Name Haris Roll # 23P-0573

-- 1. Write a query to list the name, job title, department name, and salary of the employees in ascending order of their department.

select first_name , last_name , job_id , department_id , salary from employees order by department_id asc;

```
--23P-0573

-- 1. Write a query to list the name, job title, department name, and salary of the employees in ascending order of their department
select  first_name , last_name , job_id   , department_id       , salary  from employees  order by department_id  asc;
```

Query Result

SQL | Fetched 50 rows in 0.011 seconds

	FIRST_NAME	LAST_NAME	JOB_ID	DEPARTMENT_ID	SALARY
1	Jennifer	Whalen	AD_ASST	10	4400
2	Michael	Hartstein	MK_MAN	20	13000
3	Pat	Fay	MK_REP	20	1500
4	Den	Raphaely	PU_MAN	30	11000
5	Alexander	Khoo	PU_CLERK	30	3100
6	Shelli	Baida	PU_CLERK	30	2900
7	Sigal	Tobias	PU_CLERK	30	2800

-- 2. Write a query to list the departments where at least two employees are working.

select count(department_id) from EMPLOYEES group by DEPARTMENT_ID having count(department_id)>2 ;

```
--23P-0573
-- 2. Write a query to list the departments where at least two employees are working.
select   count(department_id)   from EMPLOYEES    group by DEPARTMENT_ID   having count(department_id)>2 ;
```

Query Result

SQL | All Rows Fetched: 6 in 0.008 seconds

	COUNT(DEPARTMENT_ID)
1	6
2	45
3	5
4	34
5	3
6	6

--3. Fetch all records where the employees salary is less than the lowest salary in the company.

select salary from employees where salary < (select min(salary) from employees);

```
--23P-0573
--3. Fetch all records where the employees salary is less than the lowest salary in the company.
select salary from employees   where salary <  (select min(salary) from employees);
```

uery Result

SQL | All Rows Fetched: 0 in 0.002 seconds

SALARY

--4. Write a query to list the name, job title, annual salary, department name, and city of employees who earn 60000 or more annually and are not working as ANALYST.

SELECT e.first_name, e.job_id, e.salary * 12 AS annual_salary, d.department_name, l.city FROM employees e JOIN departments d ON e.department_id = d.department_id JOIN locations

l ON d.location_id = l.location_id WHERE e.salary * 12 >= 60000 AND e.JOB_ID!= 'ANALYST';

```sql
--23P-0573
--4. Write a query to list the name, job title, annual salary, department name, and city of employees who earn 60000 or more annu
SELECT e.first_name, e.job_id, e.salary * 12 AS annual_salary,
       d.department_name, l.city
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id
WHERE e.salary * 12 >= 60000
AND e.JOB_ID!= 'ANALYST';
```

Query Result

SQL | Fetched 50 rows in 0.012 seconds

	FIRST_NAME	JOB_ID	ANNUAL_SALARY	DEPARTMENT_NAME	CITY
1	Alexander	IT_PROG	108000	IT	Southlake
2	Bruce	IT_PROG	72000	IT	Southlake
3	Payam	ST_MAN	94800	Shipping	South San Francisco
4	Shanta	ST_MAN	78000	Shipping	South San Francisco
5	Adam	ST_MAN	98400	Shipping	South San Francisco
6	Matthew	ST_MAN	96000	Shipping	South San Francisco
7	Kevin	ST_MAN	69600	Shipping	South San Francisco

--23P-0573 --5. Write a query to print details of the employees who are also Managers.

select e.first_name from employees e join EMPLOYEES m on e.employee_id = m.manager_id ;

```
--23P-0573
--5. Write a query to print details of the employees who are also Managers.
select e.first_name  from employees e
join EMPLOYEES m  on  e.employee_id = m.manager_id ;
```

Query Result

SQL | Fetched 50 rows in 0.002 seconds

	FIRST_NAME
1	Gerald
2	Gerald
3	Gerald
4	Gerald
5	Gerald
6	Gerald
7	Lex
8	Alberto

--23P-0573 --6. List department number and department name for all departments that have no employees.

select d.department_id, d.department_name from DEPARTMENTS d join DEPARTMENTS m on d.DEPARTMENT_ID=NULL;

```
--23P-0573
--6. List department number and department name for all departments that have no employees.
select d.department_id, d.department_name  from DEPARTMENTS d   join DEPARTMENTS m  on d.DEPARTMENT_ID=NULL;
```

Query Result

SQL | All Rows Fetched: 0 in 0.003 seconds

DEPARTM...	DEPARTM...

