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|  |  |
| --- | --- |
|  | 175. Combine Two Tables |
|  |  |
|  | select firstname,lastname,city,state from person a left join address b on a.personid=b.personid |
|  |  |
|  | 176. Second Highest Salary |
|  |  |
|  | select max(salary) as secondhighestsalary from employee a where salary<(select max(salary) from employee b); |
|  |  |
|  | 177. Nth Highest Salary |
|  |  |
|  | CREATE FUNCTION getNthHighestSalary(N INT) RETURNS INT |
|  | BEGIN |
|  | RETURN (select distinct(a.salary) as getNthhighestsalary from employee a where n-1=(select count(distinct(b.salary)) |
|  | from employee b where a.salary<b.salary)); |
|  | END |
|  |  |
|  | 178. Rank Scores |
|  |  |
|  | select score,dense\_rank() over(order by score desc) 'rank' from scores; |
|  |  |
|  | 180. Consecutive Numbers |
|  |  |
|  | select distinct num as consecutivenums from |
|  | (select num, lead(num) over(order by id) as beforenumber,lag(num) over(order by id) as afternumber from logs) D |
|  | where num=beforenumber and beforenumber=afternumber; |
|  |  |
|  | 181. Employees Earning More Than Their Managers |
|  |  |
|  | select b.name as employee from employee a join employee b where a.id=b.managerid and a.salary<b.salary; |
|  |  |
|  | 182. Duplicate Emails |
|  |  |
|  | select email from person group by email having count(email)>1; |
|  |  |
|  | 183. Customers Who Never Order |
|  |  |
|  | select c.name as customers from customers c where id not in (select customerid from orders ); |
|  |  |
|  | 184. Department Highest Salary |
|  |  |
|  | select department,employee,salary from (select b.name as department,a.name as employee,salary, |
|  | dense\_rank() over(partition by departmentid order by salary desc) 'rnk' from employee a join department b on a.departmentid=b.id) d where rnk=1; |
|  |  |
|  | 185. Department Top Three Salaries |
|  |  |
|  | select department,employee,salary from (select b.name as department,a.name as employee,salary,dense\_rank() |
|  | over(partition by departmentid order by salary desc) 'rnk' from employee a join department b on a.departmentid=b.id) d where rnk in (1,2,3); |
|  |  |
|  | 196. Delete Duplicate Emails |
|  |  |
|  | delete b from person a, person b where a.email=b.email and a.id<b.id; |
|  |  |
|  | 197. Rising Temperature |
|  |  |
|  | select id from (select id,temperature,recorddate,lag(temperature,1) over(order by recorddate) as nextdaytemperature, |
|  | lag(recorddate,1) over() as nextdate from weather) d where nextdaytemperature<temperature and datediff(nextdate,recorddate)=-1; |
|  |  |
|  | 511. Game Play Analysis I |
|  |  |
|  | select player\_id,min(event\_date) as first\_login from activity group by player\_id; |
|  |  |
|  | 512. Game Play Analysis II |
|  |  |
|  | select player\_id, device\_id from Activity where (player\_id, event\_date) in ( select player\_id, min(event\_date) from Activity group by player\_id); |
|  |  |
|  | 534. Game Play Analysis III |
|  |  |
|  | select player\_id,event\_date,sum(games\_played) over(partition by player\_id order by event\_date) as games\_played\_so\_far from activity; |
|  |  |
|  | 570. Managers with at Least 5 Direct Reports |
|  |  |
|  | select b as name from (select distinct a.name as b,count(\*) from employee a,employee b where a.id=b.managerid group by a.name having count(\*)>=5) e; |
|  |  |
|  | 574. Winning Candidate |
|  |  |
|  | select name from (select name,count(\*) from candidate a join vote b on a.id=b.candidateid group by a.id order by count(\*) desc limit 1) z; |
|  |  |
|  | 577. Employee Bonus |
|  |  |
|  | select name,bonus from employee a left join bonus b on a.empid=b.empid where bonus<1000 or bonus is null; |
|  |  |
|  | 580. Count Student Number in Departments |
|  |  |
|  | select dept\_name,count(student\_id) as student\_number from department a |
