This query was completed in earlier releases as follows:

```
SELECT e.last_name, e.department_id, d.department_name
FROM   employees e, departments d
WHERE  d.department_id = e.department_id  (+);
```

FULL OUTER JOIN
Example:

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

This query retrieves all rows in the EMPLOYEES table, even if there is no match in the DEPARTMENTS table. It alslso retrieves all rows in the DEPARTMENTS table, even if there is no match in the EMPLOYEES table.

Find the Solution for the following:

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.dept_name
from employees e
join department d on e.department_id = d.dept_id ;
```

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

```
select d.dept_name , d.location_id
from department d
join employees e on d.dept_id = e.department_id
 where department_id = 80 ;
```

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.dept_name, d.location_id, l.city
from (department d  inner join employees e on
 d.dept_id = e department_id
inner join location l on d.location_id = l.location_id)
where commission_pct is not null ;
```

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.dept_name from department d
inner join employees e on d.dept_id = e.department_id
where last_name like '%a%';
```

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, d.dept_name, e.department_id
from (department d
inner join employees e on d.dept_id = e.department_id
inner join location l on l.location_id = d.location_id)
where city = 'Toronto';
```

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 last_name as 'Employee', employee_id as
"Emp#", manager_id as 'Mgr #" from employees;
```

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

```
Select last_name AS 'Employee', employee_id AS
from employees
Order By employee_id;
```

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.dept_id, dept, e.last_name emp, e.last_name
from emp e join emp c on (e.dept_id) = c.dept_id)
where e emp_id = c.emp_id.
```

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

```
desc job_grades
select e.last_name, e.job_id, d.dept_name, e.salary, j.grade_level
from emp e.dept d, job_grade;
where e.dept_id = d.dept_id
And e.salary between j.lowest_sal and j.highest_sal;
```

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 emp e join emp davies
on (davis, last_name = 'davies')
where davis.hire_date < e.hire_date ;
```

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 w.last_name, w.hiredate, m.last_name, m.hiredate
from emp w join employee m
on (w.manager_id = m.emp_id)
where w.hire_date < m.hire_date;
```

Evaluation Procedure	Marks awarded
Query(5)	
Execution (5)	
Viva(5)	
Total (15)	
Faculty Signature	