--7. Display employee name, salary, and department name where all employees match their department, including employees with no assigned department.

SELECT e.first_name ,e.last_name ,e.salary ,d.department_id from employees e join departments d on e.EMPLOYEE_ID=d.DEPARTMENT_ID

And d.DEPARTMENT_ID=NULL;

```
--23P-0573
--7. Display employee name, salary, and department name where all employees match their department, including employees with n
SELECT   e.first_name ,e.last_name ,e.salary ,d.department_id   from employees e
join  departments d  on e.EMPLOYEE_ID=d.DEPARTMENT_ID
And  d.DEPARTMENT_ID=NULL;
```

Query Result

SQL | All Rows Fetched: 0 in 0.003 seconds

FIRST_NA...	LAST_NAME	SALARY	DEPARTM...

--8. Display the name, job title, department name, and city of employees who are working in departments located in cities without a state province. select e.first_name ,e.job_id , d.department_name, l.city from employees e

join departments d on e.DEPARTMENT_ID=d.DEPARTMENT_ID join locations l on d.location_id=l.LOCATION_ID where l.state_province is null;

```
--23P-0573
--8. Display the name, job title, department name, and city of employees who are working in departments located in cities withou
select  e.first_name ,e.job_id , d.department_name, l.city  from employees e
join departments d  on  e.DEPARTMENT_ID=d.DEPARTMENT_ID
join locations l  on d.location_id=l.LOCATION_ID
where l.state_province is  null;
```

Query Result

SQL | All Rows Fetched: 1 in 0.007 seconds

	FIRST_NAME	JOB_ID	DEPARTMENT_NAME	CITY
1	Susan	HR_REP	Human Resources	London

--9. Write an SQL query to show records from one table that do not exist in another table.

select first_name from employees where FIRST_NAME not in (select first_name from DEPARTMENTS);

```
--23P-0573
--9. Write an SQL query to show records from one table that do not exist in another table.
select  first_name from employees where FIRST_NAME   not in (select first_name from DEPARTMENTS);
```

Query Result

SQL | All Rows Fetched: 0 in 0.002 seconds

FIRST_NA...

--10. Display all employees who belong to the US but not to the state of Washington.

select e.first_name , e.last_name from employees e join DEPARTMENTS d on e.DEPARTMENT_ID=d.DEPARTMENT_ID join locations l on d.location_id=l.LOCATION_ID where l.COUNTRY_ID='US' and state_province!='washington';

```
--23P-0573
--10. Display all employees who belong to the US but not to the state of Washington.
select e.first_name , e.last_name  from employees e
join DEPARTMENTS d  on e.DEPARTMENT_ID=d.DEPARTMENT_ID
join locations  l on   d.location_id=l.LOCATION_ID
where l.COUNTRY_ID='US'
and state_province!='washington';
```

Query Result

SQL | Fetched 50 rows in 0.014 seconds

	FIRST_NAME	LAST_NAME
1	Mozhe	Atkinson
2	David	Austin
3	Shelli	Baida
4	Sarah	Bell
5	Laura	Bissot
6	Alexis	Bull

--11 . Write a query to list the name, job title, department name, and location of employees who have a salary higher than the average salary in their department.

select e.first_name , e.job_id, d.department_name , l.city from employees e ,departments d ,LOCATIONS l where salary > (select AVG(salary) from employees);

```
--23P-0573
--11 11. Write a query to list the name, job title, department name, and location of employees who have a salary higher than
select e.first_name , e.job_id, d.department_name  , l.city  from employees e  ,departments d ,LOCATIONS l  where salary >
(select  AVG(salary)    from employees  );
```

ery Result

SQL | Fetched 50 rows in 0.004 seconds

	FIRST_NAME	JOB_ID	DEPARTMENT_NAME	CITY
1	Steven	AD_PRES	Administration	Beijing
2	Steven	AD_PRES	Administration	Bern
3	Steven	AD_PRES	Administration	Bombay
4	Steven	AD_PRES	Administration	Geneva
5	Steven	AD_PRES	Administration	Hiroshima
6	Steven	AD_PRES	Administration	London
7	Steven	AD_PRES	Administration	Mexico City

