Gmail

Brenda Escobar Exam 8 - 3/7/21

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Thank you for your help!

Question 1 - 20 pts

Given a series of numbers in table tt8 (c1), please write a query to find the missing numbers, assuming the numbers should be consecutive.

Please use the following SQL script to create the table tt8. View table 82, below, for the expected output.

```
drop table if exists tt8;

create table tt8 (c1 numeric);

insert into tt8 values

(1),(2),(3),(6),(7),(8),(9),(12),(14);
```

Table 81: 9 records
c1
1
2
3

| 6 |
| 7 |
| 8 |
| 9 |
| 12 |
| 14 |

Table 82: 5 records
Missing_number
4
5
10
11
13

Question 2 - 20 pts

Please write a query to obtain a concise string of the numbers, for example, given 1,2,3,6,7,8,9,12,14 as shown in table tt8 from question #1, we expect 1-3,6-9,12,14.

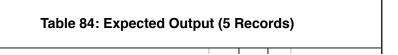| Table 83: 1 record |
| --- |
| |

numbers
1-3, 6-9, 12, 14

Question 3 - 20 pts

Please write a query to generate 5 random DNA sequences that are each about 20 bases.

Table 84: 5 records	
g	**dna**
1	ACGGCTTATCGAACTGCGTC
2	TCAGGAATAGCCAAAGACCC
3	TTATGGTATCTAGGCTCTGG
4	GTTCGTTTACACGGTTTGAG
5	GCGGGGCATGGCACGATATA

Question 4- 20 pts

Please write a query to generate 5 random DNA sequences that are each about 20 bases, and show the count of each base (A, C, G, T).

Table 84: Expected Output (5 Records)

g	dna	a	c	g	t
1	GGGGCCTATAGTGGTACTTA	4	3	7	6
2	ACCGTGTTCGGTAACGTGCA	4	5	6	5
3	CGTCTAAGCATTCGGTGGCA	4	5	6	5
4	CCCGAAACCCTTCAGGCCAC	5	10	3	2
5	TGACGGTTTAACCTCGATTG	4	4	5	7

Question 5 - 20 pts

Using the table sale2 (script for creating table provided, column s is short for sale), write a query to find out which year and month has the most total sale, as well as the amount of the total sale (you may ignore column n).

(Bonus 10 points) write a query to find out how many sales at a minimum it took each month to reach a cumulative sale of more than 100. For example, in year 2019, month 1 it took 3 sales to reach over 100 (63+37+27>100), and in month 2 it took 2 sales to reach over 100 (76+40>100).

```
drop table if exists test_score;
CREATE TABLE sale2 (
    year double precision,
    month integer,
    n integer,
    s integer
);

INSERT INTO sale2 (year, month, n, s) VALUES
(2019, 1, 1, 37)
, (2019, 1, 2, 63)
, (2019, 1, 3, 22)
, (2019, 1, 4, 27)
, (2019, 2, 1, 27)
, (2019, 2, 2, 40)
```

```
, (2019, 2, 3, 76)
, (2019, 2, 4, 24)
, (2019, 3, 1, 46)
, (2019, 3, 2, 74)
, (2019, 3, 3, 23)
, (2019, 3, 4, 95)
, (2019, 4, 1, 65)
, (2019, 4, 2, 45)
, (2019, 4, 3, 33)
, (2019, 4, 4, 64)
, (2019, 5, 1, 3)
, (2019, 5, 2, 7)
, (2019, 5, 3, 100)
, (2019, 5, 4, 65)
, (2019, 6, 1, 59)
, (2019, 6, 2, 58)
, (2019, 6, 3, 19)
, (2019, 6, 4, 66)
, (2019, 7, 1, 47)
, (2019, 7, 2, 88)
, (2019, 7, 3, 79)
, (2019, 7, 4, 97)
, (2019, 8, 1, 84)
, (2019, 8, 2, 98)
, (2019, 8, 3, 90)
, (2019, 8, 4, 21)
, (2019, 9, 1, 61)
, (2019, 9, 2, 12)
, (2019, 9, 3, 48)
, (2019, 9, 4, 88)
, (2019, 10, 1, 52)
, (2019, 10, 2, 24)
, (2019, 10, 3, 13)
, (2019, 10, 4, 97)
, (2019, 11, 1, 98)
, (2019, 11, 2, 36)
, (2019, 11, 3, 92)
, (2019, 11, 4, 63)
, (2019, 12, 1, 81)
, (2019, 12, 2, 25)
, (2019, 12, 3, 27)
, (2019, 12, 4, 84);
```