Stratascratch SQL Questions

You're tasked with analyzing a Spotify-like dataset that captures user listening habits.

For each user, calculate the total listening time and the count of unique songs they've listened to. In the database duration values are displayed in seconds. Round the total listening duration to the nearest whole minute.

The output should contain three columns: 'user\_id', 'total\_listen\_duration', and 'unique\_song\_count'.

SELECT

user\_id,

ROUND(SUM(listen\_duration) / 60) AS total\_listen\_duration,

COUNT(DISTINCT song\_id) AS unique\_song\_count

FROM

listening\_habits

GROUP BY

user\_id;

Write a query that calculates the difference between the highest salaries found in the marketing and engineering departments. Output just the absolute difference in salaries.

with cte as (

select dd.department, max(de.salary) as salary

from db\_employee de

inner join db\_dept dd

on de.department\_id = dd.id

where dd.department in ('marketing', 'engineering' )

group by dd.department

)

select max(salary) - min(salary) as salary\_difference

from cte;

We have a table with employees and their salaries, however, some of the records are old and contain outdated salary information. Find the current salary of each employee assuming that salaries increase each year. Output their id, first name, last name, department ID, and current salary. Order your list by employee ID in ascending order.

select id, first\_name, last\_name,department\_id, max(salary)

from ms\_employee\_salary

group by id, first\_name, last\_name, department\_id

order by id ASC

Find the last time each bike was in use. Output both the bike number and the date-timestamp of the bike's last use (i.e., the date-time the bike was returned). Order the results by bikes that were most recently used.

SELECT bike\_number,

MAX(end\_time) AS last\_used

FROM dc\_bikeshare\_q1\_2012

GROUP BY bike\_number

ORDER BY last\_used DESC;

Find the number of rows for each review score earned by 'Hotel Arena'. Output the hotel name (which should be 'Hotel Arena'), review score along with the corresponding number of rows with that score for the specified hotel.

select hotel\_name, reviewer\_score, count(\*)

from hotel\_reviews

where hotel\_name = 'Hotel Arena'

group by hotel\_name, reviewer\_score;

Count the number of movies that Abigail Breslin was nominated for an oscar.

select count(nominee) from oscar\_nominees

where nominee like 'Abigail%' ;

Find all posts which were reacted to with a heart. For such posts output all columns from facebook\_posts table.

select distinct fp.\* from

facebook\_reactions fr

inner join facebook\_posts fp

on fr.post\_id = fp.post\_id

where fr.reaction = 'heart' ;

Based on the above, find the average popularity of the Hack per office location.

Output the location along with the average popularity.

select avg(fb.popularity), emp.location

from

facebook\_employees as emp

inner join

facebook\_hack\_survey as fb

on emp.id = fb.employee\_id

group by emp.location;

Find all Lyft drivers who earn either equal to or less than 30k USD or equal to or more than 70k USD.

select \* from lyft\_drivers

where yearly\_salary <= 30000 or yearly\_salary >= 70000;

Find how many times each artist appeared on the Spotify ranking list

Output the artist name along with the corresponding number of occurrences.

Order records by the number of occurrences in descending order.

select artist, count(\*) as count\_number

from spotify\_worldwide\_daily\_song\_ranking

group by artist

order by count\_number desc;

Find the base pay for Police Captains.

Output the employee name along with the corresponding base pay.

select employeename, basepay

from sf\_public\_salaries

where jobtitle like '%Police%' ;

Find libraries who haven't provided the email address in circulation year 2016 but their notice preference definition is set to email.

select distinct home\_library\_code

from library\_usage

where circulation\_active\_year = 2016

and notice\_preference\_definition = 'email'

and provided\_email\_address = False ;

Compare each employee's salary with the average salary of the corresponding department.

Output the department, first name, and salary of employees along with the average salary of that department.

select department,

first\_name,

salary,

avg(salary) over ( partition by department) as sal\_dept

from employee

group by department,first\_name, salary ;

Consider Jill and Eva as first names of customers.

Output the order date, details and cost along with the first name.

select order\_date, order\_details, total\_order\_cost, first\_name

from customers

join orders

on customers.id = orders.cust\_id

where first\_name in ('Jill','Eva') ;

Find the details of each customer regardless of whether the customer made an order. Output the customer's first name, last name, and the city along with the order details.

Sort records based on the customer's first name and the order details in ascending order.

select first\_name, last\_name, city, order\_details

from customers

left join orders

on customers.id = orders.cust\_id

order by first\_name, order\_details asc;

find the number of workers by department who joined in or after April.

select department, count(worker\_id) number\_of\_workers

from worker

where month(joining\_date) >=4

group by department

order by number\_of\_workers desc ;

Find the number of employees working in the Admin department that joined in April or later.

select count(worker\_id) number\_of\_workers

from worker

where month(joining\_date) >=4

and department = 'Admin'

group by department

order by number\_of\_workers desc ;

Find the activity date and the pe\_description of facilities with the name 'STREET CHURROS' and with a score of less than 95 points.

select activity\_date, pe\_description

from los\_angeles\_restaurant\_health\_inspections

where facility\_name = 'STREET CHURROS'

and score <95;

Find the most profitable company from the financial sector. Output the result along with the continent.

SELECT company, continent

FROM forbes\_global\_2010\_2014

WHERE sector = 'Financials'

AND profits = (SELECT MAX(profits)

FROM forbes\_global\_2010\_2014

WHERE sector = 'Financials');

Write a query that returns the number of unique users per client per month

select count(distinct user\_id) as users\_num,

month(time\_id),

client\_id

from fact\_events

group by month(time\_id),

client\_id;

Count the number of user events performed by MacBookPro users.

select event\_name, count(\*) as no\_of\_users

from playbook\_events

where device = 'macbook pro'

group by event\_name ;

Write a query that will calculate the number of shipments per month. The unique key for one shipment is a combination of shipment\_id and sub\_id. Output the year\_month in format YYYY-MM and the number of shipments in that month.

select count(concat(shipment\_id, sub\_id)),

DATE\_FORMAT(shipment\_date, "%Y-%m") as date\_ym

from amazon\_shipment

group by date\_ym;

You have been asked to find the 5 most lucrative products in terms of total revenue for the first half of 2022 (from January to June inclusive).

with cte as (

select sum(units\_sold \* cost\_in\_dollars ) as revenue,

product\_id,

rank() over (order by sum(units\_sold \* cost\_in\_dollars ) desc) as rnk

from online\_orders

where month(date) between 1 and 6

group by product\_id

)

select product\_id, revenue

from cte

where rnk<=5 ;

Find the average number of bathrooms and bedrooms for each city’s property types. Output the result along with the city name and the property type.

select avg(bathrooms) as bathrooms,

avg(bedrooms) as bedrooms,

city,

property\_type

from airbnb\_search\_details

group by city,

property\_type;