--12. Write a query to list employees who have changed their job title at least once in their job history.

select e.first_name , e.last_name , e.job_id from employees e join JOB_HISTORY jh on e.EMPLOYEE_ID=jh.EMPLOYEE_ID where e.JOB_ID!=jh.JOB_ID;

```
--23P-0573
--12. Write a query to list employees who have changed their job title at least once in their job history.
select e.first_name , e.last_name ,  e.job_id   from employees e
join JOB_HISTORY jh on e.EMPLOYEE_ID=jh.EMPLOYEE_ID
where e.JOB_ID!=jh.JOB_ID;
```

ery Result

SQL | All Rows Fetched: 8 in 0.011 seconds

	FIRST_NAME	LAST_NAME	JOB_ID
1	Neena	Kochhar	AD_VP
2	Neena	Kochhar	AD_VP
3	Lex	De Haan	AD_VP
4	Den	Raphaely	PU_MAN
5	Payam	Kaufling	ST_MAN
6	Jonathon	Taylor	SA_REP
7	Jennifer	Whalen	AD_ASST
8	Michael	Hartstein	MK_MAN

--13. List employees who work in the same department as their managers.

select e.first_name ,e.last_name from employees e join EMPLOYEES m on e.EMPLOYEE_ID=m.EMPLOYEE_ID where e.DEPARTMENT_ID=m.DEPARTMENT_ID;

```
--23P-0573
--13. List employees who work in the same department as their managers.
select e.first_name ,e.last_name  from employees e  join EMPLOYEES m  on e.EMPLOYEE_ID=m.EMPLOYEE_ID
where e.DEPARTMENT_ID=m.DEPARTMENT_ID;
```

Query Result

SQL | Fetched 50 rows in 0.004 seconds

	FIRST_NAME	LAST_NAME
1	Ellen	Abel
2	Sundar	Ande
3	Mozhe	Atkinson
4	David	Austin
5	Hermann	Baer
6	Shelli	Baida
7	Amit	Banda

--14. Write a query to list the name, department name, and location of employees who work in the same country as their department location.

SELECT e.first_name, e.last_name, d.department_name, l.city, l.country_id FROM employees e JOIN departments d ON e.department_id = d.department_id JOIN locations l ON d.location_id = l.location_id WHERE l.country_id = l.country_id;

```
--23P-0573
--14. Write a query to list the name, department name, and location of employees who work in the same country as their departme
SELECT e.first_name, e.last_name, d.department_name, l.city, l.country_id
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id
WHERE l.country_id = l.country_id;
```

Query Result

SQL | Fetched 50 rows in 0.005 seconds

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME	CITY	COUNTRY_ID
1	Ellen	Abel	Sales	Oxford	UK
2	Sundar	Ande	Sales	Oxford	UK
3	Mozhe	Atkinson	Shipping	South San Francisco	US
4	David	Austin	IT	Southlake	US
5	Hermann	Baer	Public Relations	Munich	DE
6	Shelli	Baida	Purchasing	Seattle	US
7	Amit	Banda	Sales	Oxford	UK
8	Elizabeth	Bates	Sales	Oxford	UK

--15. Write a query to find employees who work in departments with more than 5 employees.

select count(department_id) from EMPLOYEES group by DEPARTMENT_ID having count(department_id)>5;

```
--23P-0573
--15. Write a query to find employees who work in departments with more than 5 employees.
select   count(department_id)   from EMPLOYEES    group by DEPARTMENT_ID   having count(department_id)>5;
```

Query Result

SQL | All Rows Fetched: 4 in 0.002 seconds

	COUNT(DEPARTMENT_ID)
1	6
2	45
3	34
4	6

--16. Display a list of employees along with their managers' names.

select e.first_name as emp_firstname , e.last_name as emp_lastname , m.first_name as m_firstname, m.last_name as m_lastname from employees e join EMPLOYEES m on e.MANAGER_ID=m.EMPLOYEE_ID;

```
--23P-0573
--16. Display a list of employees along with their managers&#39; names.
select  e.first_name as emp_firstname , e.last_name as emp_lastname , m.first_name  as m_firstname,
m.last_name as m_lastname    from employees e
join EMPLOYEES m    on e.MANAGER_ID=m.EMPLOYEE_ID;
```

