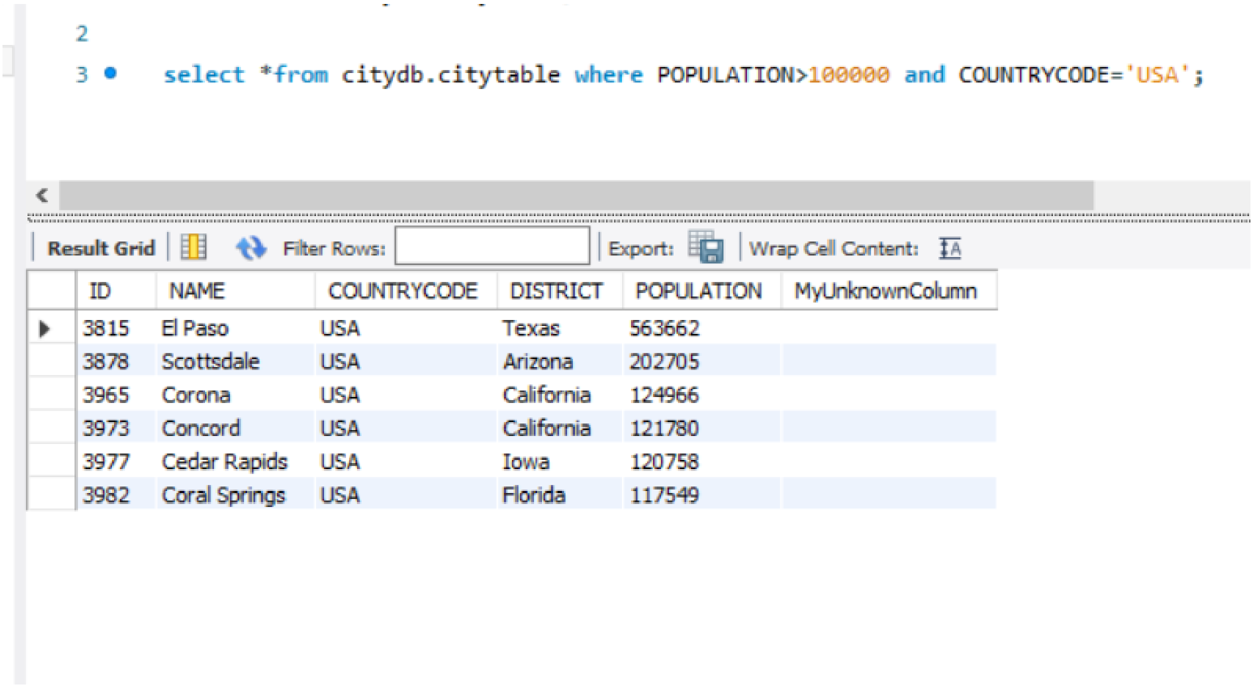
SQL Assignement-Set-1

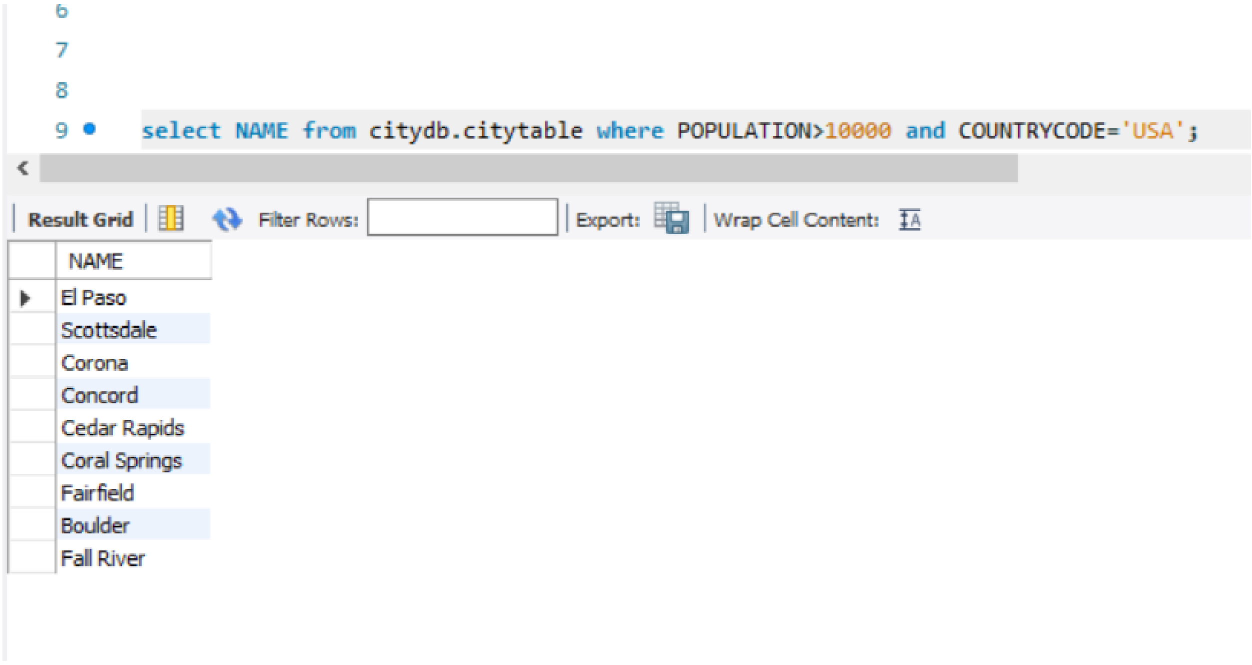
Q1.



```
select *from citydb.citytable where POPULATION>100000 and COUNTRYCODE='USA';
```

ID	NAME	COUNTRYCODE	DISTRICT	POPULATION	MyUnknownColumn
3815	El Paso	USA	Texas	563662	
3878	Scottsdale	USA	Arizona	202705	
3965	Corona	USA	California	124966	
3973	Concord	USA	California	121780	
3977	Cedar Rapids	USA	Iowa	120758	
3982	Coral Springs	USA	Florida	117549	

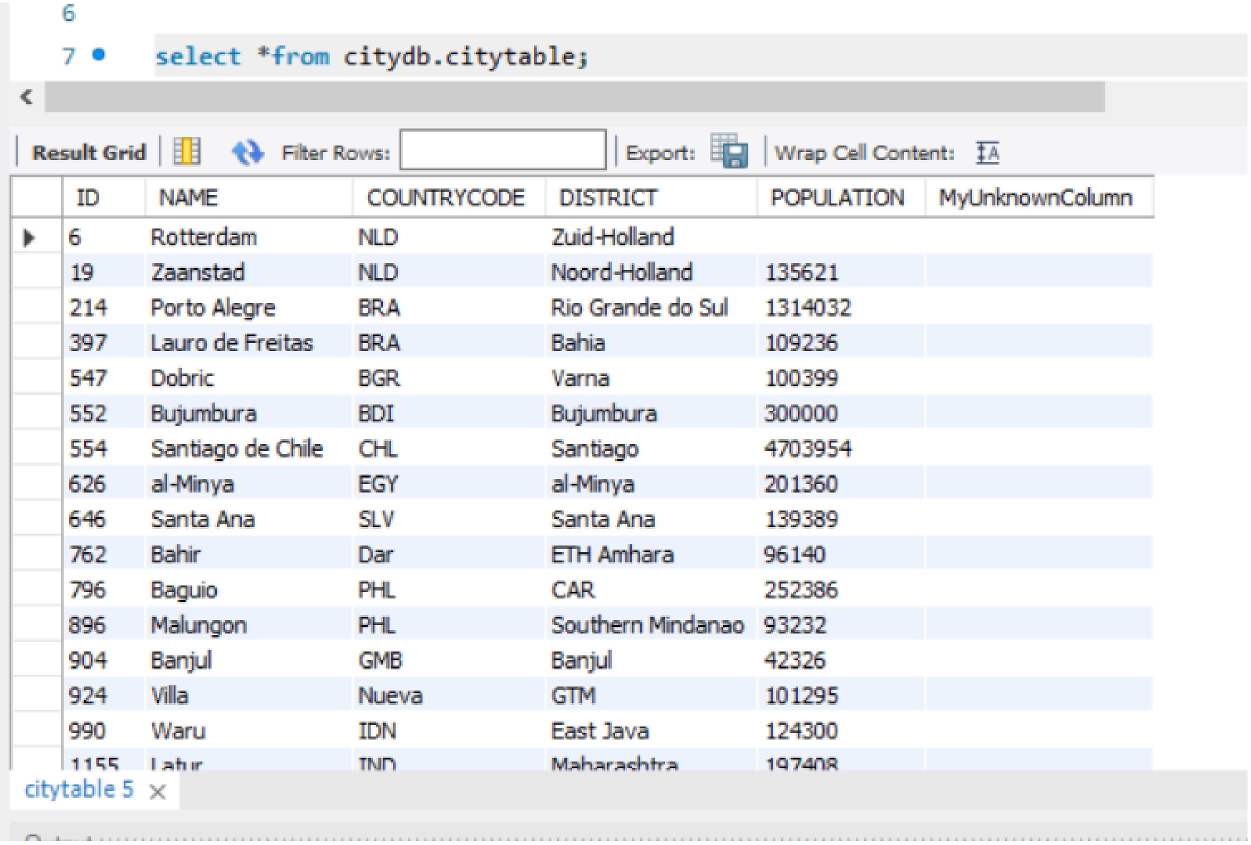
Q2.



```
select NAME from citydb.citytable where POPULATION>10000 and COUNTRYCODE='USA';
```

NAME
El Paso
Scottsdale
Corona
Concord
Cedar Rapids
Coral Springs
Fairfield
Boulder
Fall River

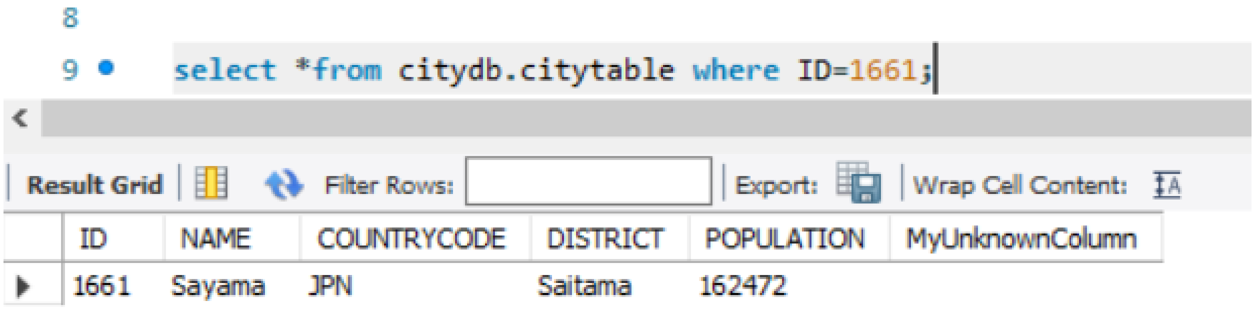
Q3.



```sql
select *from citydb.citytable;
```

ID	NAME	COUNTRYCODE	DISTRICT	POPULATION	MyUnknownColumn
6	Rotterdam	NLD	Zuid-Holland		
19	Zaanstad	NLD	Noord-Holland	135621	
214	Porto Alegre	BRA	Rio Grande do Sul	1314032	
397	Lauro de Freitas	BRA	Bahia	109236	
547	Dobric	BGR	Varna	100399	
552	Bujumbura	BDI	Bujumbura	300000	
554	Santiago de Chile	CHL	Santiago	4703954	
626	al-Minya	EGY	al-Minya	201360	
646	Santa Ana	SLV	Santa Ana	139389	
762	Bahir	Dar	ETH Amhara	96140	
796	Baguio	PHL	CAR	252386	
896	Malungon	PHL	Southern Mindanao	93232	
904	Banjul	GMB	Banjul	42326	
924	Villa	Nueva	GTM	101295	
990	Waru	IDN	East Java	124300	
1155	Latur	IND	Maharashtra	197408	

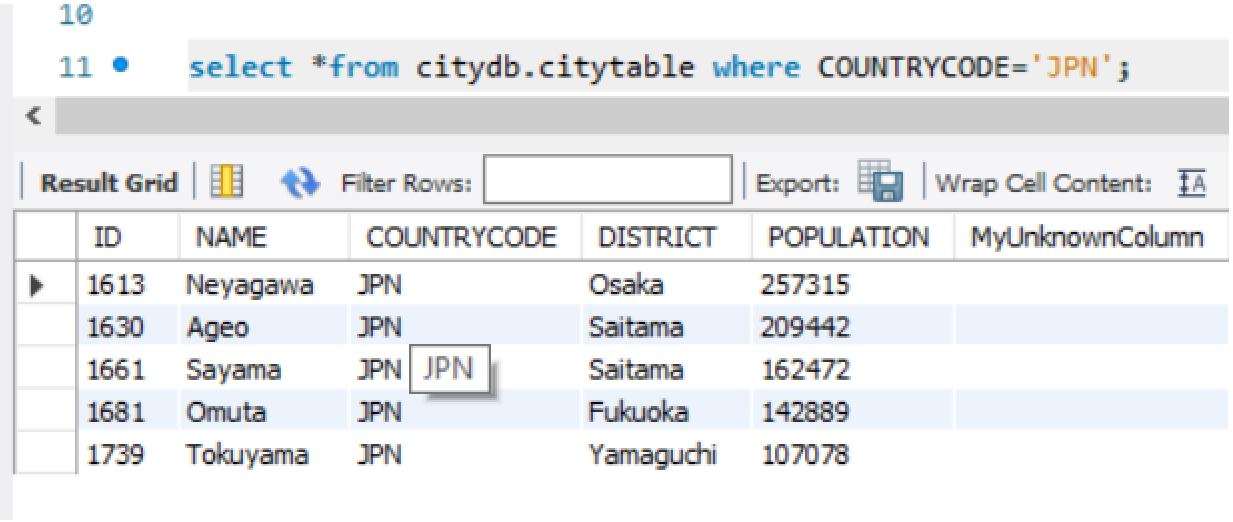
Q4.



```sql
select *from citydb.citytable where ID=1661;
```

ID	NAME	COUNTRYCODE	DISTRICT	POPULATION	MyUnknownColumn
1661	Sayama	JPN	Saitama	162472	

