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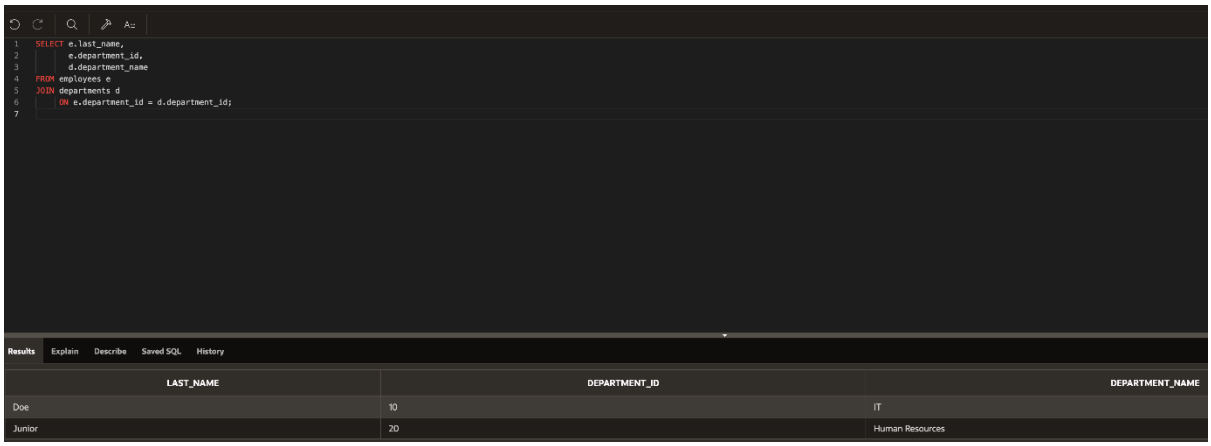
1. Write a query to display the last name, department number, and department name for all employees.



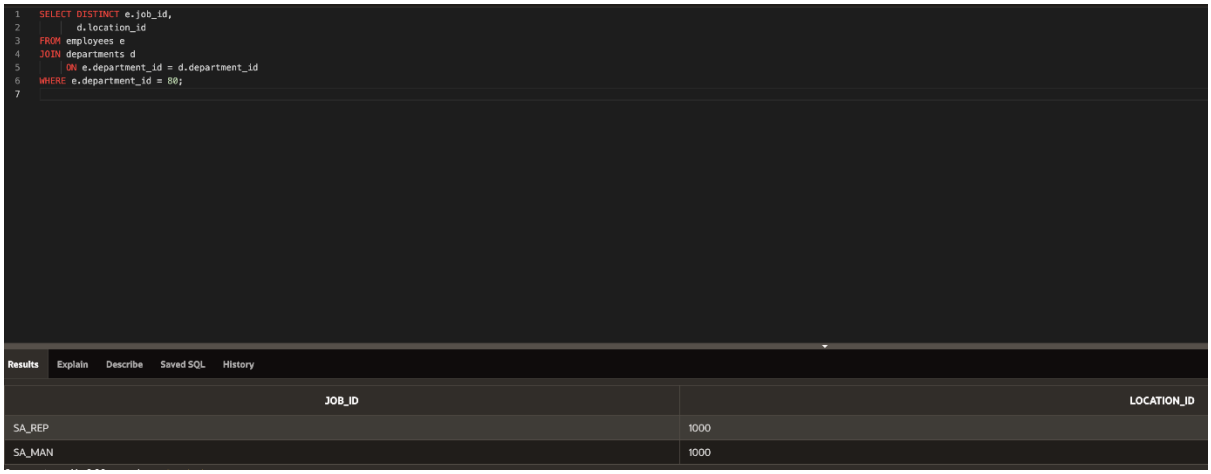
```
SELECT e.last_name,
       e.department_id,
       d.department_name
FROM employees e
JOIN departments d
    ON e.department_id = d.department_id;
```

Results | Explain | Describe | Saved SQL | History

LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
Doe	10	IT
Junior	20	Human Resources

2. Create a unique listing of all jobs that are in department 80. Include the location of the department

in the output.

