count of number of streets in descending(or ascending) order.

(Complexity can be increased to make the result with descending count of streets and ascending postal code.)

For eg: 1. Old Mahaballipuram road and mahaballiburam road should be considered as old Mahaballipuram road.

2. case sensitivity should be checked. TAZHAMBUR ROAD and tazhambur road should be considered the same.

Csv: The dataset has to be provided for the given area.

 Consider situation where the address has different structure: with number on the first place and with street name on the first place

 notnull() can be used to determine the non-missing values in the dataframe

 Split the address into words by converting the object to str first, using astype(str), then applying str.split()

 Use str.lower() to convert strings to lower case

 Use nunique() to get the number of distinct observations per group or specified axis then convert the resulting object to a dataframe using to\_frame('column\_name')

 Use sort\_values(column\_name, order) to sort along a specified column; Set order to False to display the printed values in descending order

Table

Description automatically generated

https://www.w3resource.com/python-exercises/pandas/datetime/index.php