**Lab Submission**

**Instructor: Basit Ali**

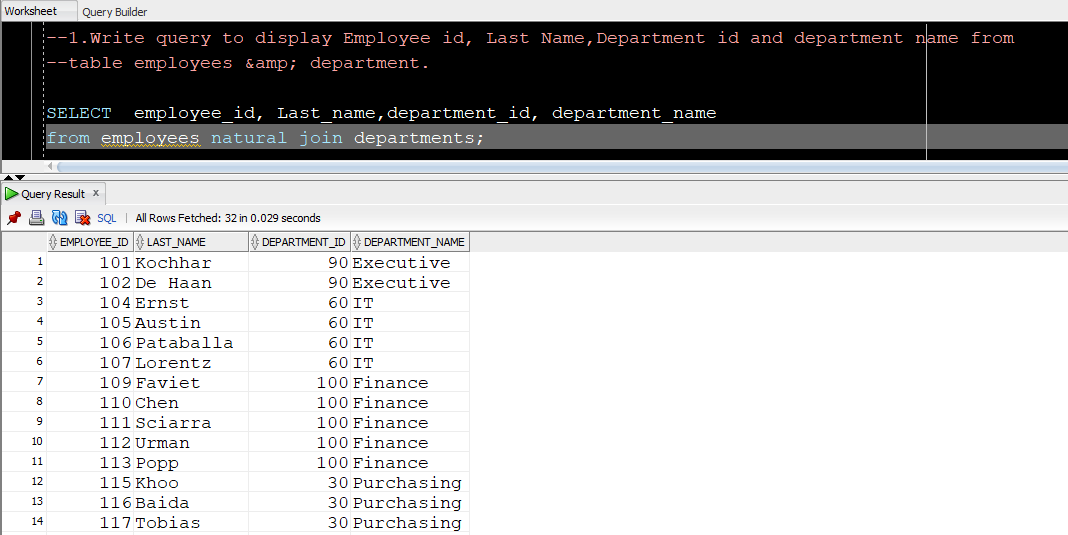
**Assignment-07**

1. Write query to display Employee id, Last Name,Department id and department name from table employees & department.

**Code:**

SELECT employee\_id, Last\_name, department\_id, department\_name

from employees natural join departments;



**---------------------------------------------**

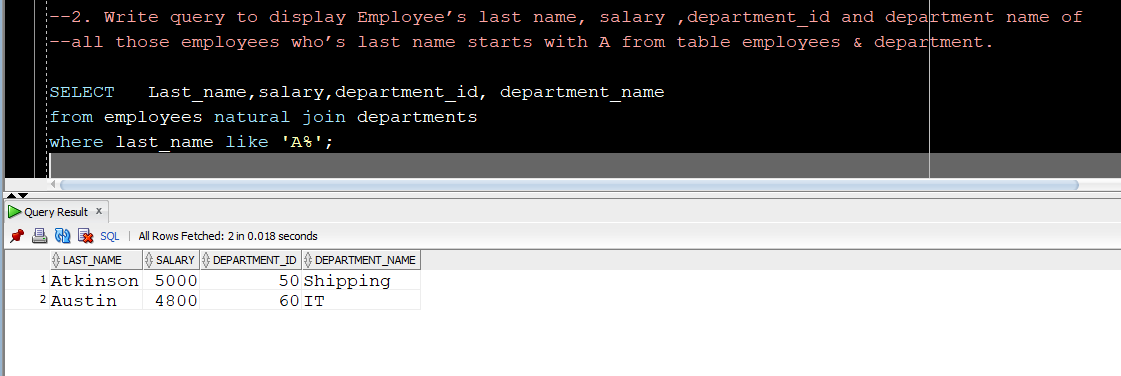
1. Write query to display Employee’s last name, salary ,department\_id and department name of all those employees who’s last name starts with A from table employees & department.

**Code:**

SELECT Last\_name, salary, department\_id, department\_name

from employees natural join departments

where last\_name like 'A%';



**---------------------------------------------**

1. Write query to display Employee’s last name, department\_id, department name and city where department is using employee,department and locations table.