|  | left outer join student b on a.dept\_id=b.dept\_id group by dept\_name order by count(student\_id) desc; |
|  |  |
|  | 584. Find Customer Referee |
|  |  |
|  | select name from customer where referee\_id!=2 or referee\_id is null; |
|  |  |
|  | 585. Investments in 2016 |
|  |  |
|  |  |
|  | 586. Customer Placing the Largest Number of Orders |
|  |  |
|  | select customer\_number from orders group by customer\_number order by count(order\_number) desc limit 1; |
|  |  |
|  | 595. Big Countries |
|  |  |
|  | select name,population,area from world where area>=3000000 or population>=25000000; |
|  |  |
|  | 596. Classes More Than 5 Students |
|  |  |
|  | select class from courses group by class having count(student)>=5; |
|  |  |
|  | 603. Consecutive Available Seats |
|  |  |
|  | select seat\_id from (select seat\_id,lag(free,1) over(order by seat\_id asc) as new,free from cinema) a where new=free and free=1 |
|  | union |
|  | select seat\_id from (select seat\_id,lead(free,1) over(order by seat\_id asc) as new,free from cinema) a where new=free and free=1 order by seat\_id asc ; |
|  |  |
|  | 602. Friend Requests II: Who Has the Most Friends |
|  |  |
|  | select a as id,count(b) as num from (select accepter\_id as a ,requester\_id as b from RequestAccepted |
|  | union |
|  | select requester\_id as a ,accepter\_id as b from RequestAccepted) m group by a order by num desc limit 1; |
|  |  |
|  | 1369. Get the Second Most Recent Activity |
|  |  |
|  | select username,activity,startdate,enddate from (select username,activity,startdate,enddate,row\_number() |
|  | over(partition by username order by startdate desc) as a,count(\*) over(partition by username) as d from UserActivity) a where a=2 or d=1; |
|  |  |
|  | 1270. All People Report to the Given Manager |
|  |  |
|  | select employee\_id from employees where manager\_id in (select min(employee\_id) from employees where manager\_id=employee\_id) and employee\_id!=(select min(employee\_id) from employees where manager\_id=employee\_id) |
|  | union all |
|  | select employee\_id from employees where manager\_id in (select employee\_id from employees where manager\_id in (select min(employee\_id) from employees where manager\_id=employee\_id) and employee\_id!=(select min(employee\_id) from employees where manager\_id=employee\_id)) |
|  | union all |
|  | select employee\_id from employees where manager\_id in (select employee\_id from employees where manager\_id in (select employee\_id from employees where manager\_id in (select min(employee\_id) from employees where manager\_id=employee\_id) |
|  | and employee\_id!=(select min(employee\_id) from employees where manager\_id=employee\_id))); |
|  |  |
|  | 1294. Weather Type in Each Country |
|  |  |
|  | select country\_name,'Cold' as Weather\_type from weather a join countries b on a.country\_id=b.country\_id where extract(month from day)=11 group by a.country\_id having avg(weather\_state)<=15 |
|  | union all |
|  | select country\_name,'Hot' as Weather\_type from weather a join countries b on a.country\_id=b.country\_id where extract(month from day)=11 group by a.country\_id having avg(weather\_state)>=25 |
|  | union all |
|  | select country\_name,'Warm' as Weather\_type from weather a join countries b on a.country\_id=b.country\_id where extract(month from day)=11 group by a.country\_id having avg(weather\_state)>15 and avg(weather\_state)<25; |
|  |  |
|  | 1407. Top Travellers |
|  |  |
|  | select name,ifnull(sum(distance),0) as travelled\_distance from users a left join rides b on a.id=b.user\_id group by name order by sum(distance) desc,name asc; |
|  |  |
|  | 1890. The Latest Login in 2020 |
|  |  |
|  |  |
|  | select user\_id,max(time\_stamp) as last\_stamp from logins where extract(year from time\_stamp)=2020 group by user\_id; |
|  |  |
|  | 1571. Warehouse Manager |
|  |  |
|  | select distinct name as warehouse\_name,sum(units\*(width\*length\*height)) as volume from warehouse a join products b on a.product\_id=b.product\_id group by name; |
