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EXPNO:08

WORKING WITH MULTIPLE TABLES

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;
```

LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
King	10	Administration
Davies	80	Sales
Smith	80	Sales

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, 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.department_id = 80;
```

JOB_ID	CITY
SA_REP	New York
SA_MAN	New York

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;
```

LAST_NAME	DEPARTMENT_NAME	LOCATION_ID	CITY
Davies	Sales	2	New York
Smith	Sales	2	New York

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

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

LAST_NAME	DEPARTMENT_NAME
Davies	Sales

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

```
SELECT e.last_name, e.job_id, e.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';
```

LAST_NAME	JOB_ID	DEPARTMENT_ID	DEPARTMENT_NAME
King	AD_PRES	10	Administration

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

```
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;
```

EMPLOYEE	EMP#	MANAGER	MGR#
Johnson	4	King	1
Davies	2	King	1
Williams	5	Davies	2
Smith	3	Davies	2
King	1	-	-

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, e.employee_id, m.last_name AS Manager
FROM employees e
LEFT JOIN employees m
ON e.manager_id = m.employee_id
ORDER BY e.employee_id;
```

LAST_NAME	EMPLOYEE_ID	MANAGER
King	1	-
Davies	2	King
Smith	3	Davies
Johnson	4	King
Williams	5	Davies

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# FROM
employees e
JOIN employees emp
ON e.department_id = emp.department_id
WHERE emp.employee_id = 2; -- Replace with a specific employee ID
```

EMPLOYEE	DEPT#
Davies	80
Smith	80

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

```
DESCRIBE job_grades;

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

Object Type **TABLE** Object **JOB_GRADES**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
JOB_GRADES	GRADE_LEVEL	VARCHAR2	5	-	-	1	-	-	-
	LOWEST_SAL	NUMBER	22	-	-	-	✓	-	-
	HIGHEST_SAL	NUMBER	22	-	-	-	✓	-	-

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no data found

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

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

LAST_NAME	HIRE_DATE
Smith	04/23/2006
Williams	12/01/2007

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.

```
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;
```

no data found