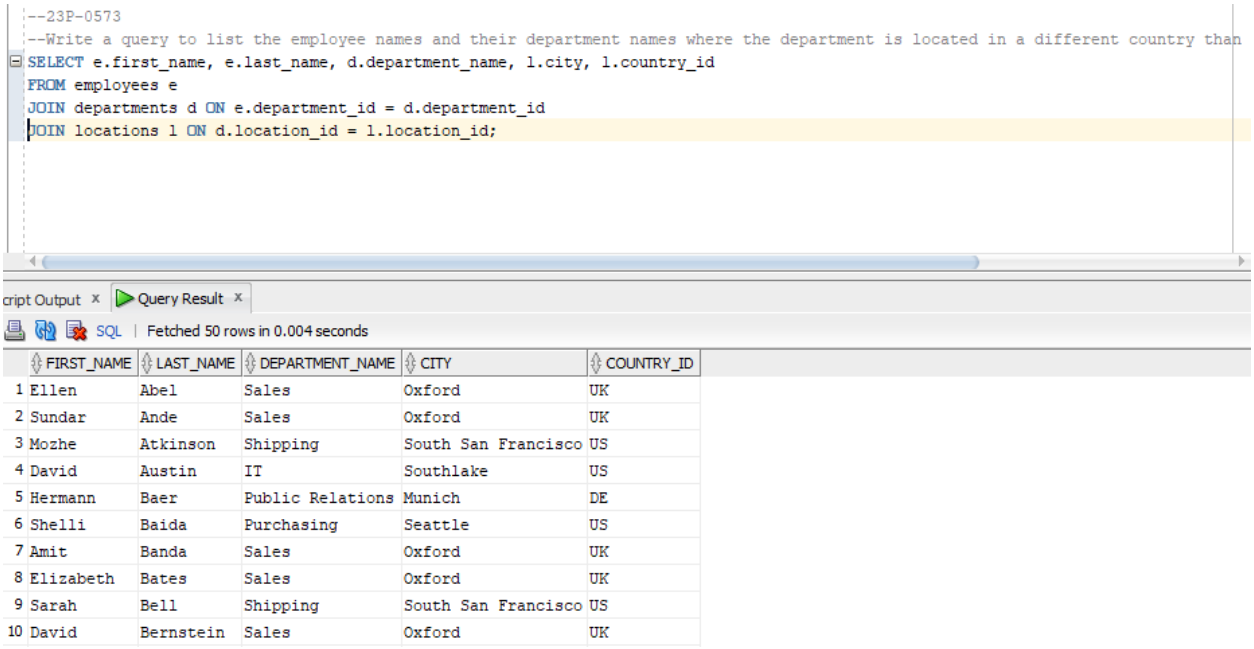
ery Result

SQL | Fetched 50 rows in 0.008 seconds

	EMP_FIRSTNAME	EMP_LASTNAME	M_FIRSTNAME	M_LASTNAME
1	Eleni	Zlotkey	Steven	King
2	Matthew	Weiss	Steven	King
3	Shanta	Vollman	Steven	King
4	John	Russell	Steven	King
5	Den	Raphaely	Steven	King
6	Karen	Partners	Steven	King

--Write a query to list the employee names and their department names where the department is located in a different country than the employee’s residence.

SELECT e.first_name, e.last_name, d.department_name, l.city, l.country_id FROM employees e JOIN departments d ON e.department_id = d.department_id JOIN locations l ON d.location_id = l.location_id;



```
--23P-0573
--Write a query to list the employee names and their department names where the department is located in a different country than
SELECT e.first_name, e.last_name, d.department_name, l.city, l.country_id
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id;
```

cript Output × | Query Result ×

SQL | Fetched 50 rows in 0.004 seconds

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME	CITY	COUNTRY_ID
1	Ellen	Abel	Sales	Oxford	UK
2	Sundar	Ande	Sales	Oxford	UK
3	Mozhe	Atkinson	Shipping	South San Francisco	US
4	David	Austin	IT	Southlake	US
5	Hermann	Baer	Public Relations	Munich	DE
6	Shelli	Baida	Purchasing	Seattle	US
7	Amit	Banda	Sales	Oxford	UK
8	Elizabeth	Bates	Sales	Oxford	UK
9	Sarah	Bell	Shipping	South San Francisco	US
10	David	Bernstein	Sales	Oxford	UK