|  |  |
|  | 1517. Find Users With Valid E-Mails |
|  |  |
|  | select \* from users where mail like '%leetcode.com' and mail not like '.%' and mail not like '%#%'; |
|  |  |
|  | 1532. The Most Recent Three Orders |
|  |  |
|  | select name as customer\_name,customer\_id,order\_id,order\_date from (select name,a.customer\_id,order\_id,order\_date,dense\_rank() over(partition by a.customer\_id order by order\_date desc) as 'rnk' from customers a join orders b on a.customer\_id=b.customer\_id) |
|  | m where rnk<=3 order by customer\_name asc,customer\_id asc,order\_date desc; |
|  |  |
|  | 1501. Countries You Can Safely Invest In |
|  |  |
|  | select country from (select distinct c.name as country,avg(duration) over(partition by c.name) as test from person a join calls b on a.id=b.caller\_id or a.id=b.callee\_id join country c on left(phone\_number,3)=c.country\_code) z where test>(select avg(duration) from person m join calls n on m.id=n.caller\_id or m.id=n.callee\_id); |
|  |  |
|  | 1468. Calculate Salaries |
|  |  |
|  | select company\_id,employee\_id,employee\_name, |
|  | case |
|  | when max(salary) over (partition by company\_id )<1000 then round(salary,0) |
|  | when max(salary) over (partition by company\_id ) between 1000 and 10000 then round(salary-(salary\*0.24),0) |
|  | when max(salary) over (partition by company\_id )>10000 then round(salary-(salary\*0.49),0) |
|  | end as salary |
|  | from salaries order by company\_id asc , employee\_id asc; |
|  |  |
|  | 1204. Last Person to Fit in the Bus |
|  |  |
|  | select person\_name from (select person\_name,turn,sum(weight) over(order by turn) as total\_weight from queue) a |
|  | where total\_weight<=1000 order by turn desc limit 1; |
|  |  |
|  | 1212. Team Scores in Football Tournament |
|  |  |
|  | select team\_id,team\_name, |
|  | sum(case |
|  | when team\_id=host\_team and host\_goals>guest\_goals then 3 |
|  | when team\_id=guest\_team and host\_goals<guest\_goals then 3 |
|  | when team\_id=host\_team and host\_goals=guest\_goals then 1 |
|  | when team\_id=guest\_team and host\_goals=guest\_goals then 1 |
|  | else 0 |
|  |  |
|  | end) as num\_points |
|  | from teams a left join matches b on a.team\_id=b.host\_team or a.team\_id=b.guest\_team |
|  | group by team\_id order by num\_points desc,team\_id asc; |
|  |  |
|  |  |
|  | 2228. Users With Two Purchases Within Seven Days |
|  |  |
|  | select distinct user\_id from (select user\_id,purchase\_date, |
|  | lag(purchase\_date) over(partition by user\_id order by purchase\_date) as temp from purchases) x where datediff(purchase\_date,temp)<=7; |
|  |  |
|  |  |
|  | 2230. The Users That Are Eligible for Discount |
|  |  |
|  | CREATE PROCEDURE getUserIDs(startDate DATE, endDate DATE, minAmount INT) |
|  | BEGIN |
|  | select distinct user\_id from purchases where (time\_stamp between startDate and endDate) and amount>=minAmount order by user\_id; |
|  | END |
|  |  |
|  | 2205. The Number of Users That Are Eligible for Discount |
|  |  |
|  |  |
|  | CREATE FUNCTION getUserIDs(startDate DATE, endDate DATE, minAmount INT) RETURNS INT |
|  | BEGIN |
|  | RETURN ( |
|  | select count(distinct user\_id) as user\_count from purchases where (time\_stamp between startDate and endDate) and amount>=minamount |
|  | ); |
|  | END |
|  |  |
|  | 1978. Employees Whose Manager Left the Company |
|  |  |
|  | select distinct employee\_id from employees a where salary<30000 and manager\_id not in |
|  | (select employee\_id from employees b ) order by employee\_id; |
|  |  |
|  | 1939. Users That Actively Request Confirmation Messages |
|  |  |
|  | select distinct a.user\_id from confirmations a join confirmations b on a.user\_id=b.user\_id |
|  | and a.time\_stamp<b.time\_stamp where timestampdiff(second,a.time\_stamp,b.time\_stamp)<=86400; |
|  |  |
