MYSQL ASSIGNMENT 5

```
create database office;

use office;

create table employees(emp_id int,emp_name varchar(50),dept_id int);

insert into employees(emp_id,emp_name,dept_id) values
(1,"Alice",10),(2,"Bob",20),(3,"Charlie",30),(4,"David",10),(5,"Eve",40);

create table departments(dept_id int, dept_name varchar(50));

insert into departments(dept_id,dept_name) values
(10,"HR"),(20,"Finance"),(30,"IT"),(40,"Admin"),(50,"Marketing");

create table projects(project_id int, emp_id int, project_name varchar (50));

insert into projects(project_id,emp_id,project_name) values
(101,1,"Alpha"),(102,2,"Beta"),(103,3,"Gamma"),(104,4,"Delta");
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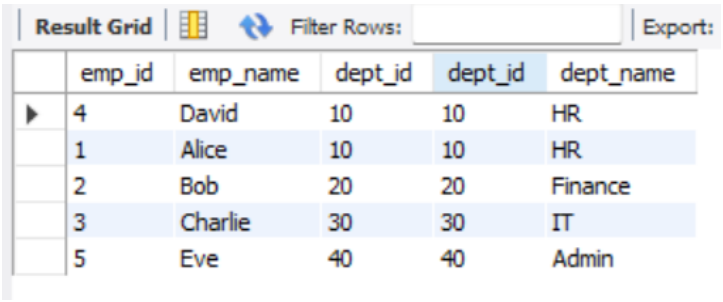
1.Write a query to get Employee and Department details using join.

select * from employees join departments on employees.dept_id = departments.dept_id;



emp_id	emp_name	dept_id	dept_id	dept_name
4	David	10	10	HR
1	Alice	10	10	HR
2	Bob	20	20	Finance
3	Charlie	30	30	IT
5	Eve	40	40	Admin

2. Write a query to retrieve all employees with their departments, even if the department is missing.

select emp_name, dept_name from employees left join departments on employees.dept_id = departments.dept_id;

Result Grid | Filter Rows:

emp_name	dept_name
Alice	HR
Bob	Finance
Charlie	IT
David	HR
Eve	Admin

3. Write a query to get department details even if there are no employees in that department.

select dept_name, emp_name from employees right join departments on employees.dept_id = departments.dept_id;

Result Grid | Filter Rows:

dept_name	emp_name
HR	David
HR	Alice
Finance	Bob
IT	Charlie
Admin	Eve
Marketing	NULL

4. Write a query to get all employees and departments, whether matched or not.

select * from employees left join departments on employees.dept_id = departments.dept_id union

select * from employees right join departments on employees.dept_id = departments.dept_id;

Result Grid | Filter Rows: | Export

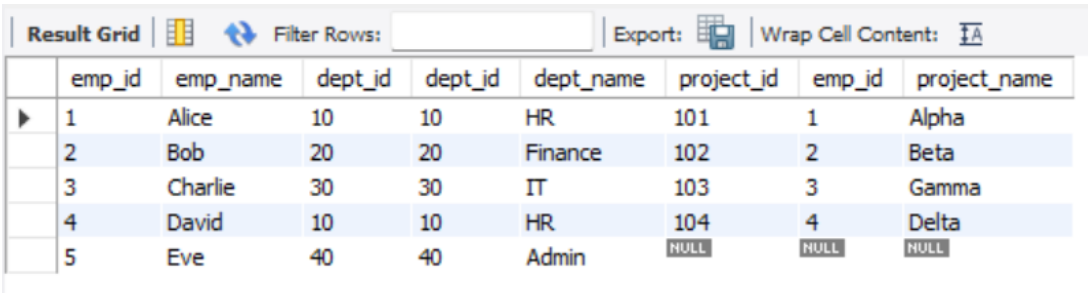
emp_id	emp_name	dept_id	dept_id	dept_name
1	Alice	10	10	HR
2	Bob	20	20	Finance
3	Charlie	30	30	IT
4	David	10	10	HR
5	Eve	40	40	Admin
NULL	NULL	NULL	50	Marketing