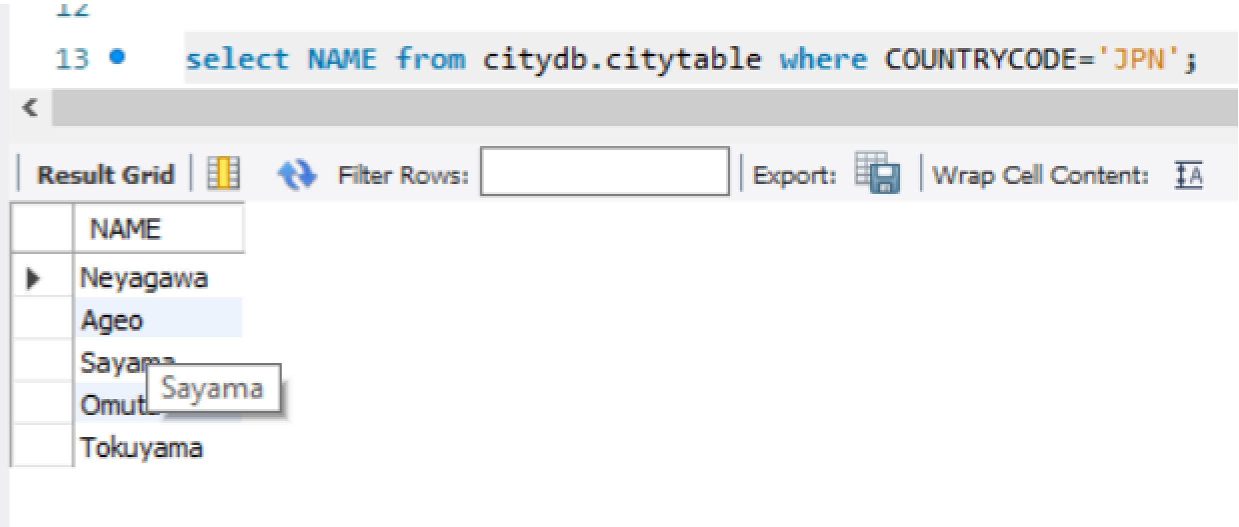
Q5.



```
select *from citydb.citytable where COUNTRYCODE='JPN';
```

ID	NAME	COUNTRYCODE	DISTRICT	POPULATION	MyUnknownColumn
1613	Neyagawa	JPN	Osaka	257315	
1630	Ageo	JPN	Saitama	209442	
1661	Sayama	JPN	Saitama	162472	
1681	Omuta	JPN	Fukuoka	142889	
1739	Tokuyama	JPN	Yamaguchi	107078	

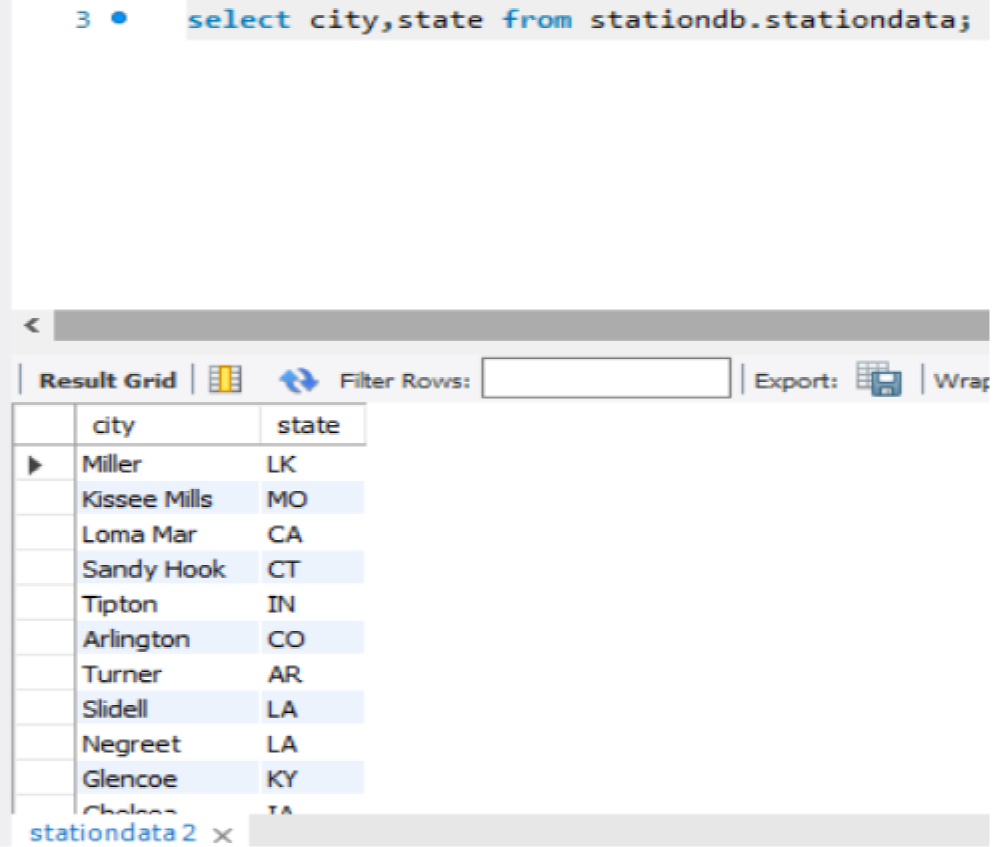
Q6.



```
select NAME from citydb.citytable where COUNTRYCODE='JPN';
```

NAME
Neyagawa
Ageo
Sayama
Omuta
Tokuyama

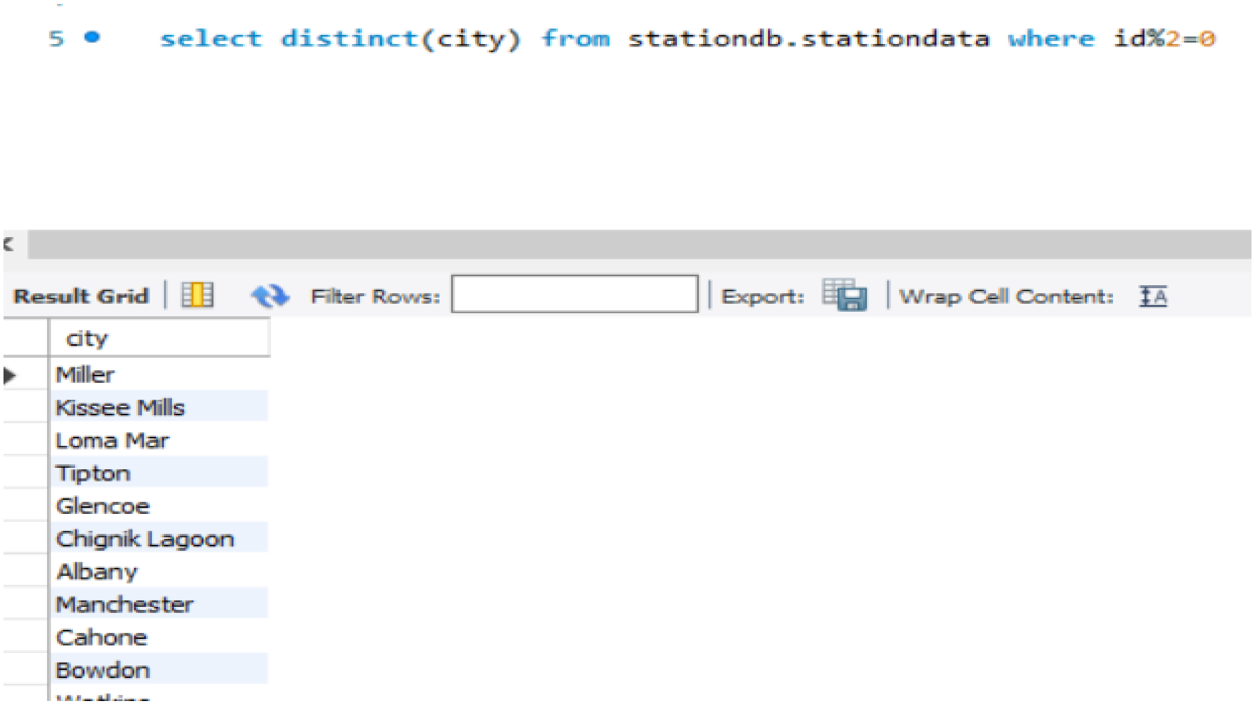
Q7.



```
select city,state from stationdb.stationdata;
```

city	state
Miller	LK
Kissee Mills	MO
Loma Mar	CA
Sandy Hook	CT
Tipton	IN
Arlington	CO
Turner	AR
Slidell	LA
Negreet	LA
Glencoe	KY

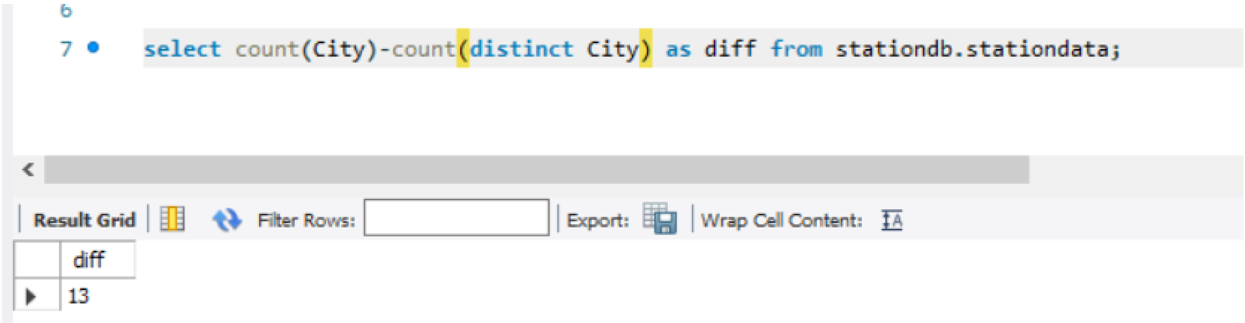
Q8.



```
select distinct(city) from stationdb.stationdata where id%2=0
```

city
Miller
Kissee Mills
Loma Mar
Tipton
Glencoe
Chignik Lagoon
Albany
Manchester
Cahone
Bowdon

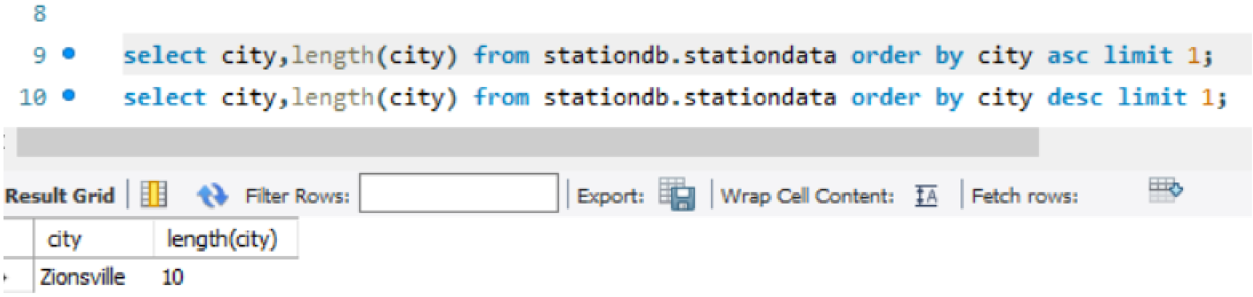
Q9



```sql
select count(City)-count(distinct City) as diff from stationdb.stationdata;
```

```
diff
13
```

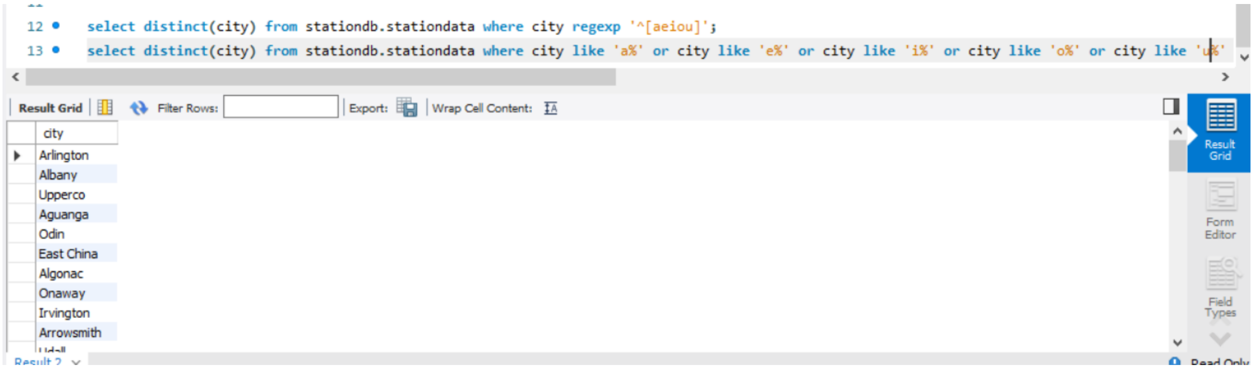
Q10



```sql
select city,length(city) from stationdb.stationdata order by city asc limit 1;
select city,length(city) from stationdb.stationdata order by city desc limit 1;
```

```
city         length(city)
Zionsville   10
```

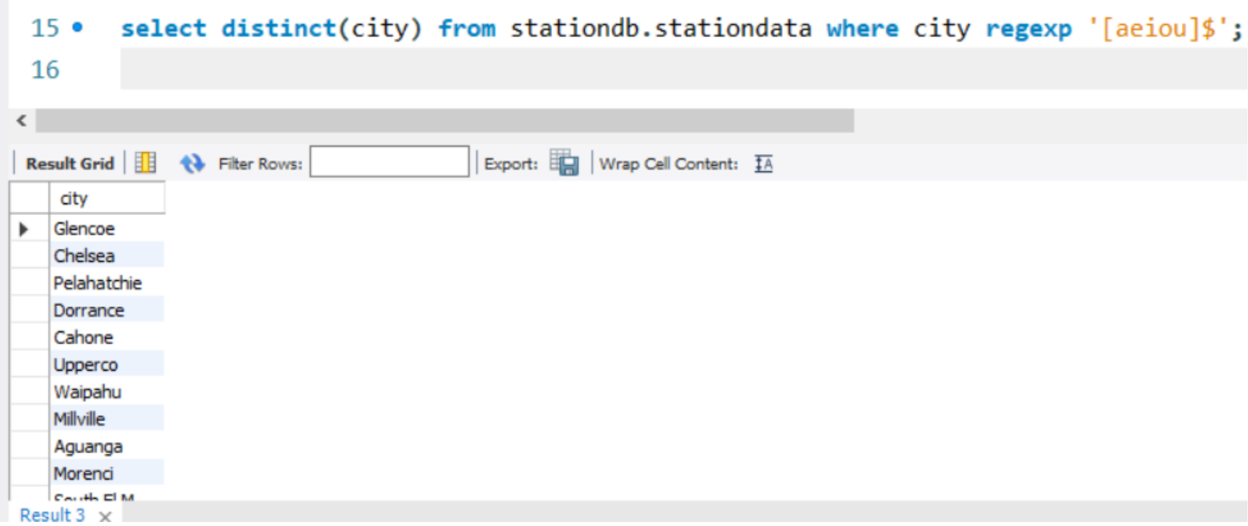
Q11.



```sql
select distinct(city) from stationdb.stationdata where city regexp '^[aeiou]';
select distinct(city) from stationdb.stationdata where city like 'a%' or city like 'e%' or city like 'i%' or city like 'o%' or city like 'u%'
```

```
city
Arlington
Albany
Upperco
Aguanga
Odin
East China
Algonac
Onaway
Irvington
Arrowsmith
Udall
```