|  | 1873. Calculate Special Bonus |
|  |  |
|  | select employee\_id, |
|  | case |
|  | when employee\_id%2!=0 and name not like 'M%' then salary |
|  | else 0 |
|  | end as bonus |
|  | from employees |
|  |  |
|  | 1809. Ad-Free Sessions |
|  |  |
|  | select distinct session\_id from playback d where session\_id not in |
|  | (select session\_id from playback a join ads b on a.customer\_id=b.customer\_id where timestamp between start\_time and end\_time); |
|  |  |
|  | 1795. Rearrange Products Table |
|  |  |
|  | select product\_id as product\_id,store as store, a as price from (select product\_id,'store1' as store,store1 as a from products |
|  | union |
|  | select product\_id,'store2' as store,store2 as a from products |
|  | union |
|  | select product\_id,'store3' as store,store3 as a from products) m where a is not null order by product\_id; |
|  |  |
|  | 1179. Reformat Department Table |
|  |  |
|  | select id, |
|  | sum(case when month='Jan' then revenue else null end) as Jan\_Revenue, |
|  | sum(case when month = 'feb' then revenue else null end) as Feb\_Revenue, |
|  | sum(case when month = 'mar' then revenue else null end) as Mar\_Revenue, |
|  | sum(case when month = 'apr' then revenue else null end) as Apr\_Revenue, |
|  | sum(case when month = 'may' then revenue else null end) as May\_Revenue, |
|  | sum(case when month = 'jun' then revenue else null end) as Jun\_Revenue, |
|  | sum(case when month = 'jul' then revenue else null end) as Jul\_Revenue, |
|  | sum(case when month = 'aug' then revenue else null end) as Aug\_Revenue, |
|  | sum(case when month = 'sep' then revenue else null end) as Sep\_Revenue, |
|  | sum(case when month = 'oct' then revenue else null end) as Oct\_Revenue, |
|  | sum(case when month = 'nov' then revenue else null end) as Nov\_Revenue, |
|  | sum(case when month = 'dec' then revenue else null end) as Dec\_Revenue |
|  | from department |
|  | group by id |
|  | order by id; |
|  |  |
|  | 1421. NPV Queries |
|  |  |
|  | select a.id,a.year,ifnull(npv,0) as npv from queries a left join NPV b on a.id=b.id and a.year=b.year order by a.id; |
|  |  |
|  | 1789. Primary Department for Each Employee |
|  |  |
|  | select employee\_id,department\_id from employee where primary\_flag='Y' |
|  | union |
|  | select employee\_id,department\_id from (select employee\_id,department\_id,count(\*) from employee group by employee\_id having count(\*)=1) d; |
|  |  |
|  | 1777. Product's Price for Each Store |
|  |  |
|  | select product\_id, |
|  | max(case when store='store1' then price end) as store1, |
|  | max(case when store='store2' then price end) as store2, |
|  | max(case when store='store3' then price end) as store3 |
|  | from products |
|  | group by product\_id |
|  | order by product\_id; |
|  |  |
|  | 1731. The Number of Employees Which Report to Each Employee |
|  |  |
|  | select distinct a.employee\_id,a.name,count(\*) as reports\_count,round(avg(b.age),0) as |
|  | average\_age from employees a join employees b on a.employee\_id=b.reports\_to group by a.employee\_id order by a.employee\_id ; |
|  |  |
|  | select user\_id,count(follower\_id) as followers\_count from followers group by user\_id order by user\_id; |
|  |  |
|  | 1596. The Most Frequently Ordered Products for Each Customer |
|  |  |
|  | select a as customer\_id,b as product\_id,d as product\_name from |
|  | (select b.customer\_id as a,c.product\_id as b ,c.product\_name as d, |
|  | dense\_rank() over(partition by b.customer\_id order by count(b.product\_id) desc) as rnk |
|  | from orders b join products c on b.product\_id=c.product\_id group by b.customer\_id, c.product\_id) d where rnk=1; |
|  |  |
|  | 2175. The Change in Global Rankings |
|  |  |
|  | select m.team\_id as team\_id,m.name as name,cast(m.rnk as SIGNED)-cast(b.rnk1 as SIGNED) as rank\_diff from |
|  |  |
|  | (select team\_id,name,row\_number() over(order by points desc) as rnk from teampoints) m |