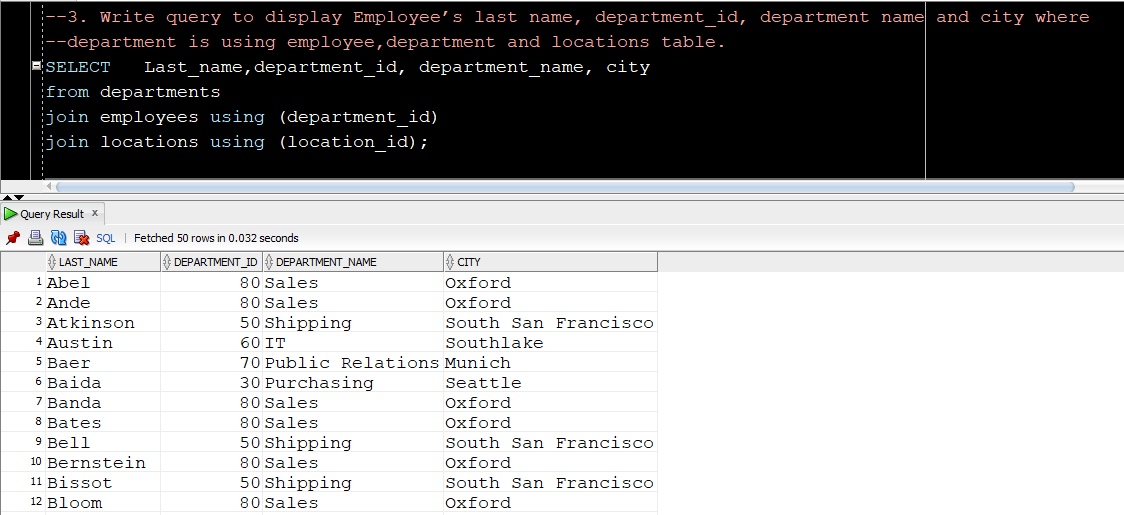
**Code:**

SELECT Last\_name, department\_id, department\_name, city

from departments

join employees using (department\_id)

join locations using (location\_id);



**---------------------------------------------**

1. Write query to display employee first name, his salary and his manager’s first name his salary from table employees.

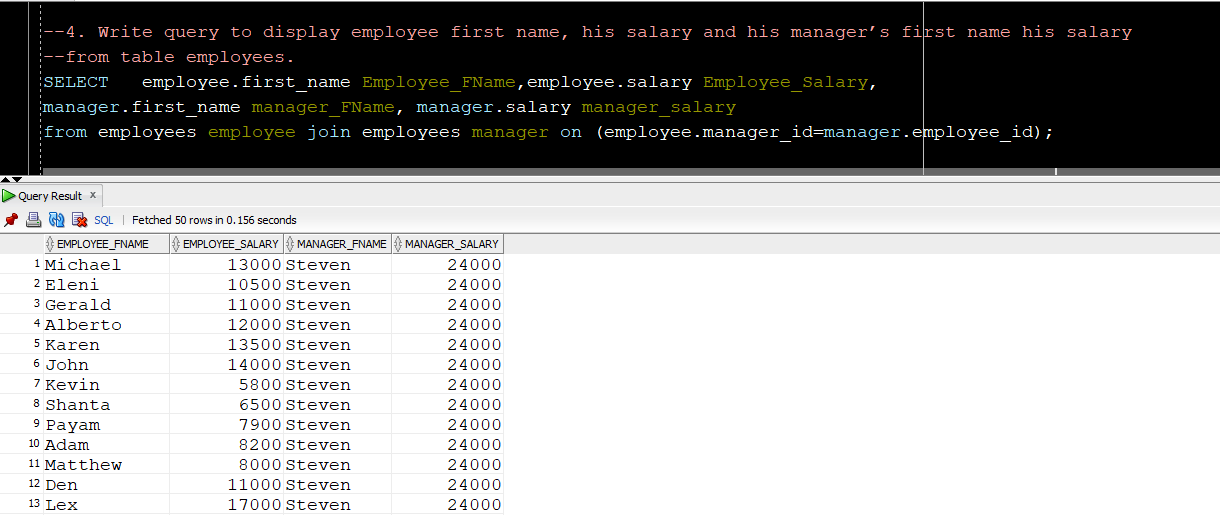
**Code:**

SELECT employee.first\_name Employee\_FName, employee.salary Employee\_Salary, manager.first\_name manager\_FName, manager.salary manager\_salary

from employees employee

join employees manager

on (employee.manager\_id=manager.employee\_id);



**---------------------------------------------**

1. What is your understanding about full outer join write a query and explain its working.

**Full outer join** is join that includes all the rows from both tables whether their rows are matching or not. In simple words, it is a combination of **left** and **right outer join**.