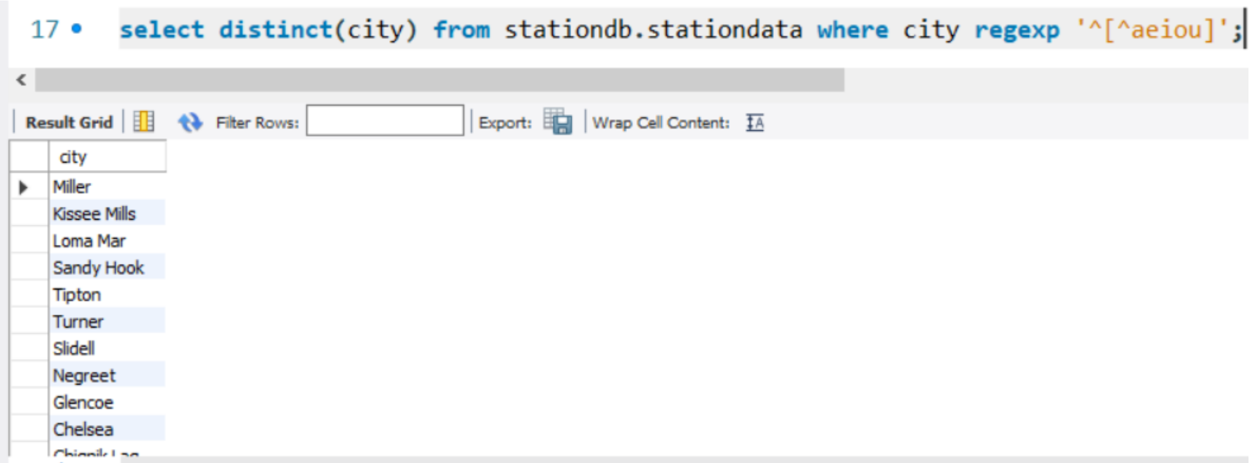
Q12.



```sql
select distinct(city) from stationdb.stationdata where city regexp '[aeiou]$';
```

city
Glencoe
Chelsea
Pelahatchie
Dorrance
Cahone
Upperco
Waipahu
Millville
Aguanga
Morenci
South El M

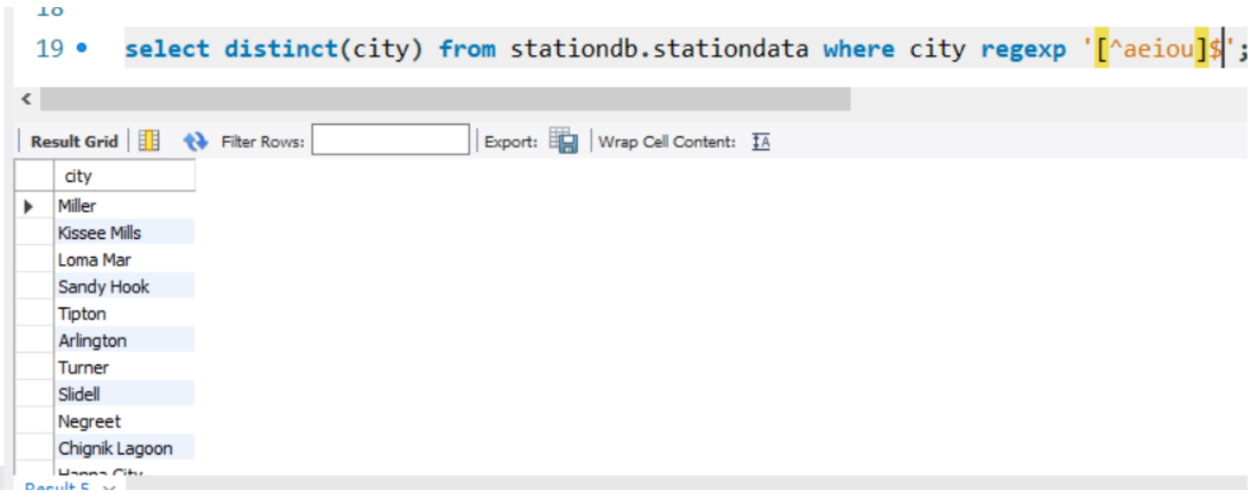
Q13.



```sql
select distinct(city) from stationdb.stationdata where city regexp '^[^aeiou]';
```

city
Miller
Kissee Mills
Loma Mar
Sandy Hook
Tipton
Turner
Slidell
Negreet
Glencoe
Chelsea
Chignik Lag

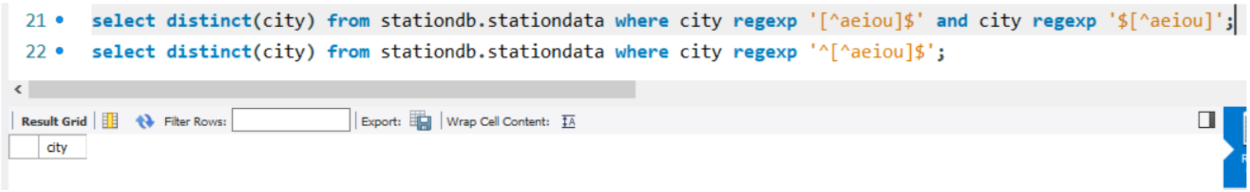
Q14.



```sql
select distinct(city) from stationdb.stationdata where city regexp '[^aeiou]$';
```

city
Miller
Kissee Mills
Loma Mar
Sandy Hook
Tipton
Arlington
Turner
Slidell
Negreet
Chignik Lagoon
Hanna City

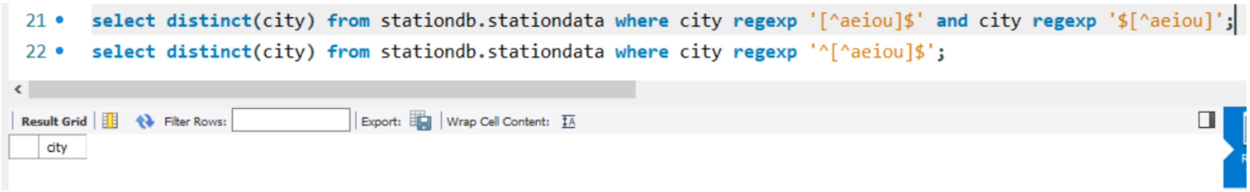
Q15.



```sql
select distinct(city) from stationdb.stationdata where city regexp '[^aeiou]$' and city regexp '$[^aeiou]';
select distinct(city) from stationdb.stationdata where city regexp '^[^aeiou]$';
```

city

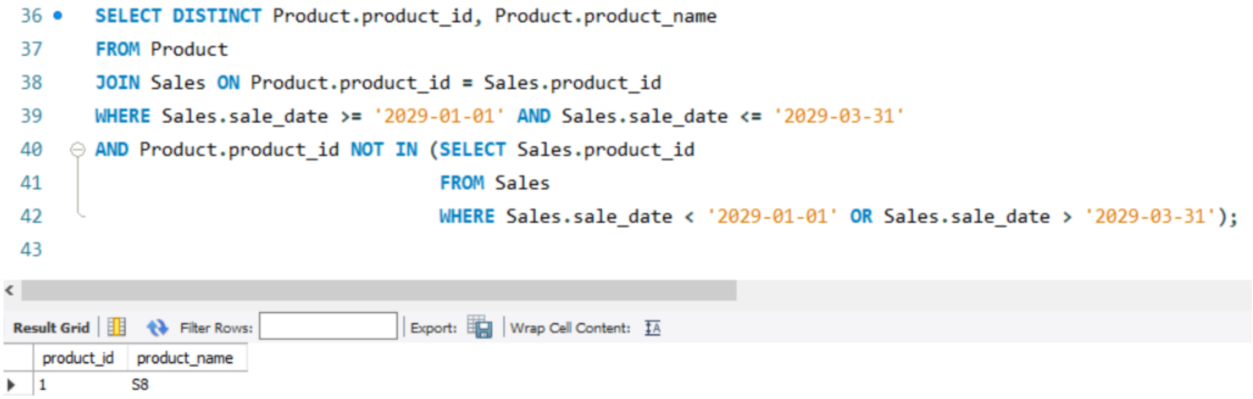
Q16



```sql
select distinct(city) from stationdb.stationdata where city regexp '[^aeiou]$' and city regexp '$[^aeiou]';
select distinct(city) from stationdb.stationdata where city regexp '^[^aeiou]$';
```

city

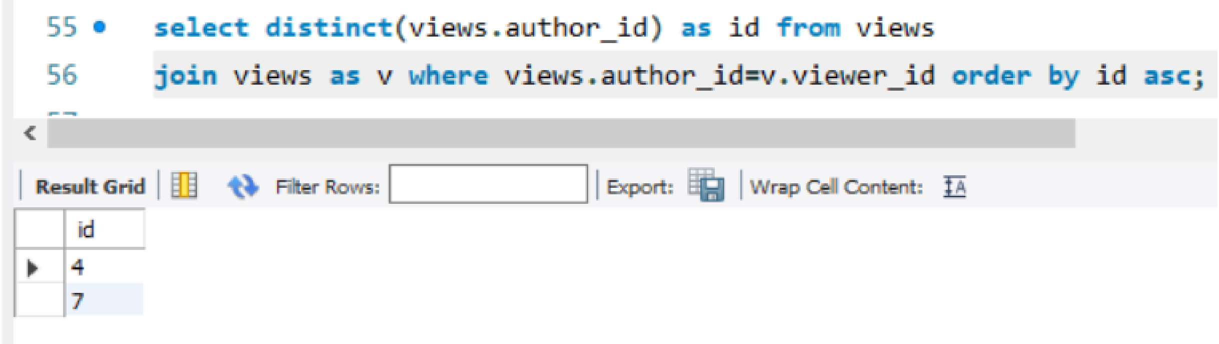
Q17.



```sql
SELECT DISTINCT Product.product_id, Product.product_name
FROM Product
JOIN Sales ON Product.product_id = Sales.product_id
WHERE Sales.sale_date >= '2029-01-01' AND Sales.sale_date <= '2029-03-31'
AND Product.product_id NOT IN (SELECT Sales.product_id
                               FROM Sales
                               WHERE Sales.sale_date < '2029-01-01' OR Sales.sale_date > '2029-03-31');
```

product_id	product_name
1	S8

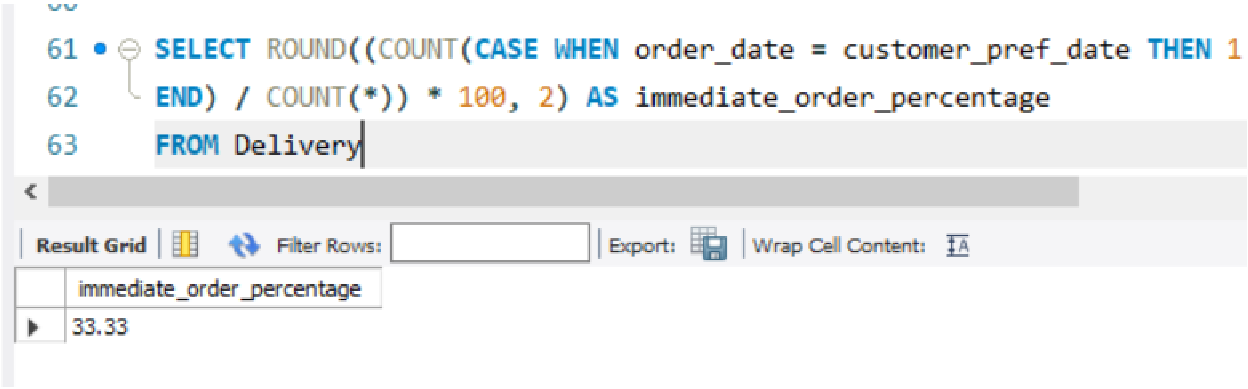
Q18.



```sql
select distinct(views.author_id) as id from views
join views as v where views.author_id=v.viewer_id order by id asc;
```

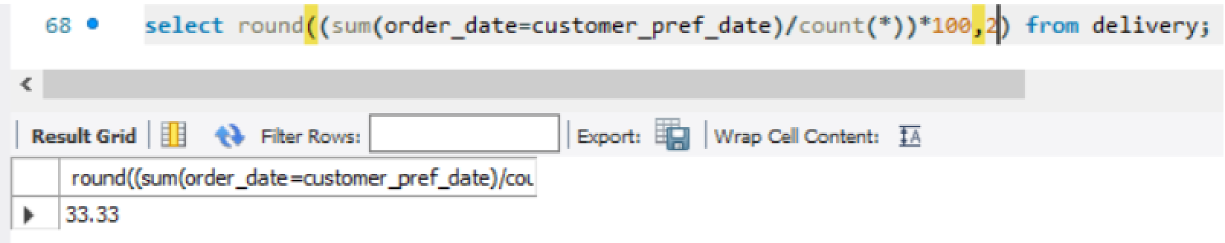
id
4
7

Q19.



```sql
SELECT ROUND((COUNT(CASE WHEN order_date = customer_pref_date THEN 1
END) / COUNT(*)) * 100, 2) AS immediate_order_percentage
FROM Delivery
```

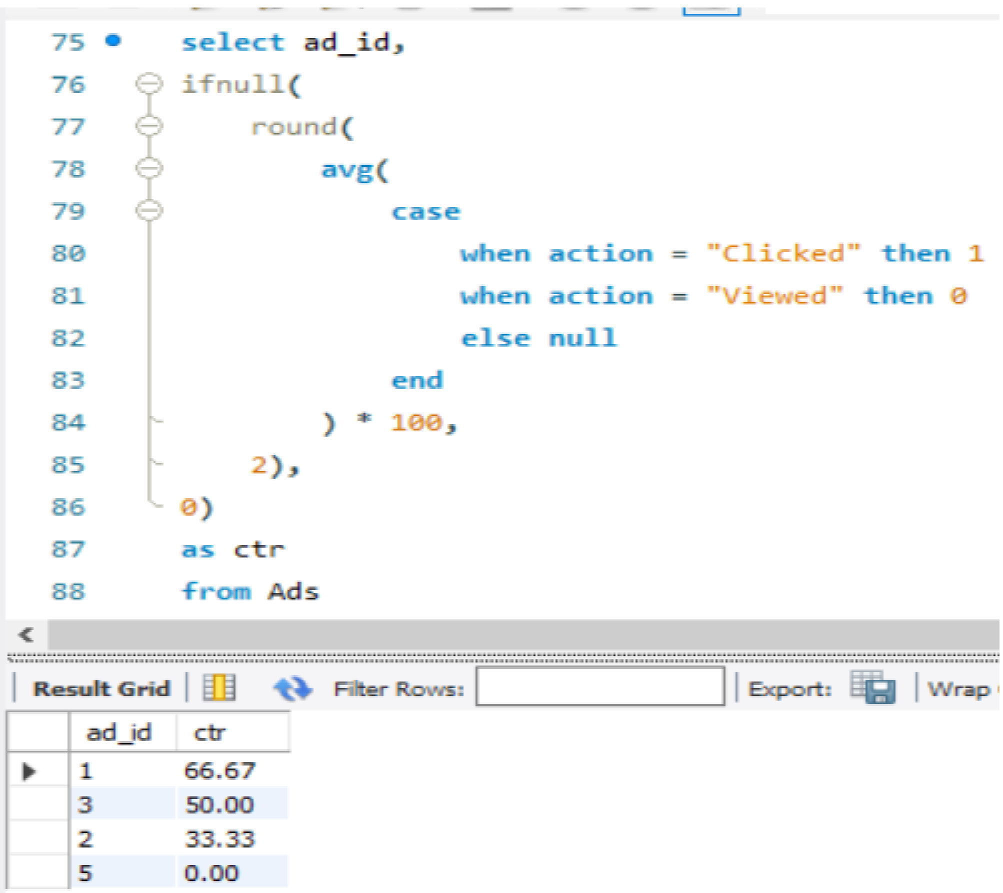
immediate_order_percentage
33.33



```sql
select round((sum(order_date=customer_pref_date)/count(*))*100,2) from delivery;
```

