Lab Exercise 6: Displaying Data from Multiple Tables

1. By using natural join, display the department's name and their city.

```
SELECT city, department_name
FROM departments d, locations l
where d.location_id= l.location_id;
```

Query Result

SQL | All Rows Fetched: 27 in 0.006 seconds

	CITY	DEPARTMENT_NAME
1	Southlake	IT
2	South San Francisco	Shipping
3	Seattle	Administration
4	Seattle	Purchasing
5	Seattle	Executive
6	Seattle	Finance
7	Seattle	Accounting
8	Seattle	Treasury
9	Seattle	Corporate Tax

2. For each of this question, use USING and ON clause.

   I. Find the department name and city name for location 1700.

```
SELECT DEPARTMENT_NAME, CITY
FROM departments d
join locations
USING(location_id)
WHERE location_id = '1700';
```

Query Result

SQL | All Rows Fetched: 21 in 0.004 seconds

	DEPARTMENT_NAME	CITY
1	Administration	Seattle
2	Purchasing	Seattle
3	Executive	Seattle
4	Finance	Seattle
5	Accounting	Seattle

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```
SELECT DEPARTMENT_NAME, CITY
FROM departments d
join locations
on (locations.location_id = 1700);
```

Query Result

SQL | All Rows Fetched: 27 in 0.041 seconds

	DEPARTMENT_NAME	CITY
1	Administration	Seattle
2	Marketing	Seattle
3	Purchasing	Seattle
4	Human Resources	Seattle
5	Shipping	Seattle

II. Find the job title and employees name that have that position.

```
SELECT job_title, first_name ||' '|| last_name as "NAME"
FROM employees
join jobs
USING (job_id);
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.004 seconds

	JOB_TITLE	NAME
1	Public Accountant	William Gietz
2	Accounting Manager	Shelley Higgins
3	Administration Assistant	Jennifer Whalen
4	President	Steven King
5	Administration Vice President	Neena Kochhar
6	Administration Vice President	Lex De Haan
7	Accountant	Daniel Faviet
8	Accountant	Luis Popp

```
SELECT job_title, first_name ||' '|| last_name as "NAME"
FROM employees e
join jobs j
on(e.job_id = j.job_id);
```

uery Result

SQL | Fetched 50 rows in 0.008 seconds

	JOB_TITLE	NAME
1	Public Accountant	William Gietz
2	Accounting Manager	Shelley Higgins
3	Administration Assistant	Jennifer Whalen
4	President	Steven King
5	Administration Vice President	Neena Kochhar
6	Administration Vice President	Lex De Haan
7	Accountant	Daniel Faviet
8	Accountant	Luis Popp
9	Accountant	John Chen
10	Accountant	Ismael Sciarra
11	Accountant	Jose Manuel Urman

III. Find employees' name that have salary less than 7000 and display together their job title.

```
SELECT job_title, first_name ||' '|| last_name as "NAME"
FROM employees e
join jobs j
on(e.job_id = j.job_id)
where salary < 7000;
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.005 seconds

	JOB_TITLE	NAME
1	Administration Assistant	Jennifer Whalen
2	Accountant	Luis Popp
3	Human Resources Representative	Susan Mavris
4	Programmer	Bruce Ernst
5	Programmer	David Austin
6	Programmer	Valli Pataballa

```
SELECT job_title, first_name ||' '|| last_name as "NAME"
FROM employees
join jobs
USING (job_id)
where salary < 7000
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.004 seconds

	JOB_TITLE	NAME
1	Administration Assistant	Jennifer Whalen
2	Accountant	Luis Popp
3	Human Resources Representative	Susan Mavris
4	Programmer	Bruce Ernst
5	Programmer	David Austin
6	Programmer	Valli Pataballa
7	Programmer	Diana Lorentz
8	Marketing Representative	Pat Fay
9	Purchasing Clerk	Guy Himuro
10	Purchasing Clerk	Sigal Tobias
11	Purchasing Clerk	Karen Colmenares

3. Find the employees' last name and their hire date if they were hired before Hunold.

```
SELECT e.first_name,e.last_name, e.hire_date
FROM employees e
join employees n
on(n.last_name= 'Hunold')
where e.hire_date < n.hire_date;
```

Query Result

SQL | Fetched 50 rows in 0.005 seconds

	FIRST_NAME	LAST_NAME	HIRE_DATE
1	Steven	King	17-JUN-03
2	Neena	Kochhar	21-SEP-05
3	Lex	De Haan	13-JAN-01
4	David	Austin	25-JUN-05

4. Find the manager's name and their subordinate name.

```
SELECT e.first_name,e.last_name
FROM employees e
join employees f
on e.employee_id= f.employee_id
```

Query Result

SQL | Fetched 50 rows in 0.002 seconds

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

5. Find the employees name, eventhough they do not have any department. Display together the department's name if they have it.

```
SELECT first_name,last_name, department_name
FROM employees e left outer join departments d
on e.department_id = d.department_id
```

ipt Output | Query Result

SQL | Fetched 50 rows in 0.004 seconds

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME
1	Jennifer	Whalen	Administration
2	Pat	Fay	Marketing
3	Michael	Hartstein	Marketing
4	Karen	Colmenares	Purchasing
5	Guy	Himuro	Purchasing

6. Find the department's name and employees name eventhough no employee is in that deparment.

```
SELECT e.first_name,e.last_name,d.department_name
FROM employees e right outer join departments d
on (e.department_id = d.department_id)
```

Script Output | Query Result

SQL | All Rows Fetched: 122 in 0.007 seconds

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME
1	Jennifer	Whalen	Administration
2	Pat	Fay	Marketing
3	Michael	Hartstein	Marketing
4	Sigal	Tobias	Purchasing
5	Karen	Colmenares	Purchasing
6	Shelli	Baida	Purchasing

7. Cross join employee and job.

```
SELECT last_name, job_title
FROM employees
cross join jobs;
```

Script Output | Query Result

SQL | Fetched 50 rows in 0.004 seconds

	LAST_NAME	JOB_TITLE
1	Abel	President
2	Ande	President
3	Atkinson	President
4	Austin	President
5	Baer	President
6	Baida	President
7	Banda	President
8	Bates	President
9	Bell	President
10	Bernstein	President