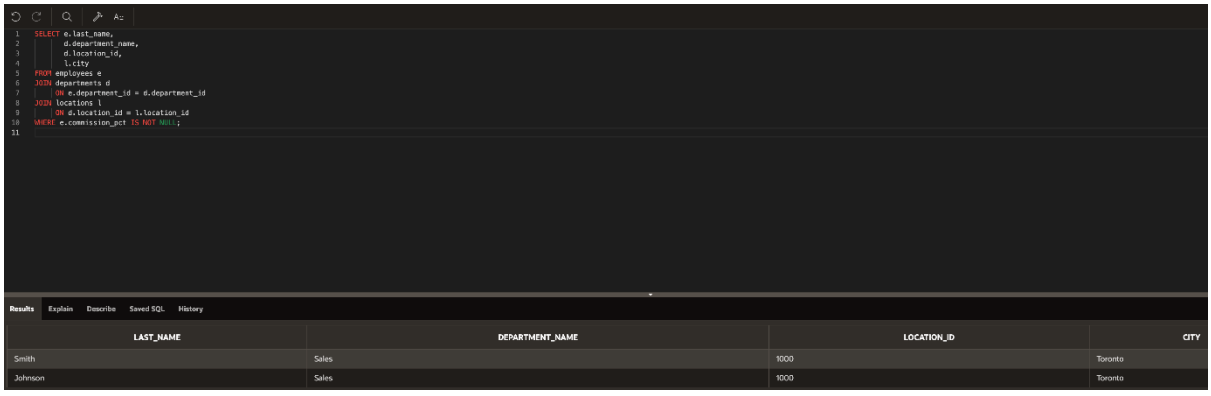


```
SELECT DISTINCT e.job_id,
       d.location_id
FROM employees e
JOIN departments d
    ON e.department_id = d.department_id
WHERE e.department_id = 80;
```

Results | Explain | Describe | Saved SQL | History

JOB_ID	LOCATION_ID
SA_REP	1000
SA_MAN	1000

3. Write a query to display the employee last name, department name, location ID, and city of all employees who earn a commission



```
SELECT e.last_name,
       d.department_name,
       d.location_id,
       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.commission_pct IS NOT NULL;
```

Results | Explain | Describe | Saved SQL | History

LAST_NAME	DEPARTMENT_NAME	LOCATION_ID	CITY
Smith	Sales	1000	Toronto
Johnson	Sales	1000	Toronto

4. Display the employee last name and department name for all employees who have an a(lowercase) in their last names.

```sql
SELECT e.last_name,
       d.department_name
FROM employees e
JOIN departments d
    ON e.department_id = d.department_id
WHERE e.last_name LIKE '%a%';
```

Results | Explain | Describe | Saved SQL | History

LAST_NAME	DEPARTMENT_NAME
Garcia	Sales
Santos	Human Resources

5. Write a query to display the last name, job, department number, and department name for all employees who work in Toronto.

```sql
SELECT e.last_name,
       e.job_id,
       d.department_id,
       d.department_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.city = 'Toronto';
```

Results | Explain | Describe | Saved SQL | History

LAST_NAME	JOB_ID	DEPARTMENT_ID	DEPARTMENT_NAME
Smith	SA_REP	80	Sales
Garcia	SA_REP	80	Sales
Johnson	SA_MAN	80	Sales

6. Display the employee last name and employee number along with their manager's last name and manager number. Label the columns Employee, Emp#, Manager, and Mgr#, Respectively

```sql
SELECT e.last_name AS Employee,
       e.employee_id AS Emp#,
       m.last_name AS Manager,
       m.employee_id AS Mgr#
FROM employees e
LEFT JOIN employees m
    ON e.manager_id = m.employee_id;
```