round((sum(order_date=customer_pref_date)/cou
33.33

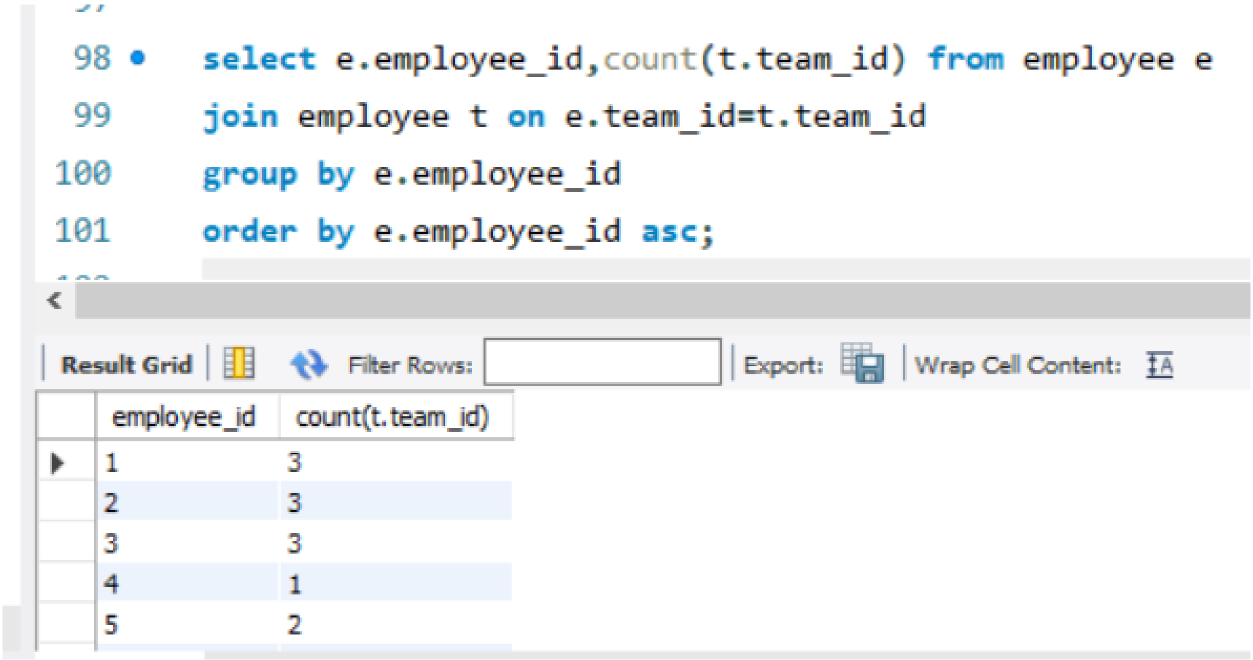
Q20.



```sql
select ad_id,
ifnull(
    round(
        avg(
            case
                when action = "Clicked" then 1
                when action = "Viewed" then 0
                else null
            end
        ) * 100,
    2),
0)
as ctr
from Ads
```

ad_id	ctr
1	66.67
3	50.00
2	33.33
5	0.00

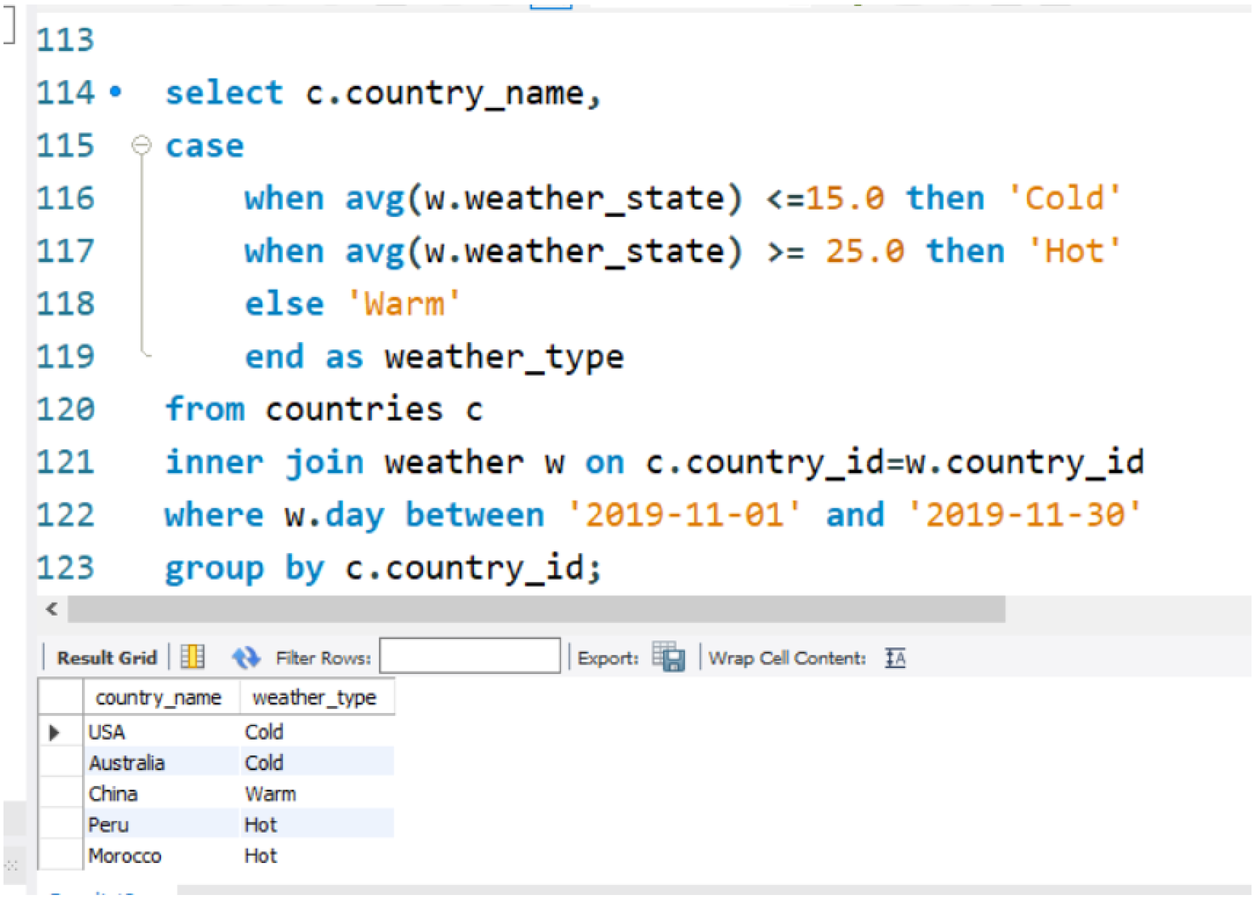
Q21.



```sql
select e.employee_id,count(t.team_id) from employee e
join employee t on e.team_id=t.team_id
group by e.employee_id
order by e.employee_id asc;
```

employee_id	count(t.team_id)
1	3
2	3
3	3
4	1
5	2

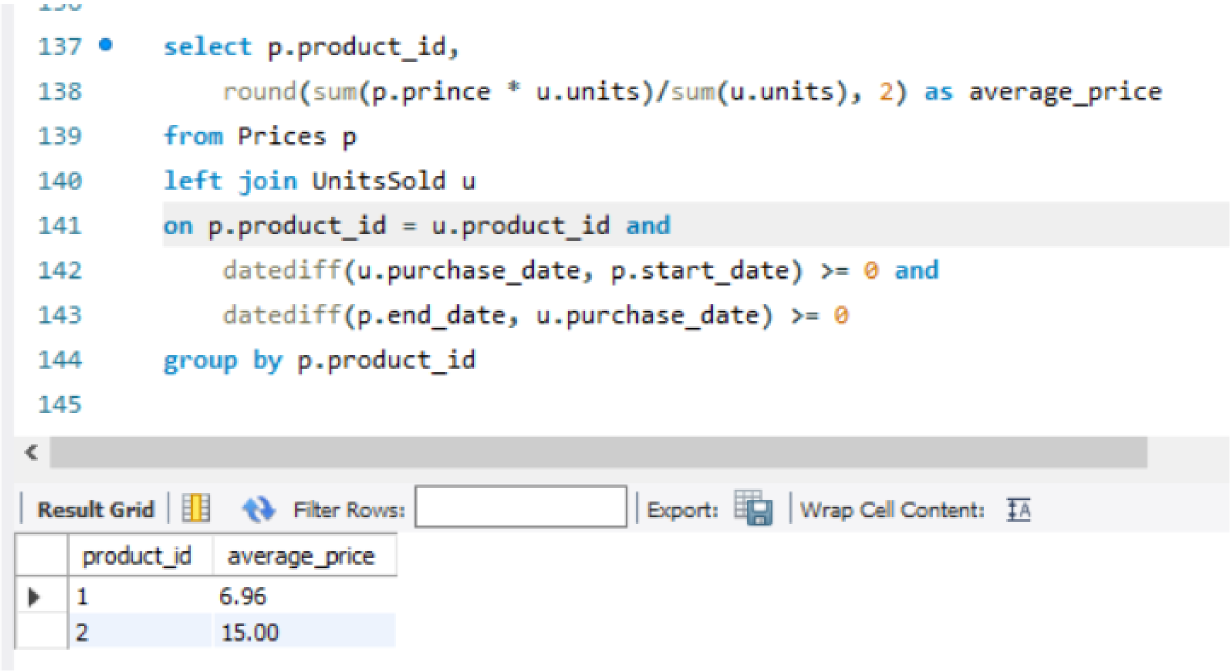
Q22.



```sql
select c.country_name,
case
    when avg(w.weather_state) <=15.0 then 'Cold'
    when avg(w.weather_state) >= 25.0 then 'Hot'
    else 'Warm'
    end as weather_type
from countries c
inner join weather w on c.country_id=w.country_id
where w.day between '2019-11-01' and '2019-11-30'
group by c.country_id;
```

country_name	weather_type
USA	Cold
Australia	Cold
China	Warm
Peru	Hot
Morocco	Hot

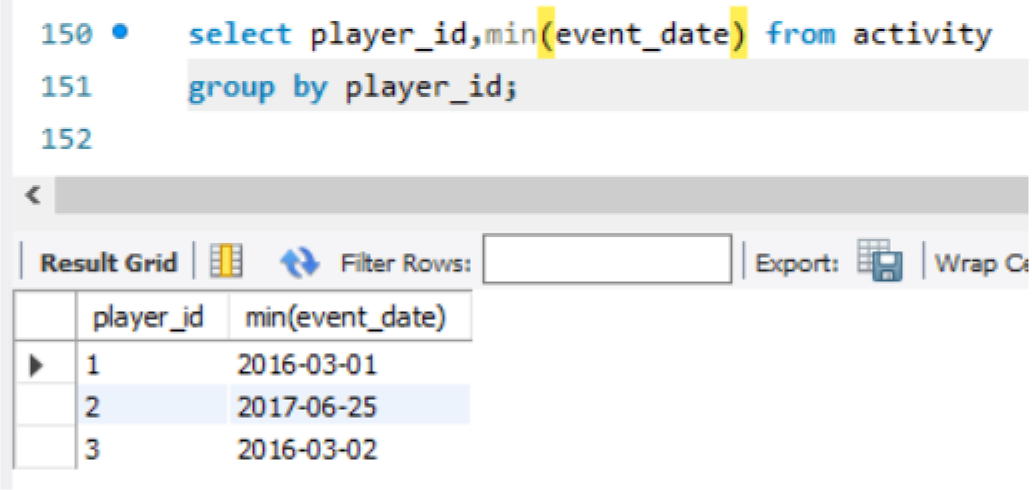
Q23.



```
select p.product_id,
    round(sum(p.prince * u.units)/sum(u.units), 2) as average_price
from Prices p
left join UnitsSold u
on p.product_id = u.product_id and
    datediff(u.purchase_date, p.start_date) >= 0 and
    datediff(p.end_date, u.purchase_date) >= 0
group by p.product_id
```

product_id	average_price
1	6.96
2	15.00

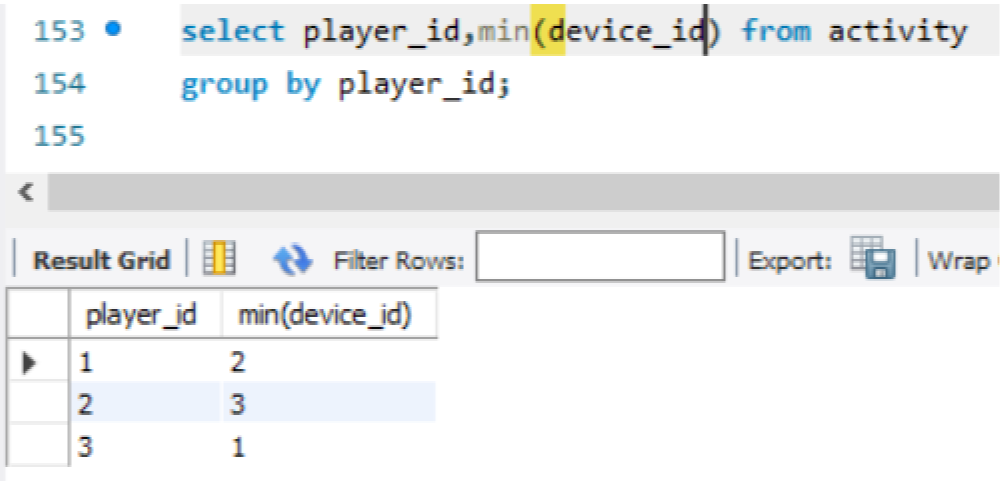
Q24.



```
select player_id,min(event_date) from activity
group by player_id;
```

player_id	min(event_date)
1	2016-03-01
2	2017-06-25
3	2016-03-02

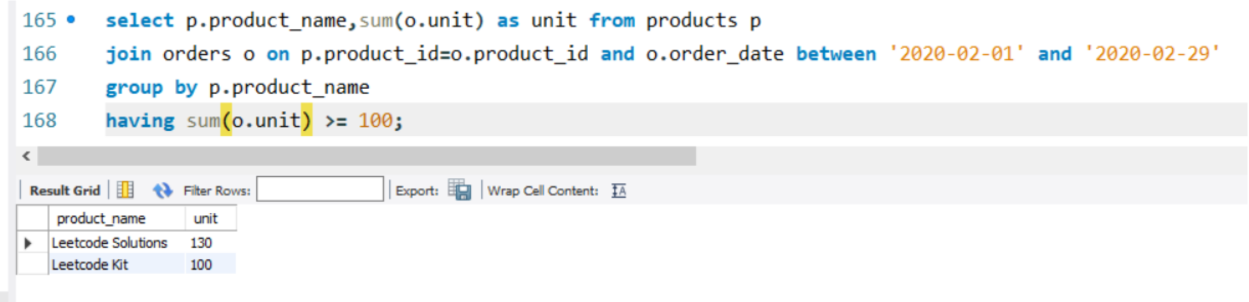
Q25.



```sql
select player_id,min(device_id) from activity
group by player_id;
```