|  |  |
|  | join |
|  |  |
|  | (select a.team\_id,name,row\_number() over(order by sum(points+points\_change) desc) |
|  | as rnk1 from teampoints a join pointschange b on a.team\_id=b.team\_id group by a.team\_id) b on m.team\_id=b.team\_id; |
|  |  |
|  |  |
|  | select ifnull(round(count(distinct requester\_id,accepter\_id)/(count(distinct sender\_id,send\_to\_id )),2),0.00) |
|  | as accept\_rate from friendrequest, requestaccepted |
|  |  |
|  | 597. Friend Requests I: Overall Acceptance Rate |
|  |  |
|  | select ifnull(round(count(distinct requester\_id,accepter\_id)/count(distinct sender\_id,send\_to\_id),2),0.00) |
|  | as accept\_rate from FriendRequest,RequestAccepted; |
|  |  |
|  | 1661. Average Time of Process per Machine |
|  |  |
|  | select a.machine\_id,round(avg(b.timestamp-a.timestamp),3) as processing\_time from activity a join activity |
|  | b on a.machine\_id=b.machine\_id where a.activity\_type='start' and b.activity\_type='end' group by machine\_id |
|  |  |
|  | 1677. Product's Worth Over Invoices |
|  |  |
|  | select name, |
|  | ifnull(case when a.product\_id=b.product\_id then sum(rest) end,0) as rest, |
|  | ifnull(case when a.product\_id=b.product\_id then sum(paid) end,0) as paid, |
|  | ifnull(case when a.product\_id=b.product\_id then sum(canceled) end,0) as canceled, |
|  | ifnull(case when a.product\_id=b.product\_id then sum(refunded) end,0) as refunded |
|  | from product b left join invoice a on a.product\_id=b.product\_id group by name order by name ; |
|  |  |
|  | 1667. Fix Names in a Table |
|  |  |
|  | select user\_id,concat(UPPER(SUBSTRING(name,1,1)),LOWER(substring(name,2))) as name from users order by user\_id; |
|  |  |
|  | 1633. Percentage of Users Attended a Contest |
|  |  |
|  | select contest\_id,round((count(\*)/ (select count(\*) from users))\*100,2) as percentage from users a join register b on a.user\_id=b.user\_id |
|  | group by contest\_id order by count(\*)/ (select count(\*) from users)\*100 desc,contest\_id asc; |
|  |  |
|  | 2238. Number of Times a Driver Was a Passenger |
|  |  |
|  | select a.driver\_id,count(distinct b.ride\_id) as cnt from rides a left join rides b on a.driver\_id=b.passenger\_id group by a.driver\_id; |
|  |  |
|  | 2066. Account Balance |
|  |  |
|  | select account\_id,day, |
|  | sum(case when type='Deposit' then amount else -amount end) over(partition by account\_id order by day) as balance |
|  | from transactions; |
|  |  |
|  | 1098. Unpopular Books |
|  |  |
|  | select a.book\_id,a.name from books a left join orders b on a.book\_id=b.book\_id and dispatch\_date between '2018-06-23' and '2019-06-23' where datediff('2019-06-23',available\_from)>30 group by a.book\_id,a.name having sum(quantity)<10 or sum(quantity) is null; |
|  |  |
|  | 1934. select a.user\_id, |
|  | round(avg(case when action='confirmed' then 1 else 0 end),2) as confirmation\_rate |
|  | from signups a left join confirmations b on b.user\_id=a.user\_id group by a.user\_id; |
|  |  |
|  | 1511. select m as customer\_id,name from (select a.customer\_id as m,name,sum(quantity\*price) |
|  | from customers a left join orders b on a.customer\_id=b.customer\_id left join product c on c.product\_id=b.product\_id where extract(month from order\_date) in (6,7) group by a.customer\_id,extract(month from order\_date) having sum(quantity\*price)>=100) n group by m having count(m)=2; |
|  |  |
|  | 610. select x,y,z, |
|  | case when x+y>z and x+z>y and y+z>x then 'Yes' else 'No' end as triangle |
|  | from triangle; |
|  |  |
|  |  |
|  | 627. update salary set sex=if(sex='m','f','m'); |
|  |  |
|  | 1050. select a.actor\_id,a.director\_id from actordirector a left join actordirector b |
|  | on a.actor\_id=b.actor\_id and a.director\_id=b.director\_id and a.timestamp=b.timestamp group by a.actor\_id,a.director\_id having count(a.timestamp)>=3 |
|  |  |