5. JOIN three tables (Employees, Departments, Projects) to get employee, department, and project information.

select * from employees left join departments on employees.dept_id =

departments.dept_id left join projects on employees.emp_id =

projects.emp_id;

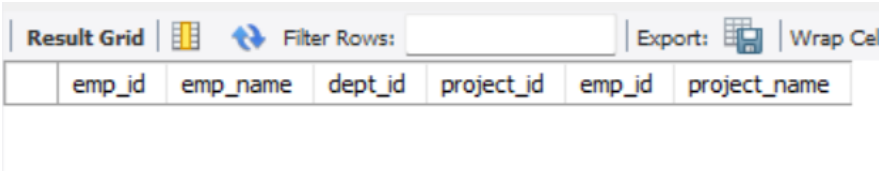


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

emp_id	emp_name	dept_id	dept_id	dept_name	project_id	emp_id	project_name
1	Alice	10	10	HR	101	1	Alpha
2	Bob	20	20	Finance	102	2	Beta
3	Charlie	30	30	IT	103	3	Gamma
4	David	10	10	HR	104	4	Delta
5	Eve	40	40	Admin	NULL	NULL	NULL

6. Find employees who are not assigned to any projects.

select * from employees join projects on employees.emp_id = projects.emp_id where project_name is null;

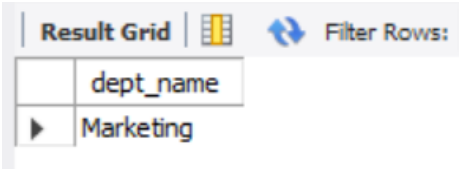


Result Grid | Filter Rows: | Export: | Wrap Cel

emp_id	emp_name	dept_id	project_id	emp_id	project_name

7. Find departments with no employees using a RIGHT JOIN.

select dept_name from employees right join departments on departments.dept_id = employees.dept_id where employees.dept_id is null;



Result Grid | Filter Rows:

dept_name
Marketing

8. Write a query to get Employee and Department details using join with aliases.

select emp_id, emp_name, dept_name from employees join

departments on employees.dept_id = departments.dept_id;

Result Grid | Filter Rows:

emp_id	emp_name	dept_name
4	David	HR
1	Alice	HR
2	Bob	Finance
3	Charlie	IT
5	Eve	Admin

9. Write a query to find employees in the same department as other employees.

select a.emp_id, a.emp_name, b.emp_id, b.emp_name from employees a join

employees b on a.dept_id = b.dept_id and a.emp_id != b.emp_id;

Result Grid | Filter Rows:

emp_id	emp_name	emp_id	emp_name
4	David	1	Alice
1	Alice	4	David

10. Write a query to find projects managed by employees in the 'IT' department.

select p.project_id, p.project_name from projects p join employees e on

p.emp_id = e.emp_id join departments d on e.dept_id =

d.dept_id where d.dept_name = 'IT';

Result Grid | Filter Rows:

project_id	project_name
103	Gamma

11. Write a query to show employees and their project information (even if not assigned to a project).

select e.emp_id, e.emp_name, p.project_name from employees e left join projects p on e.emp_id = p.emp_id;

Result Grid | Filter Rows:

emp_id	emp_name	project_name
1	Alice	Alpha
2	Bob	Beta
3	Charlie	Gamma
4	David	Delta
5	Eve	NULL

12. Find employees who work in departments with names starting with 'A'.

select e.emp_id, e.emp_name from employees e join departments d on e.dept_id = d.dept_id where d.dept_name like 'A%';

Result Grid | Filter Rows:

emp_id	emp_name
5	Eve

13. Find the total number of employees in each department using GROUP BY and JOIN.

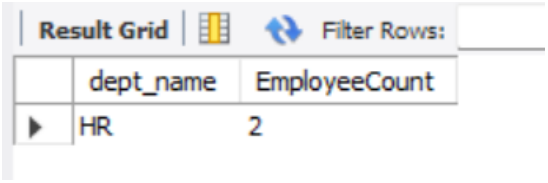
select d.dept_name, COUNT(e.emp_id) as TotalEmployees from departments d left join employees e on d.dept_id = e.dept_id group by d.dept_name;

Result Grid | Filter Rows:

dept_name	TotalEmployees
HR	2
Finance	1
IT	1
Admin	1
Marketing	0

14. Get the list of departments with more than one employee.

select d.dept_name, COUNT(e.emp_id) as EmployeeCount from departments d join employees e on d.dept_id = e.dept_id group by d.dept_name having COUNT(e.emp_id) > 1;


Result Grid
Filter Rows:
dept_name
EmployeeCount
HR
2