--18 Write a query to find employees who earn more than their department's average salary but less than the highest salary in the company.

select e.first_name, e.last_name , e.salary ,e.department_id from employees e join (select department_id ,avg(salary) as AVG_salary from employees group by department_id) d_avg on e.department_id = d_avg.department_id where e.salary > d_avg.AVG_salary and e.salary <(select max(salary) from employees);

```
--23P-0573
--18 Write a query to find employees who earn more than their department&#39;s average salary but less than the highest salary in
select e.first_name, e.last_name , e.salary ,e.department_id from employees e
join (  select department_id ,avg(salary) as AVG_salary from employees group by department_id )
d_avg on e.department_id = d_avg.department_id
where e.salary > d_avg.AVG_salary
and e.salary <( select max(salary) from employees);
```

Script Output | Query Result

SQL | All Rows Fetched: 37 in 0.011 seconds

	FIRST_NAME	LAST_NAME	SALARY	DEPARTMENT_ID
1	Daniel	Faviet	9000	100
2	Nancy	Greenberg	12008	100
3	Den	Raphaely	11000	30
4	Michael	Hartstein	13000	20
5	Shelley	Higgins	12008	110
6	Britney	Everett	3900	50
7	Sarah	Bell	4000	50
8	Jennifer	Dilly	3600	50
9	Kelly	Chung	3800	50
10	Alexis	Bull	4100	50
11	Nandita	Sarchand	4200	50

Line 12 Column 52 | Insert | Modified | Windo

--19. Display a list of all employees who have worked in multiple departments, showing their job history and department names.

SELECT e.first_name, e.last_name, e.job_id, d.department_name FROM employees e JOIN job_history jh ON e.employee_id = jh.employee_id JOIN departments d ON d.department_id = jh.department_id WHERE e.employee_id IN (SELECT employee_id FROM job_history GROUP BY employee_id HAVING COUNT(DISTINCT department_id) > 1) ORDER BY e.last_name, e.first_name;

```
--23P-0573
--19. Display a list of all employees who have worked in multiple departments, showing their job history and department names.
SELECT e.first_name, e.last_name, e.job_id, d.department_name
FROM employees e
JOIN job_history jh ON e.employee_id = jh.employee_id
JOIN departments d ON d.department_id = jh.department_id
WHERE e.employee_id IN (
    SELECT employee_id
    FROM job_history
    GROUP BY employee_id
    HAVING COUNT(DISTINCT department_id) > 1
)
ORDER BY e.last_name, e.first_name;
```

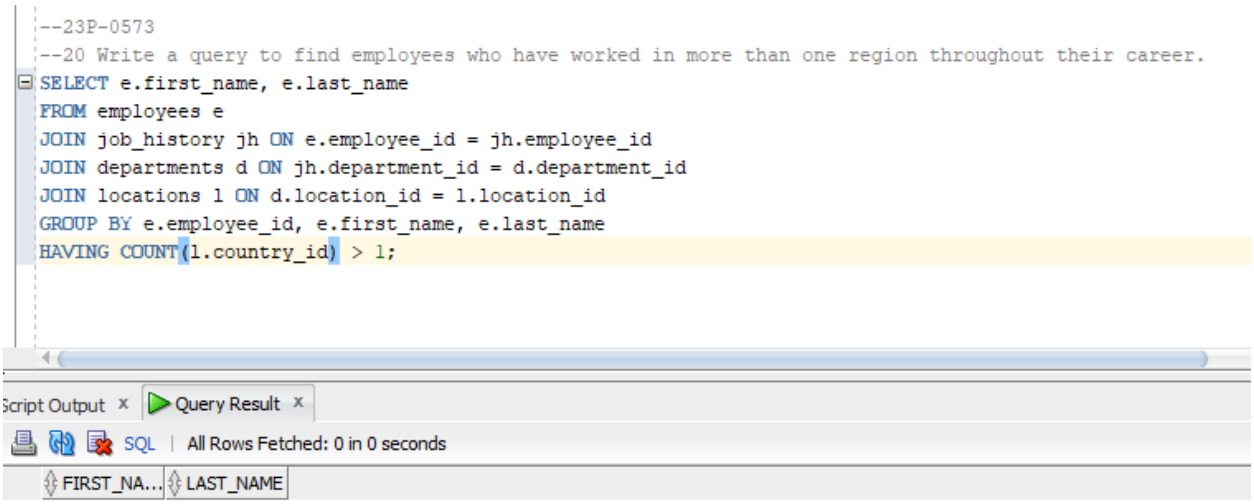
Script Output | Query Result

SQL | All Rows Fetched: 0 in 0.007 seconds

FIRST_NA...	LAST_NAME	JOB_ID	DEPARTM...