player_id	min(device_id)
1	2
2	3
3	1

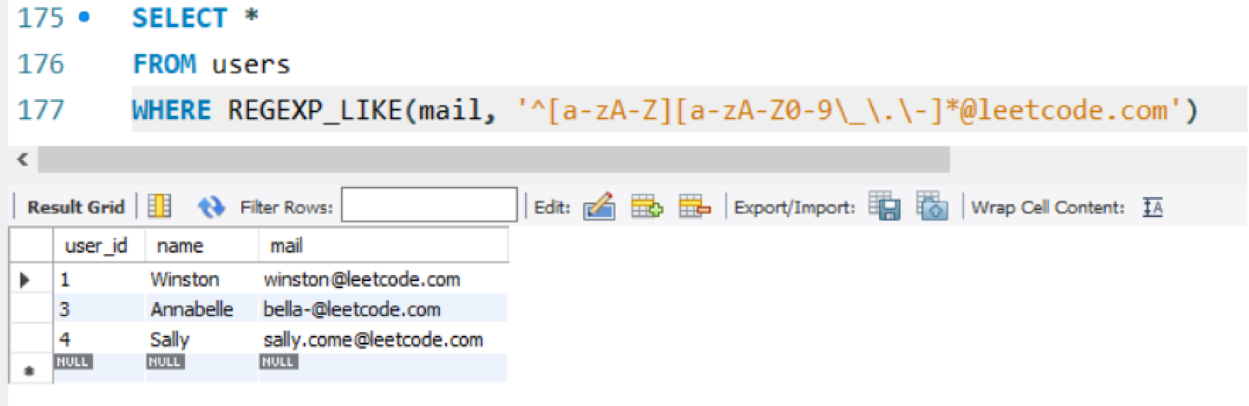
Q26.



```sql
select p.product_name,sum(o.unit) as unit from products p
join orders o on p.product_id=o.product_id and o.order_date between '2020-02-01' and '2020-02-29'
group by p.product_name
having sum(o.unit) >= 100;
```

product_name	unit
Leetcode Solutions	130
Leetcode Kit	100

Q27.

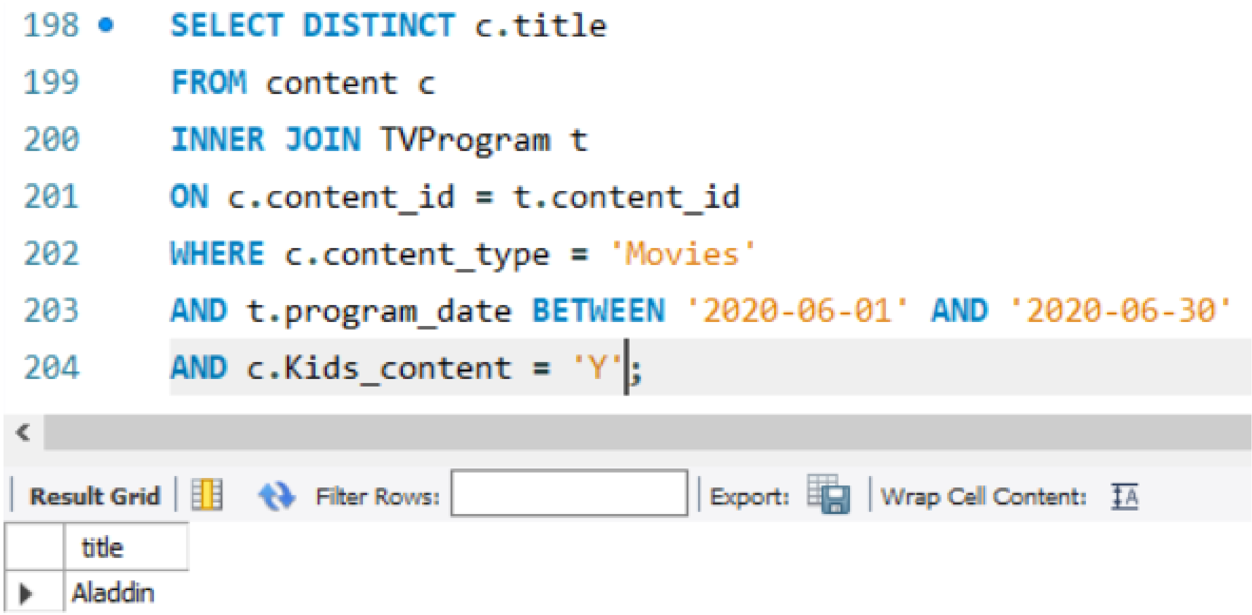


```sql
SELECT *
FROM users
WHERE REGEXP_LIKE(mail, '^[a-zA-Z][a-zA-Z0-9\_\.\-]*@leetcode.com')
```

user_id	name	mail
1	Winston	winston@leetcode.com
3	Annabelle	bella-@leetcode.com
4	Sally	sally.come@leetcode.com
NULL	NULL	NULL

Q28.

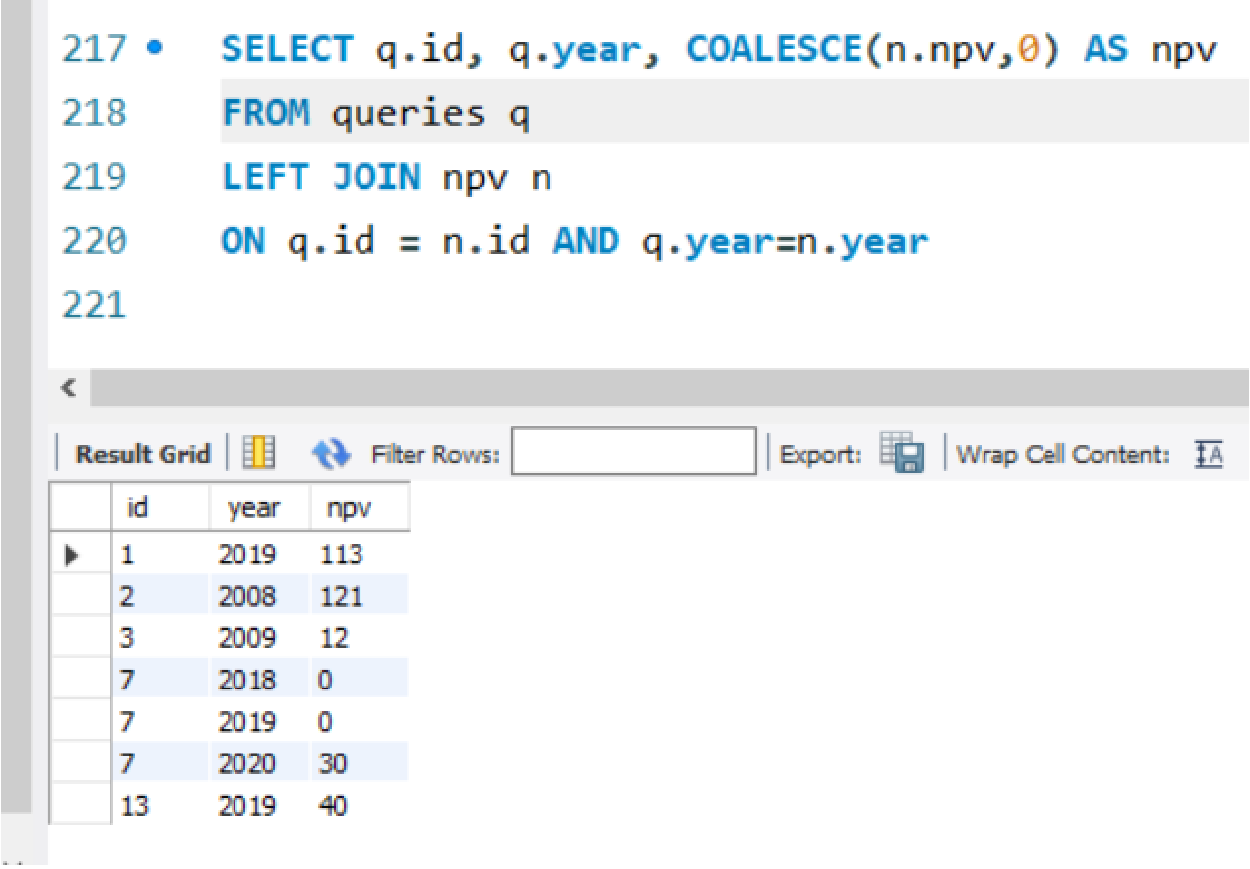
Q29.



```sql
SELECT DISTINCT c.title
FROM content c
INNER JOIN TVProgram t
ON c.content_id = t.content_id
WHERE c.content_type = 'Movies'
AND t.program_date BETWEEN '2020-06-01' AND '2020-06-30'
AND c.Kids_content = 'Y';
```

title
Aladdin

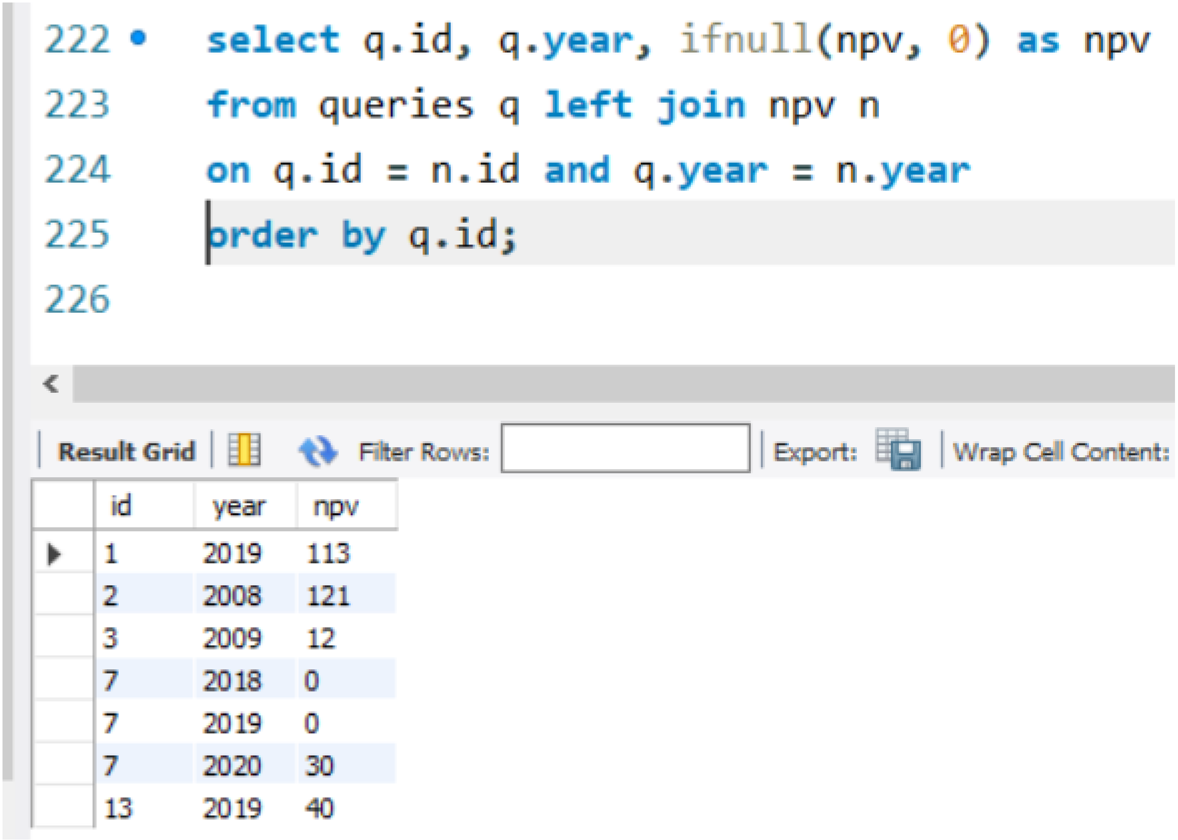
Q30.



```sql
SELECT q.id, q.year, COALESCE(n.npv,0) AS npv
FROM queries q
LEFT JOIN npv n
ON q.id = n.id AND q.year=n.year
```

id	year	npv
1	2019	113
2	2008	121
3	2009	12
7	2018	0
7	2019	0
7	2020	30
13	2019	40

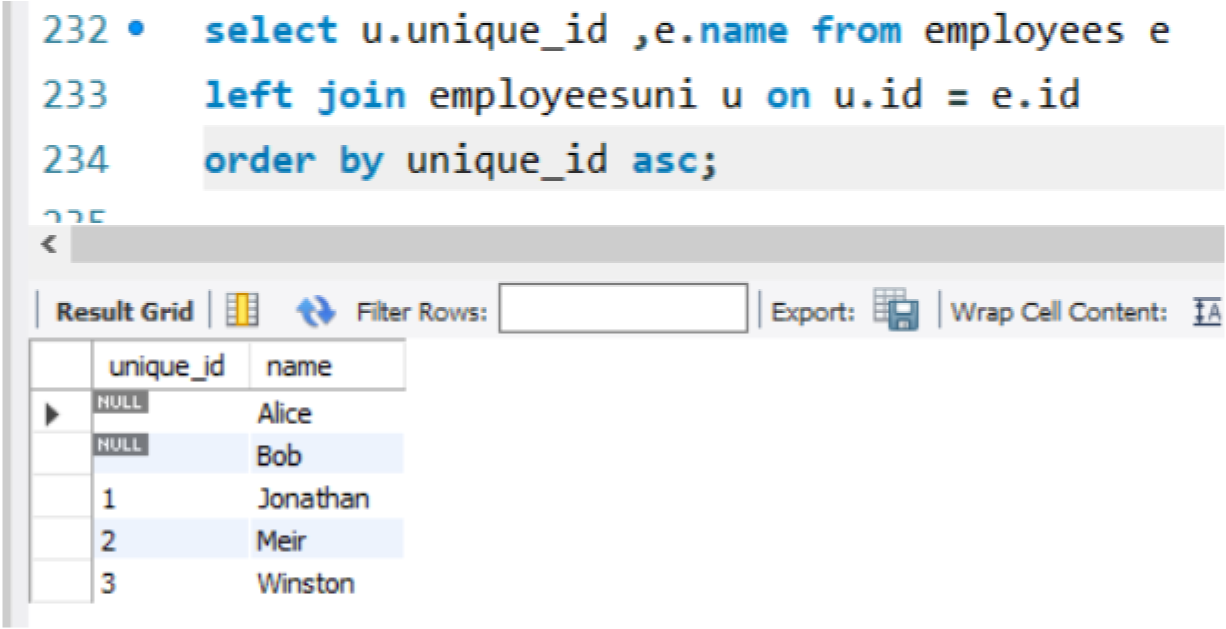
Q31.



```
select q.id, q.year, ifnull(npv, 0) as npv
from queries q left join npv n
on q.id = n.id and q.year = n.year
order by q.id;
```

id	year	npv
1	2019	113
2	2008	121
3	2009	12
7	2018	0
7	2019	0
7	2020	30
13	2019	40