Results | Explain | Describe | Saved SQL | History

EMPLOYEE	EMP#	MANAGER	MGR#
shakes	176	-	-
Santos	107	-	-
Revera	300	-	-
Doe	1002	-	-
Junior	175	-	-
Smith	104	-	-
Garcia	106	-	-
Johnson	105	-	-

7. Modify lab4_6.sql to display all employees including King, who has no manager. Order the results by the employee number.

```
SELECT e.last_name AS Employee,
       e.employee_id AS Emp#,
       NVL(m.last_name, 'No Manager') AS Manager,
       NVL(TO_CHAR(m.employee_id), '---') AS Mgr#
FROM employees e
LEFT JOIN employees m
    ON e.manager_id = m.employee_id
ORDER BY e.employee_id;
```

Results | Explain | Describe | Saved SQL | History

EMPLOYEE	EMP#	MANAGER	MGR#
Smith	104	No Manager	---
Johnson	105	No Manager	---
Garcia	106	No Manager	---
Santos	107	No Manager	---
Junior	175	No Manager	---
shakes	176	No Manager	---
Revera	300	No Manager	---
Doe	1002	No Manager	---

8. Create a query that displays employee last names, department numbers, and all the employees who

work in the same department as a given employee. Give each column an appropriate label

```
SELECT e.last_name AS Employee,
       e.department_id AS Dept#,
       d.department_name AS Department
FROM employees e
JOIN departments d
    ON e.department_id = d.department_id
WHERE e.department_id = (
    SELECT department_id
    FROM employees
    WHERE last_name = 'Clark'
);
```

Results | Explain | Describe | Saved SQL | History

EMPLOYEE	DEPT#	DEPARTMENT
Doe	10	IT
Miller	10	IT
Anderson	10	IT
Clark	10	IT
light	10	IT

9. Show the structure of the JOB_GRADES table. Create a query that displays the name, job,

department name, salary, and grade for all employees

```
SELECT e.last_name,
       e.job_id,
       d.department_name,
       e.salary,
       j.grade_level
FROM employees e
JOIN departments d
    ON e.department_id = d.department_id
JOIN job_grades j
    ON e.salary BETWEEN j.lowest_sal AND j.highest_sal;
```

Results | Explain | Describe | Saved SQL | History

LAST_NAME	JOB_ID	DEPARTMENT_NAME	SALARY	GRADE_LEVEL
Miller	AD_ASST	IT	4000	A
Anderson	AD_ASST	IT	4200	A
light	AD_ASST	IT	4250	A
Clark	AD_VP	IT	17000	D
Santos	HR_REP	Human Resources	6000	B
Junior	IT_PROG	Human Resources	7500	B
Garcia	SA_REP	Sales	7500	B
Smith	SA_REP	Sales	8000	B
Johnson	SA_MAN	Sales	12000	C

10. Create a query to display the name and hire date of any employee hired after employee Davies.

```sql
SELECT last_name, hire_date
FROM employees
WHERE hire_date > (
    SELECT hire_date
    FROM employees
    WHERE last_name = 'Davies'
);
```

Results | Explain | Describe | Saved SQL | History

LAST_NAME	HIRE_DATE
Smith	2/20/2010
Doe	1/15/2020
Miller	7/1/2014
Anderson	8/10/2016
Garcia	9/15/2015
light	8/13/2016
Johnson	5/10/2012
Santos	11/20/2018

11. Display the names and hire dates for all employees who were hired before their managers, along with their manager's names and hire dates. Label the columns Employee, Emp Hired, Manager, and Mgr Hired, respectively.

```sql
SELECT e.last_name AS Employee,
       e.hire_date AS "Emp Hired",
       m.last_name AS Manager,
       m.hire_date AS "Mgr Hired"
FROM employees e
JOIN employees m
    ON e.manager_id = m.employee_id
WHERE e.hire_date < m.hire_date;
```

Results | Explain | Describe | Saved SQL | History

EMPLOYEE	Emp Hired	MANAGER	Mgr Hired
Harris	5/10/2012	Williams	1/1/2015