--20 Write a query to find employees who have worked in more than one region throughout their career. SELECT e.first_name, e.last_name

FROM employees e JOIN job_history jh ON e.employee_id = jh.employee_id JOIN departments d ON jh.department_id = d.department_id JOIN locations l ON d.location_id = l.location_id GROUP BY e.employee_id, e.first_name, e.last_name HAVING COUNT(l.country_id) > 1;



--21 List all employees and the region they are working in.

SELECT e.first_name, e.last_name, l.state_province AS region FROM employees e JOIN departments d ON e.department_id = d.department_id JOIN locations l ON d.location_id =

l.location_id;

```
--23P-0573
--21 List all employees and the region they are working in.
SELECT e.first_name, e.last_name, l.state_province AS region
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id;
```

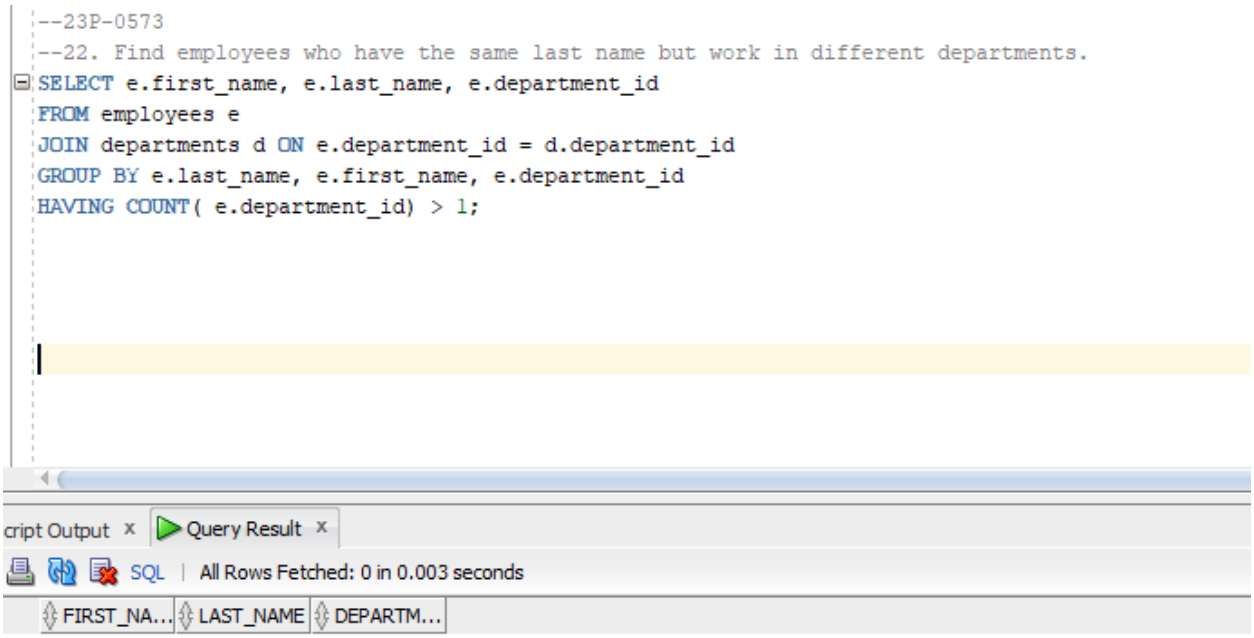
Script Output | Query Result

SQL | Fetched 50 rows in 0 seconds

	FIRST_NAME	LAST_NAME	REGION
1	Ellen	Abel	Oxford
2	Sundar	Ande	Oxford
3	Mozhe	Atkinson	California
4	David	Austin	Texas
5	Hermann	Baer	Bavaria
6	Shelli	Baida	Washington
7	Amit	Banda	Oxford