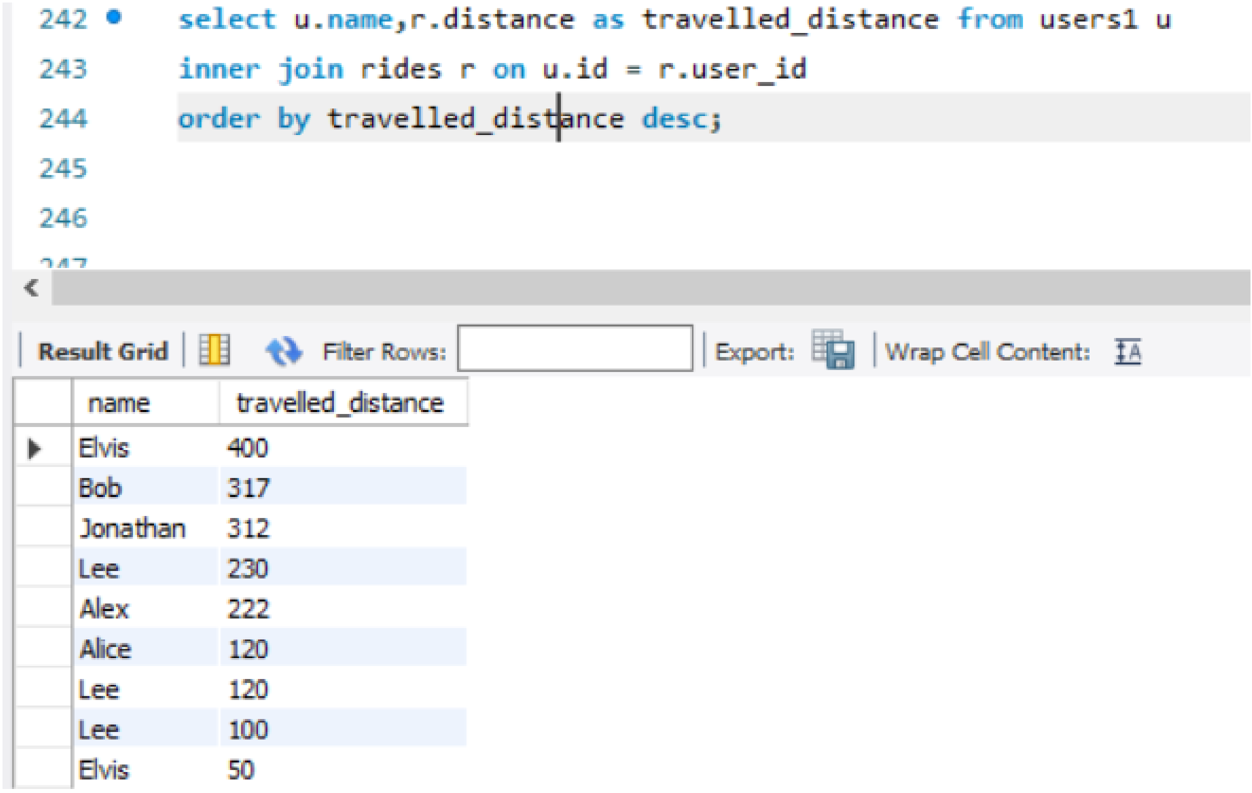
Q32.



```
select u.unique_id ,e.name from employees e
left join employeesuni u on u.id = e.id
order by unique_id asc;
```

unique_id	name
NULL	Alice
NULL	Bob
1	Jonathan
2	Meir
3	Winston

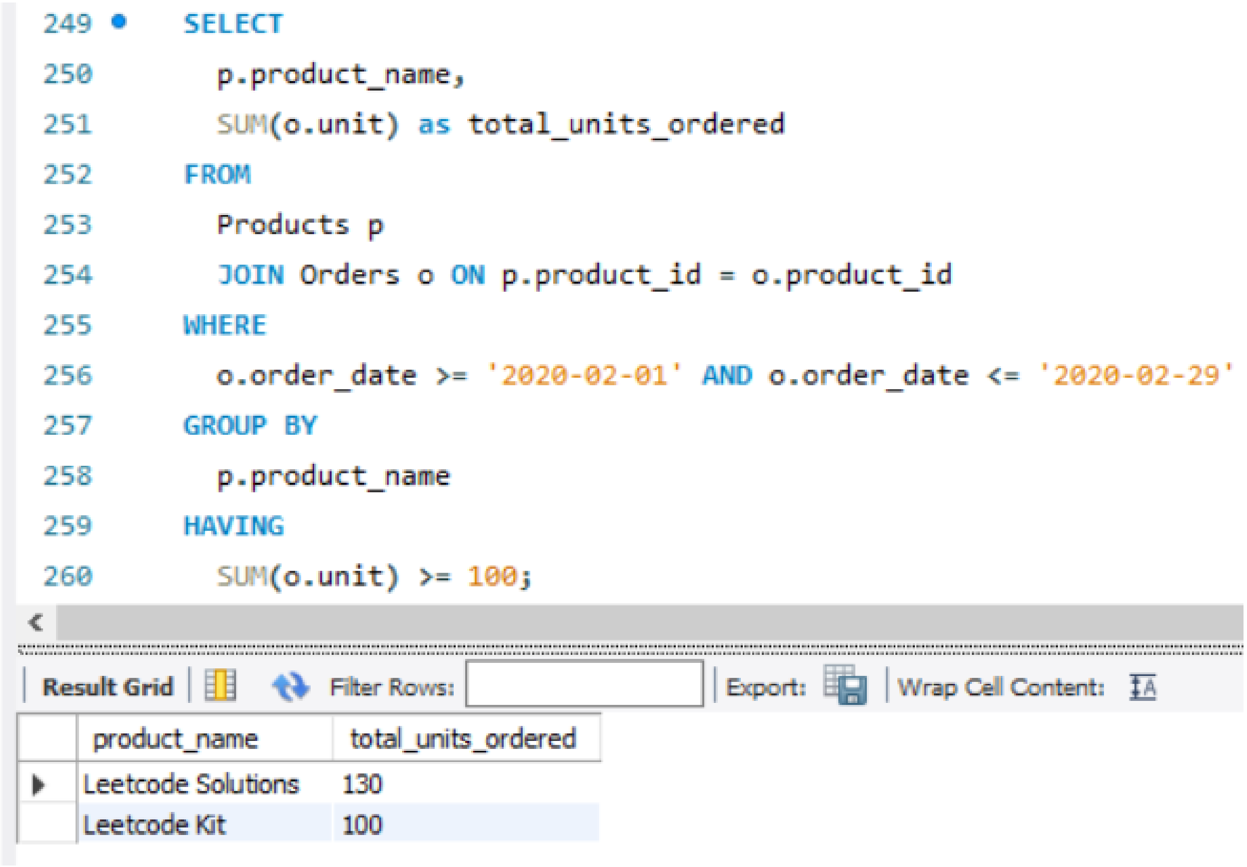
Q33.



```sql
select u.name,r.distance as travelled_distance from users1 u
inner join rides r on u.id = r.user_id
order by travelled_distance desc;
```

name	travelled_distance
Elvis	400
Bob	317
Jonathan	312
Lee	230
Alex	222
Alice	120
Lee	120
Lee	100
Elvis	50

Q34.

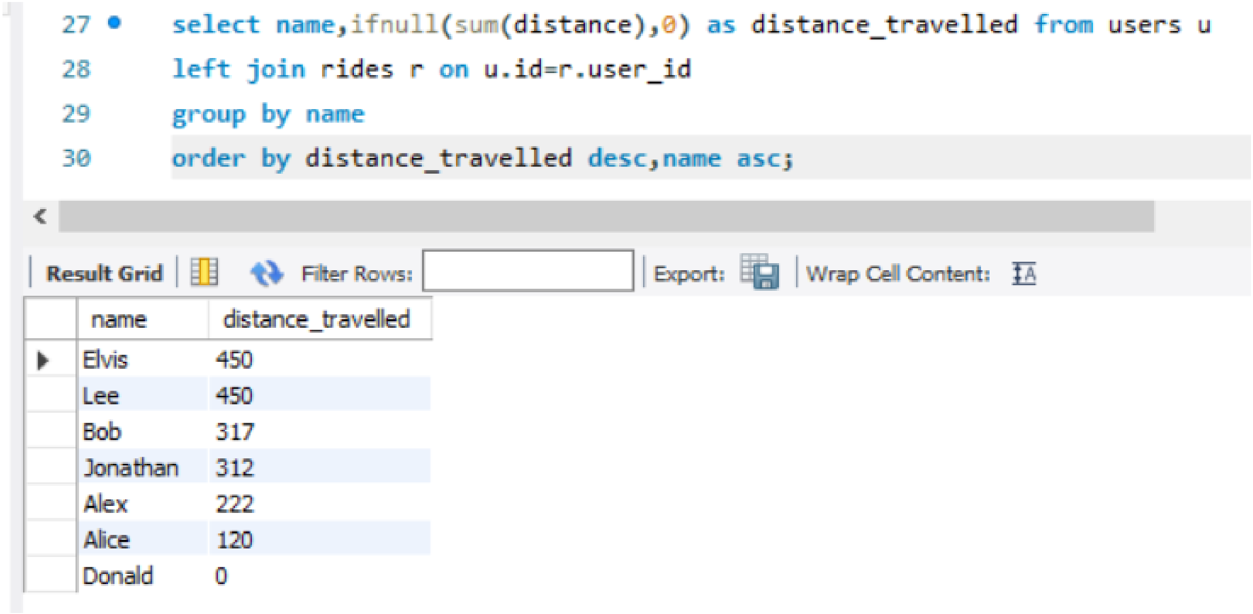


```sql
SELECT
  p.product_name,
  SUM(o.unit) as total_units_ordered
FROM
  Products p
  JOIN Orders o ON p.product_id = o.product_id
WHERE
  o.order_date >= '2020-02-01' AND o.order_date <= '2020-02-29'
GROUP BY
  p.product_name
HAVING
  SUM(o.unit) >= 100;
```

product_name	total_units_ordered
Leetcode Solutions	130
Leetcode Kit	100

Q35

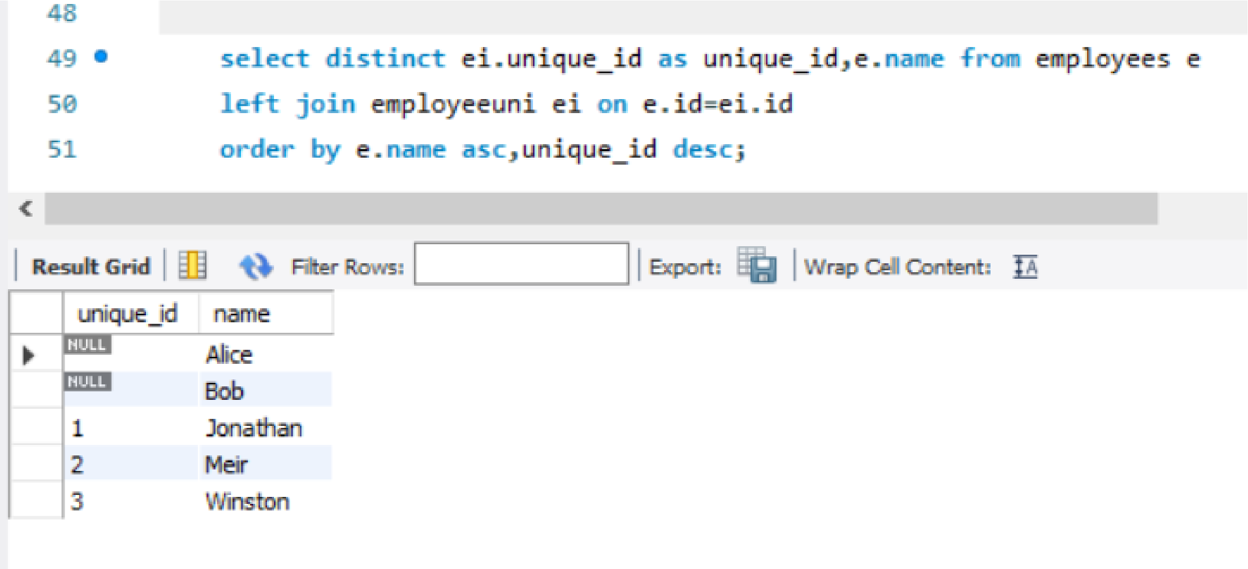
Q36



```sql
select name,ifnull(sum(distance),0) as distance_travelled from users u
left join rides r on u.id=r.user_id
group by name
order by distance_travelled desc,name asc;
```

name	distance_travelled
Elvis	450
Lee	450
Bob	317
Jonathan	312
Alex	222
Alice	120
Donald	0

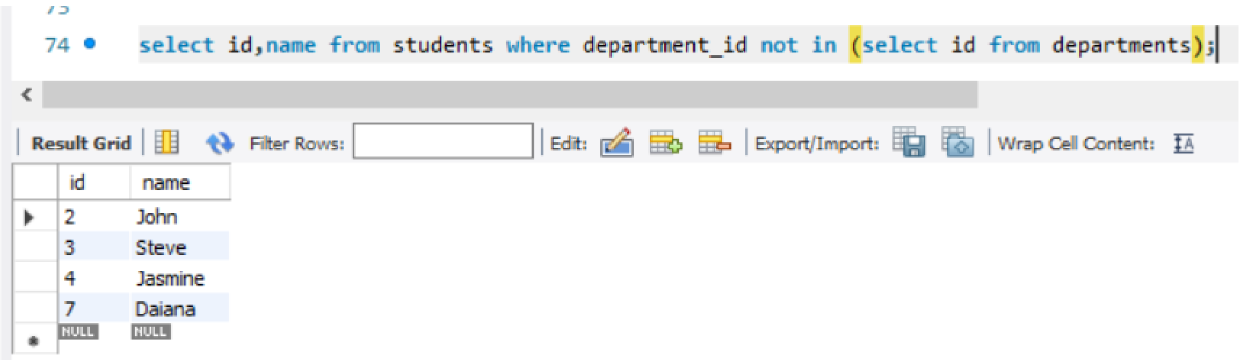
Q37



```sql
select distinct ei.unique_id as unique_id,e.name from employees e
left join employeeuni ei on e.id=ei.id
order by e.name asc,unique_id desc;
```