**Explanation:**

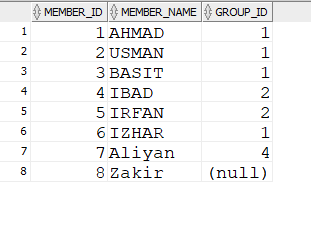
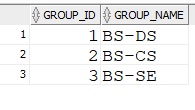
Consider, there are two tables:

**Groups:** This table is consists of **group\_id** and **group\_name.**

**Members:**  This table is consists of **member\_id, member\_name** and

**group\_id.**

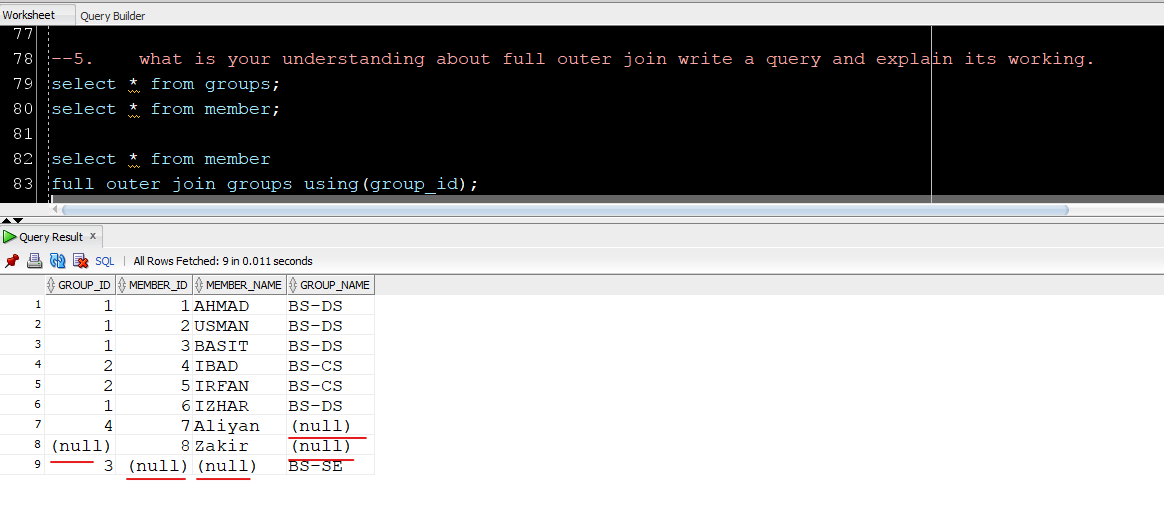
**(Members** belong to one of the group listed in the **Groups** table.**)**



**Table: Groups**

**Table: Members**

**Full Outer Join**

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Through full outer join, all the rows including matched and unmatched are displayed.

Like in above example,

* Group\_ID =4 have no Group\_name
* Member\_id=8 doesn’t belong to any group.
* Group\_id =3 have zero members.

**Code:**

select \* from member

full outer join groups using(group\_id);

**---------------------------------------------**

1. What does cross join means in sql write a query and explain it.

**Cross join** is also known as Cartesian product. It multiplies each row of **table** **A** with all rows of **table** **B.**

**Explanation:**

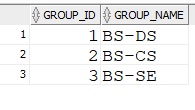
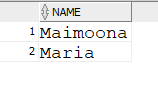
Consider, there are two tables:

**Groups:** This table is consists of **group\_id** and **group\_name.**

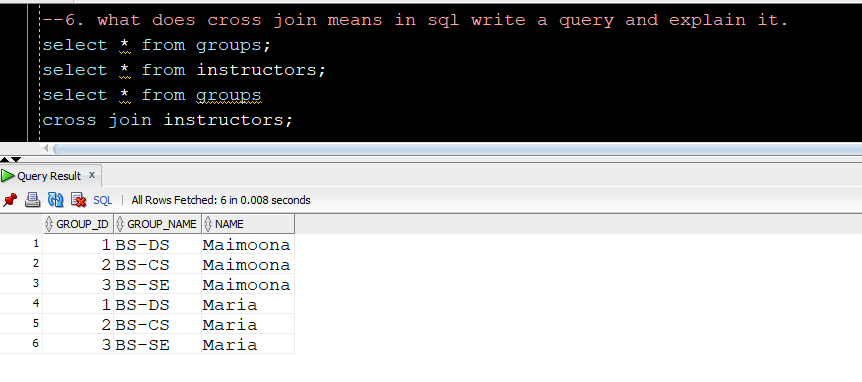
**Instructors:**  This table is consists of **instructor\_name**

**(Each Instructor** will supervise the performance of all groups.**)**

**Table: Groups**



**Table: Instructor**

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**Code:**

select \*

from groups

cross join instructors;

**---------------------------------------------**