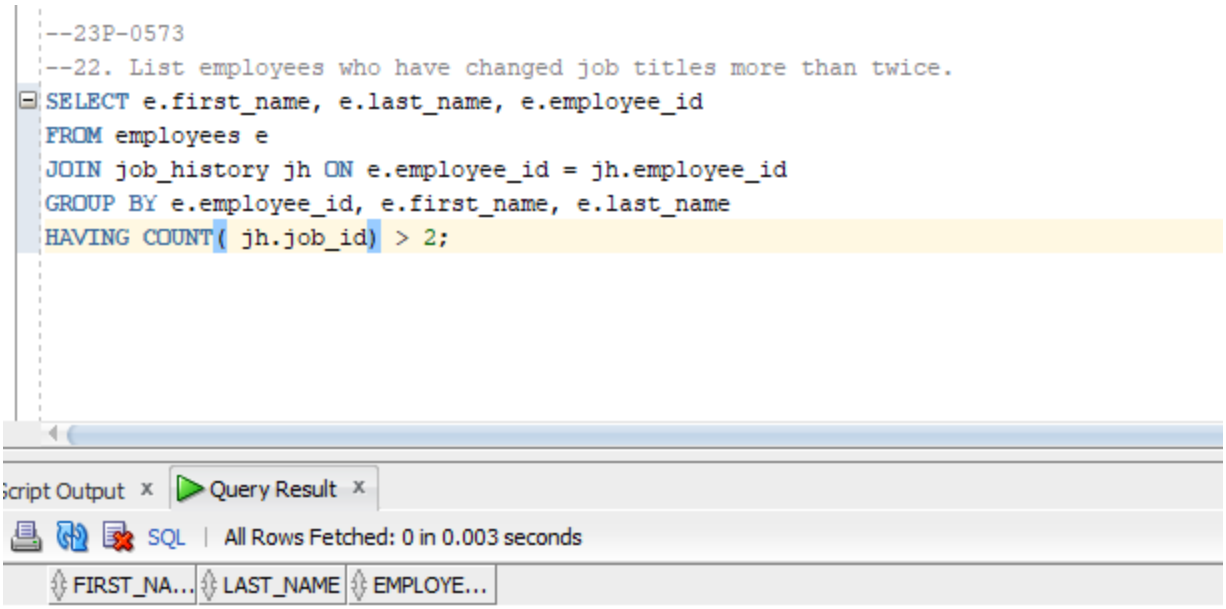
--22. Find employees who have the same last name but work in different departments.

SELECT e.first_name, e.last_name, e.department_id FROM employees e JOIN departments d ON e.department_id = d.department_id GROUP BY e.last_name, e.first_name, e.department_id HAVING COUNT(e.department_id) > 1;



--22. List employees who have changed job titles more than twice.

SELECT e.first_name, e.last_name, e.employee_id FROM employees e JOIN job_history jh ON e.employee_id = jh.employee_id GROUP BY e.employee_id, e.first_name, e.last_name HAVING COUNT(jh.job_id) > 2;



--24. Show job titles that are not currently assigned to any employee..

SELECT j.job_id, j.job_title FROM jobs j LEFT JOIN employees e ON j.job_id = e.job_id WHERE e.job_id IS NULL;

```sql
--23P-0573
--24. Show job titles that are not currently assigned to any employee..
SELECT j.job_id, j.job_title
FROM jobs j
LEFT JOIN employees e ON j.job_id = e.job_id
WHERE e.job_id IS NULL;
```

--25.Find the top 3 employees with the highest salaries in each department.

SELECT e.first_name, e.last_name, e.department_id, e.salary FROM employees e WHERE (e.salary, e.department_id) IN (SELECT salary, department_id FROM employees e1 WHERE e1.department_id = e.department_id ORDER BY salary DESC

) ORDER BY e.department_id, e.salary DESC;

```sql
--23P-0573
--25.Find the top 3 employees with the highest salaries in each department.
SELECT e.first_name, e.last_name, e.department_id, e.salary
FROM employees e
WHERE (e.salary, e.department_id) IN (
    SELECT salary, department_id
    FROM employees e1
    WHERE e1.department_id = e.department_id
    ORDER BY salary DESC

)
ORDER BY e.department_id, e.salary DESC;
```