unique_id	name
NULL	Alice
NULL	Bob
1	Jonathan
2	Meir
3	Winston

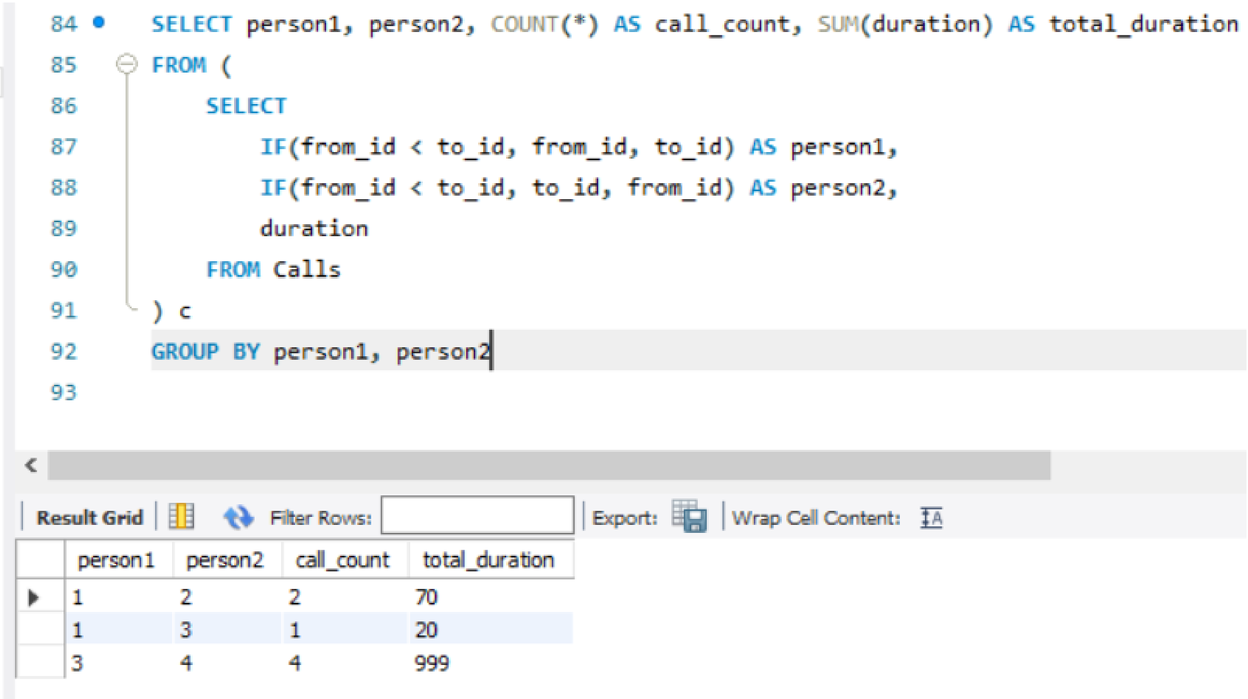
Q38



```sql
select id,name from students where department_id not in (select id from departments);
```

id	name
2	John
3	Steve
4	Jasmine
7	Daiana
NULL	NULL

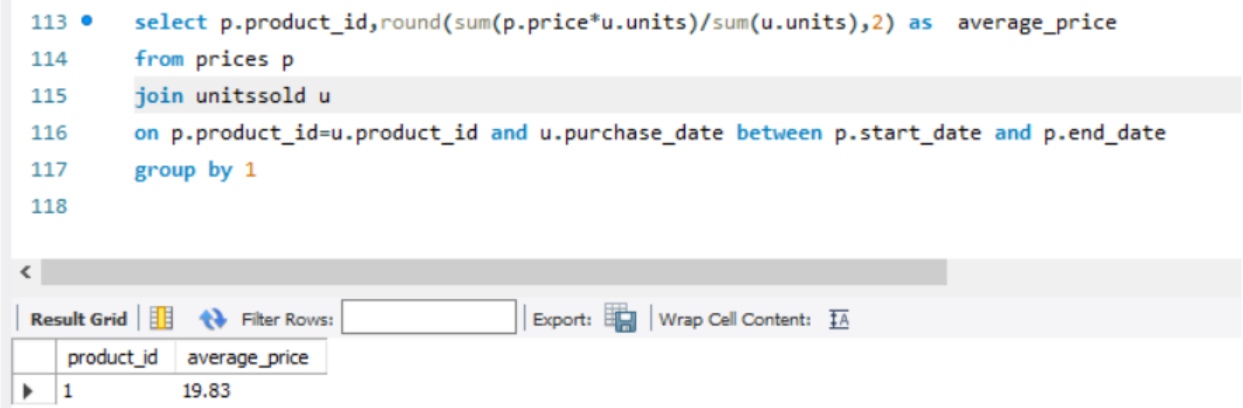
Q39.



```
SELECT person1, person2, COUNT(*) AS call_count, SUM(duration) AS total_duration
FROM (
    SELECT
        IF(from_id < to_id, from_id, to_id) AS person1,
        IF(from_id < to_id, to_id, from_id) AS person2,
        duration
    FROM Calls
) c
GROUP BY person1, person2
```

person1	person2	call_count	total_duration
1	2	2	70
1	3	1	20
3	4	4	999

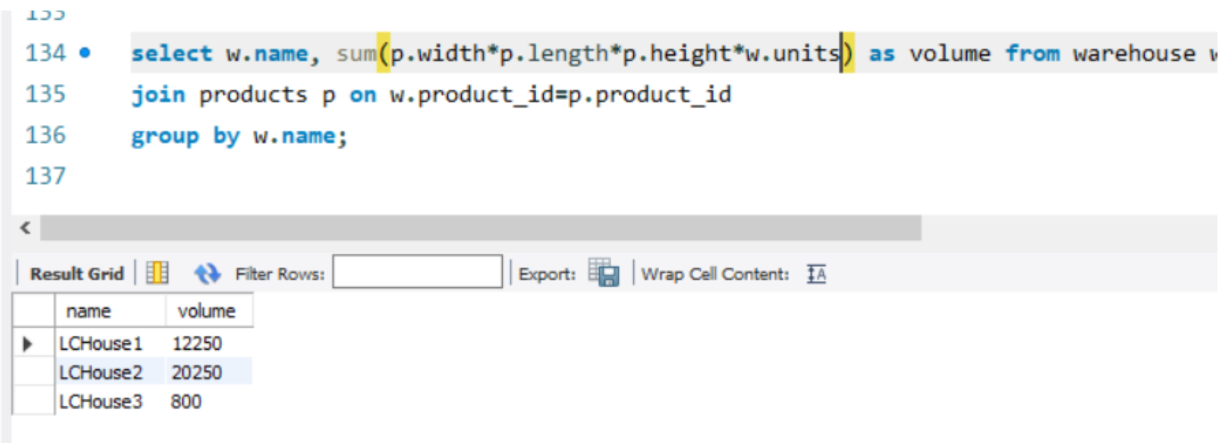
Q40.



```
select p.product_id,round(sum(p.price*u.units)/sum(u.units),2) as  average_price
from prices p
join unitssold u
on p.product_id=u.product_id and u.purchase_date between p.start_date and p.end_date
group by 1
```

product_id	average_price
1	19.83

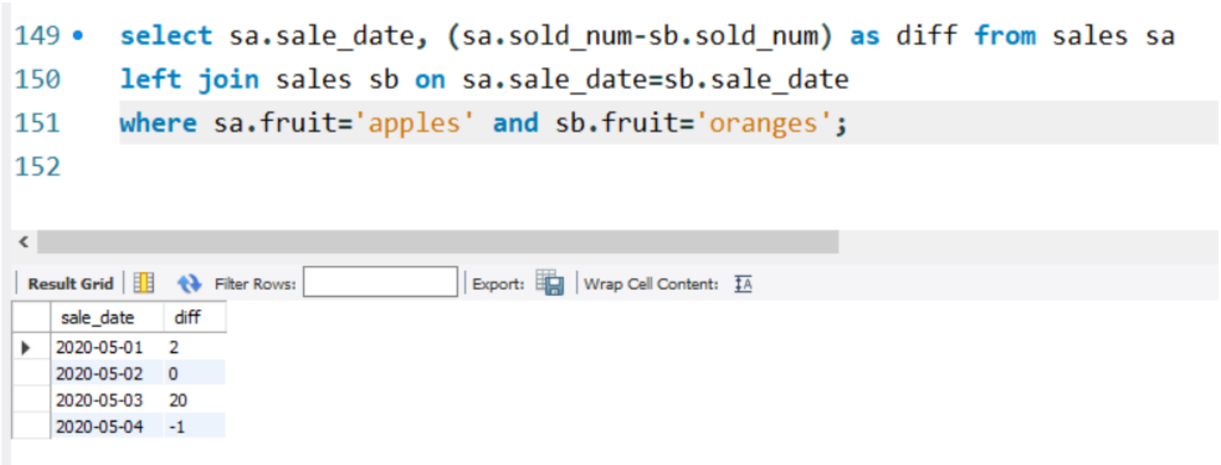
Q41.



```
select w.name, sum(p.width*p.length*p.height*w.units) as volume from warehouse
join products p on w.product_id=p.product_id
group by w.name;
```

name	volume
LCHouse1	12250
LCHouse2	20250
LCHouse3	800

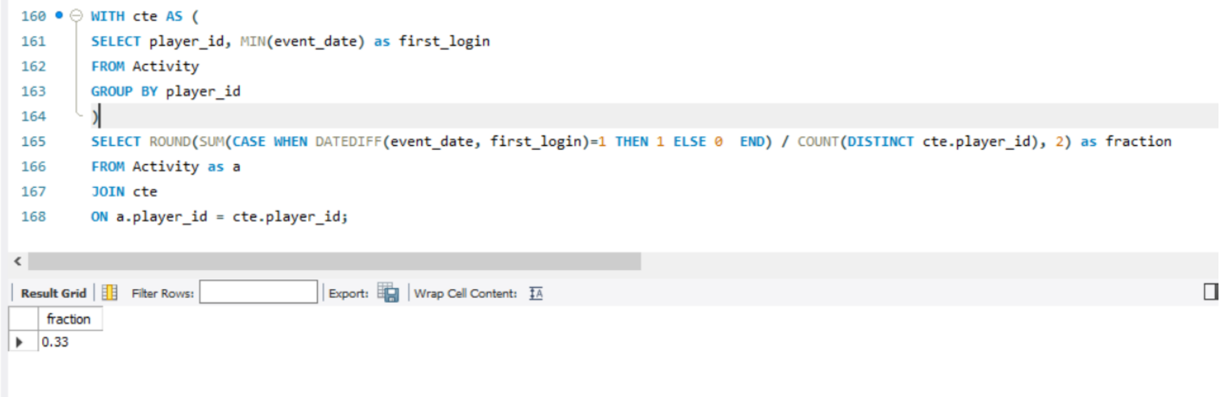
Q42.



```sql
select sa.sale_date, (sa.sold_num-sb.sold_num) as diff from sales sa
left join sales sb on sa.sale_date=sb.sale_date
where sa.fruit='apples' and sb.fruit='oranges';
```

sale_date	diff
2020-05-01	2
2020-05-02	0
2020-05-03	20
2020-05-04	-1

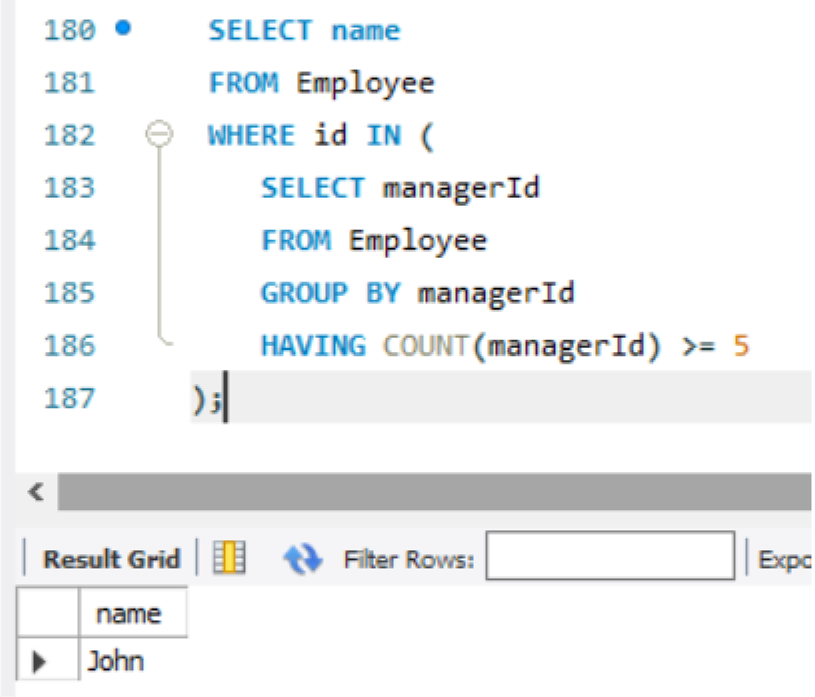
Q43.



```sql
WITH cte AS (
SELECT player_id, MIN(event_date) as first_login
FROM Activity
GROUP BY player_id
)
SELECT ROUND(SUM(CASE WHEN DATEDIFF(event_date, first_login)=1 THEN 1 ELSE 0  END) / COUNT(DISTINCT cte.player_id), 2) as fraction
FROM Activity as a
JOIN cte
ON a.player_id = cte.player_id;
```

fraction
0.33

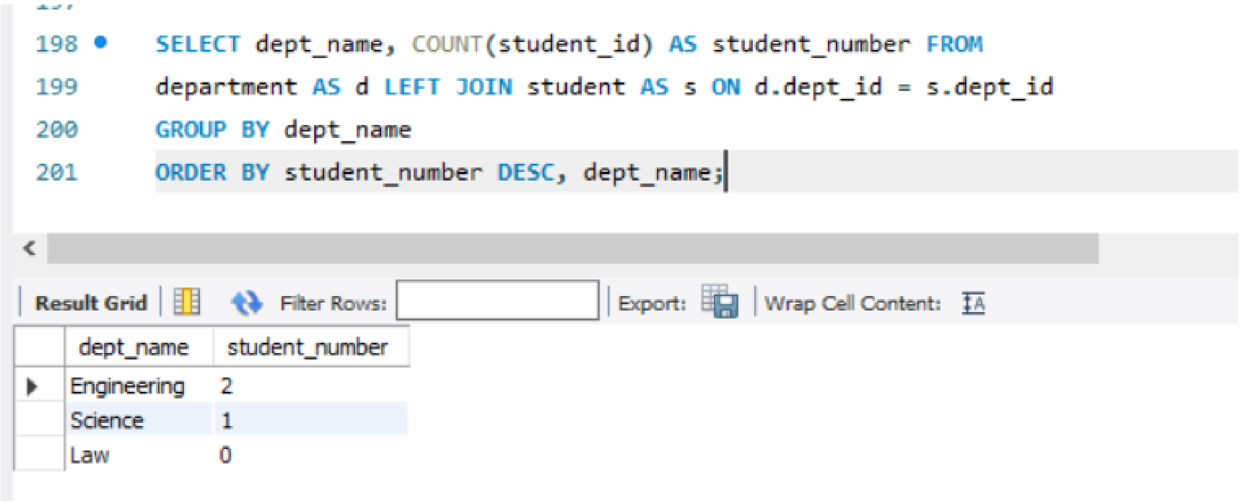
Q44.



```sql
SELECT name
FROM Employee
WHERE id IN (
    SELECT managerId
    FROM Employee
    GROUP BY managerId
    HAVING COUNT(managerId) >= 5
);
```