|  | 1142. select ifnull(round(count(distinct session\_id)/count(distinct user\_id),2),0.00) |
|  | as average\_sessions\_per\_user from activity where activity\_date between '2019-06-28' and '2019-07-27' |
|  |  |
|  | 1241.select distinct b.sub\_id as post\_id, count(distinct a.sub\_id) as number\_of\_comments |
|  | from submissions a right join (select distinct sub\_id from submissions where parent\_id is null) b on a.parent\_id=b.sub\_id group by b.sub\_id |
|  |  |
|  | 1280.select a.student\_id,student\_name,b.subject\_name,count(c.subject\_name) as attended\_exams |
|  | from students as a cross join subjects as b left join examinations as c on a.student\_id=c.student\_id and |
|  | b.subject\_name=c.subject\_name group by a.student\_id,b.subject\_name order by a.student\_id |
|  |  |
|  | 1322. select ad\_id,ifnull(round(a/(a+b)\* 100,2),0.00) as ctr from (select a.ad\_id, |
|  | sum(case when action='Clicked' then 1 else 0 end) as a, |
|  | sum(case when action='Viewed' then 1 else 0 end) as b |
|  | from ads a group by a.ad\_id) m order by ctr desc,ad\_id asc; |
|  |  |
|  |  |
|  |  |
|  | 1435.select bin as total from (select |
|  | case when duration/60<5 then '[0-5>' |
|  | when duration/60>5 and duration/60<10 then '[5-10>' |
|  | ifnull(when duration/60>10 and duration/60<15,0) then '[10-15>' |
|  | when duration/60>15 then '15 or more' end as bin |
|  | from sessions) as d; /\* issue with the case\*/ need slight tweaking |
|  |  |
|  | Individual case statement works.... |
|  |  |
|  |  |
|  | select '[0-5>' as bin, |
|  | sum(case when duration/60<5 then 1 else 0 end) as total |
|  | from sessions |
|  | union all |
|  | select '[5-10>' as bin, |
|  | sum(case when duration/60>5 and duration/60<10 then 1 else 0 end) |
|  | from sessions |
|  | union all |
|  | select '[10-15>' as bin, |
|  | sum(case when duration/60>10 and duration/60<15 then 1 else 0 end) as total |
|  | from sessions |
|  | union all |
|  | select '15 or more' as bin, |
|  | sum(case when duration/60>15 then 1 else 0 end) as total |
|  | from sessions; |
|  |  |
|  | 2159.select first\_col,second\_col from (select first\_col,row\_number() over(order by first\_col asc) as d from data order by first\_col asc) a join |
|  | (select second\_col,row\_number() over(order by second\_col desc) as f from data order by first\_col asc) b on a.d=b.f order by second\_col desc,first\_col asc |
|  |  |
|  | 1495 |
|  | select distinct title from tvprogram a inner join content b on a.content\_id=b.content\_id where kids\_content='Y' |
|  | and extract(month from program\_date)=6 and content\_type='Movies' |
|  |  |
|  | 1527. |
|  | SELECT \* |
|  | FROM patients |
|  | WHERE conditions like '% DIAB1%' or conditions like 'DIAB1%' |
|  |  |
|  |  |
|  | 1543. |
|  | select lower(trim(product\_name)) as product\_name,date\_format(sale\_date,'%Y-%m') as sale\_date,count(sale\_id) as total from sales |
|  | group by LOWER(TRIM(product\_name)),date\_format(sale\_date,'%Y-%m') order by LOWER(TRIM(product\_name)) asc,date\_format(sale\_date,'%Y-%m') asc; |
|  |  |
|  | 1565. |
|  | select date\_format(order\_date,'%Y-%m') as month,count(order\_id) as order\_count,count(distinct customer\_id) as customer\_count |
|  | from orders where invoice>20 group by date\_format(order\_date,'%Y-%m') |
|  |  |
|  | 1571. |
|  | select name warehouse\_name,sum(units\*width\*length\*height) as volume from warehouse a join products b on a.product\_id=b.product\_id group by name |
|  |  |
|  |  |
|  | 1581 |
|  | select distinct customer\_id,count(\*) as count\_no\_trans from visits where visit\_id not in (select visit\_id from transactions) group by customer\_id |
|  |  |
|  | 1607. |
|  | select distinct seller\_name from seller where seller\_name not in (select seller\_name from |
|  | seller a left join orders b on a.seller\_id=b.seller\_id where extract(year from sale\_date)=2020) order by seller\_name |
|  |  |
|  |  |