name
John

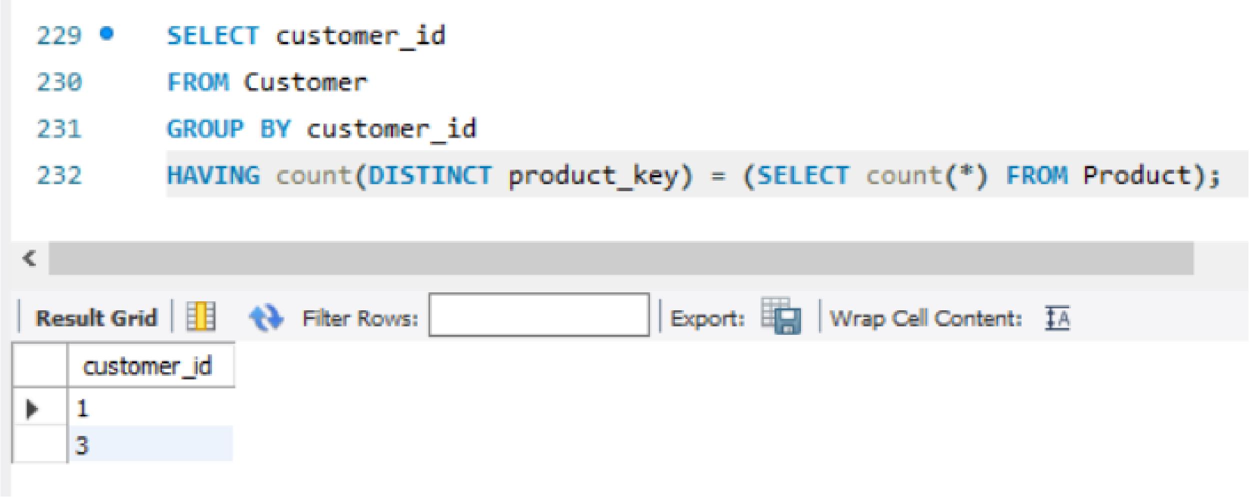
Q45.



```sql
SELECT dept_name, COUNT(student_id) AS student_number FROM
department AS d LEFT JOIN student AS s ON d.dept_id = s.dept_id
GROUP BY dept_name
ORDER BY student_number DESC, dept_name;
```

dept_name	student_number
Engineering	2
Science	1
Law	0

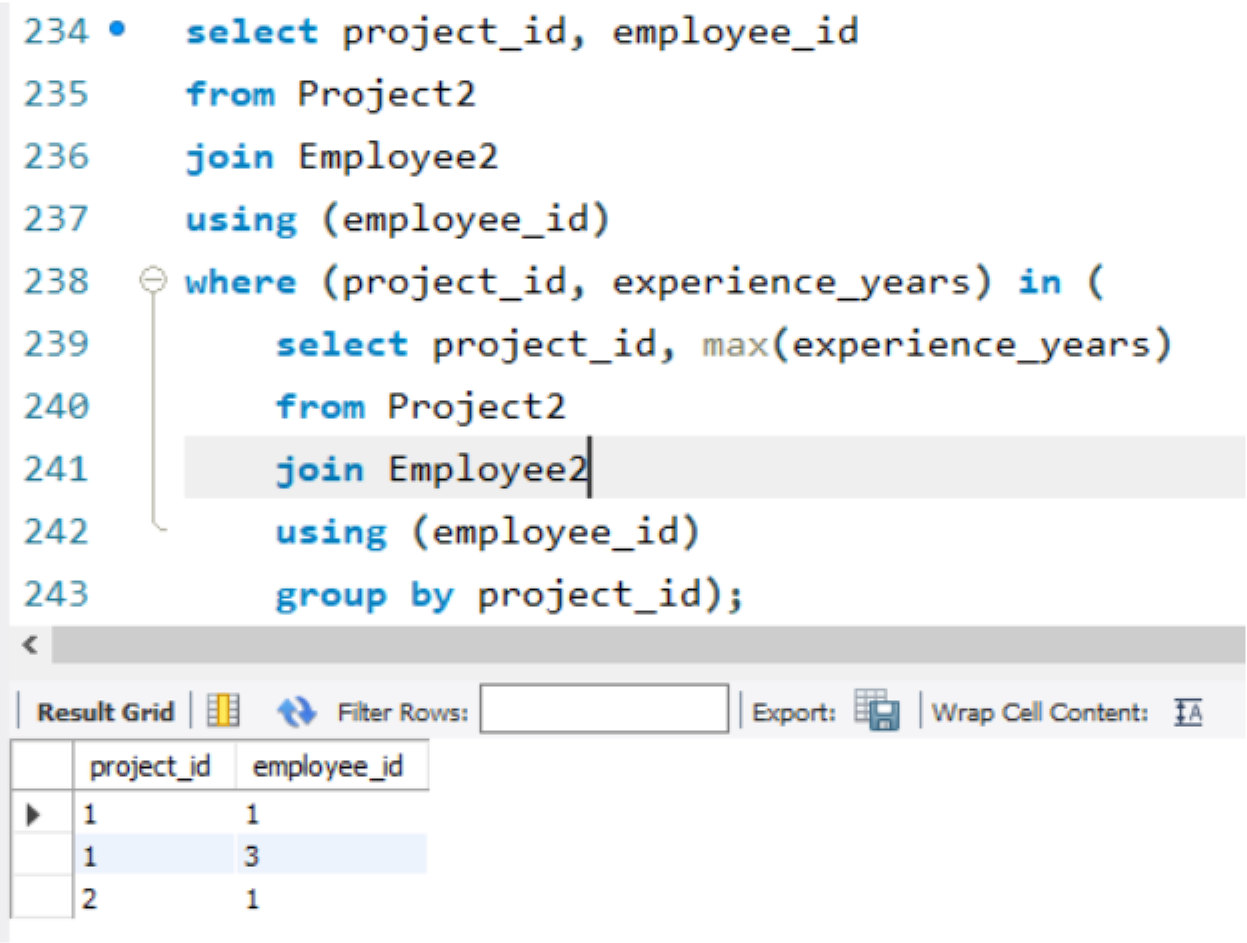
Q46.



```sql
SELECT customer_id
FROM Customer
GROUP BY customer_id
HAVING count(DISTINCT product_key) = (SELECT count(*) FROM Product);
```

customer_id
1
3

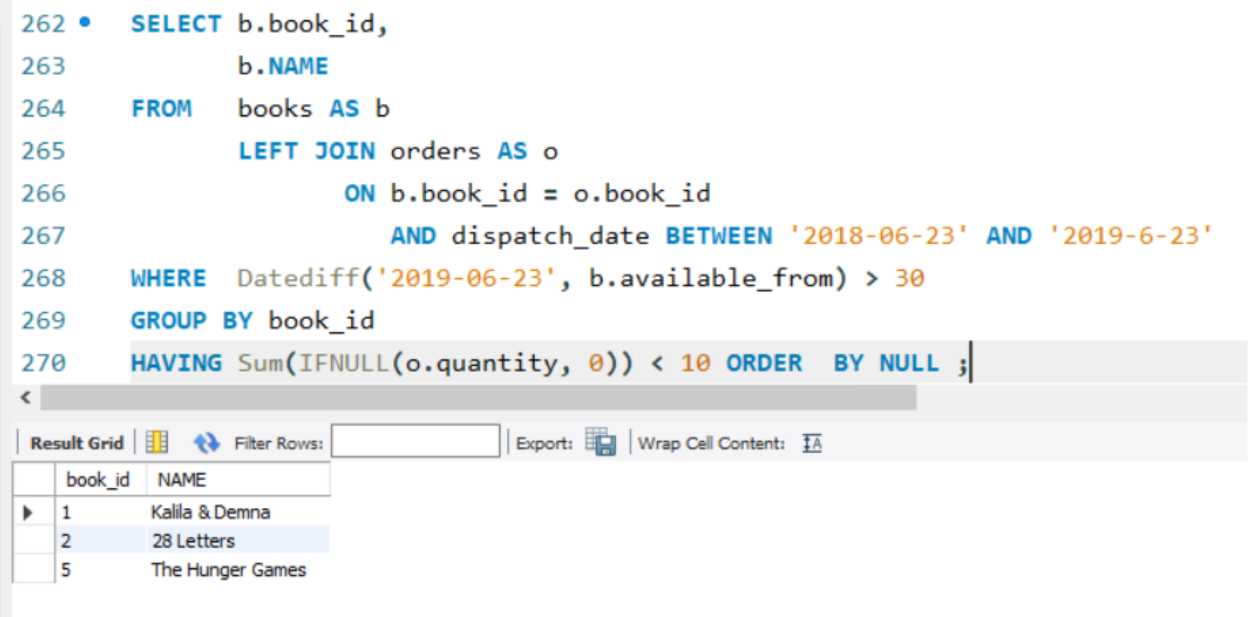
Q47.



```sql
select project_id, employee_id
from Project2
join Employee2
using (employee_id)
where (project_id, experience_years) in (
    select project_id, max(experience_years)
    from Project2
    join Employee2
    using (employee_id)
    group by project_id);
```

project_id	employee_id
1	1
1	3
2	1

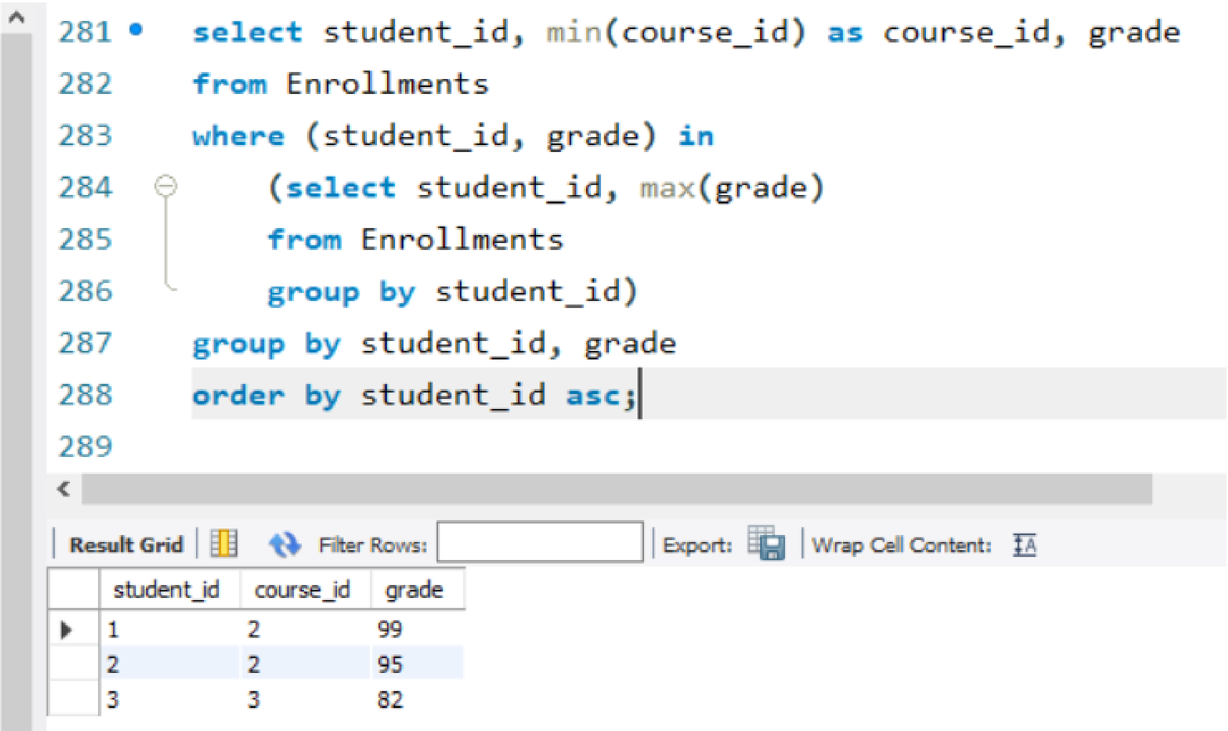
Q48.



```sql
SELECT b.book_id,
       b.NAME
FROM   books AS b
       LEFT JOIN orders AS o
              ON b.book_id = o.book_id
                 AND dispatch_date BETWEEN '2018-06-23' AND '2019-6-23'
WHERE  Datediff('2019-06-23', b.available_from) > 30
GROUP  BY book_id
HAVING Sum(IFNULL(o.quantity, 0)) < 10 ORDER  BY NULL ;
```

book_id	NAME
1	Kalila & Demna
2	28 Letters
5	The Hunger Games

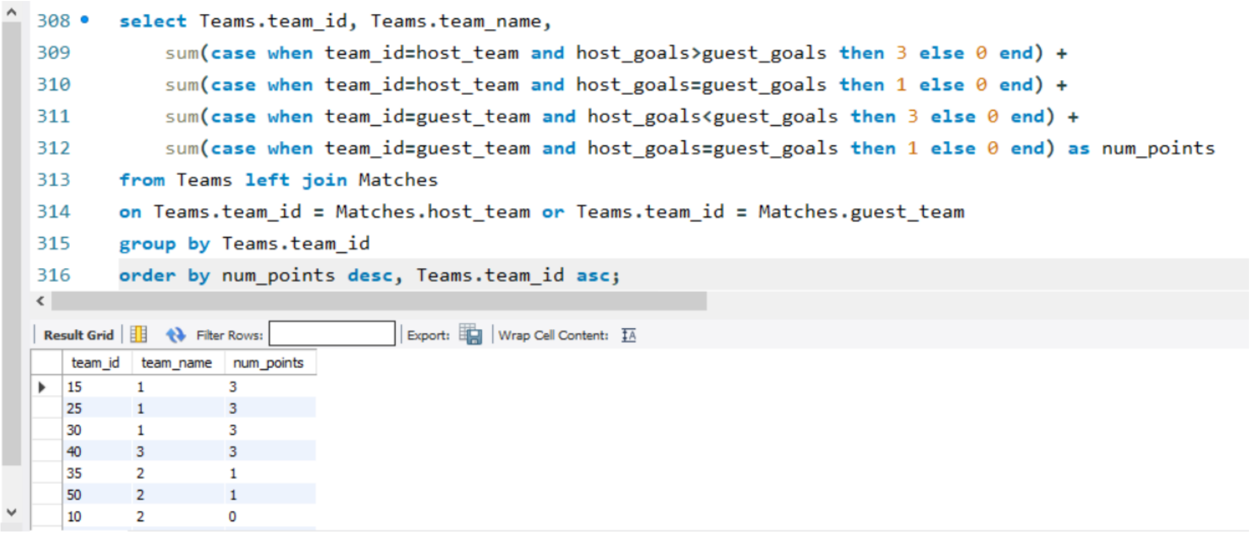
Q49.



```
select student_id, min(course_id) as course_id, grade
from Enrollments
where (student_id, grade) in
    (select student_id, max(grade)
    from Enrollments
    group by student_id)
group by student_id, grade
order by student_id asc;
```

student_id	course_id	grade
1	2	99
2	2	95
3	3	82

Q50.



```
select Teams.team_id, Teams.team_name,
    sum(case when team_id=host_team and host_goals>guest_goals then 3 else 0 end) +
    sum(case when team_id=host_team and host_goals=guest_goals then 1 else 0 end) +
    sum(case when team_id=guest_team and host_goals<guest_goals then 3 else 0 end) +
    sum(case when team_id=guest_team and host_goals=guest_goals then 1 else 0 end) as num_points
from Teams left join Matches
on Teams.team_id = Matches.host_team or Teams.team_id = Matches.guest_team
group by Teams.team_id
order by num_points desc, Teams.team_id asc;
```

team_id	team_name	num_points
15	1	3
25	1	3
30	1	3
40	3	3
35	2	1
50	2	1
10	2	0