Task 1:

SELECT employees.first\_name, employees.last\_name, departments.department\_name from employees join departments on employees.department\_id=departments.department\_id;

Task 2:

NOTE: projects are not related to employees so I did a similar ask with clients.

SELECT clients.client\_name , projects.project\_name from clients left join projects on projects.client\_id=clients.client\_id;

Task 3:

SELECT departments.department\_name,employees.first\_name,employees.last\_name FROM employees right join departments on departments.department\_id=employees.department\_id

Task 4:

Task 5:

SELECT a.first\_name as emp\_first\_name,a.last\_name as emp\_last\_name,b.first\_name as manager\_first\_name,b.last\_name as manager\_last\_name from employees a, employees b where a.manager\_id=b.employee\_id

Task 6:

SELECT \* from employees cross join departments;

Task 7:

select e.first\_name, e.last\_name, d.department\_name from employees e, departments d where e.department\_id=d.department\_id

Task 8:

select AVG(e.salary), d.department\_name from employees e, departments d where e.department\_id=d.department\_id GROUP by d.department\_name

Task 9:

SELECT e.first\_name, p.project\_name from employees e, projects p, emp\_proj where (e.employee\_id=emp\_proj.emp\_id and p.project\_id=emp\_proj.proj\_id) and p.start\_date > '2023-2-01'

Task 10:

SELECT e.first\_name, e.last\_name from employees e, departments d where e.department\_id=d.department\_id and d.department\_name='HR'

Task 11:

SELECT o.order\_id, o.order\_date, c.customer\_name from orders o, customers c where o.customer\_id=c.customer\_id

Task 12:

SELECT employees.first\_name,employees.salary,departments.department\_name from employees JOIN departments using (department\_id)

Task 13:

SELECT COUNT(o.order\_id),c.customer\_name from orders o JOIN customers c USING(customer\_id) GROUP BY c.customer\_id

Task 14:

SELECT c.customer\_name from orders o JOIN customers c USING(customer\_id) GROUP BY c.customer\_id HAVING COUNT(o.order\_id) > 5

Task 15:

SELECT employees.first\_name, case when departments.department\_name in ('HR','Marketing') then 'Building 1' when departments.department\_name in ('Sales','Engineering') then 'Building 2' else 'N/A' end as work\_location from employees join departments using (department\_id)

Task 16:

SELECT employees.first\_name, departments.department\_name from employees join departments using (department\_id) order by departments.department\_name, employees.first\_name

Task 17:

SELECT departments.department\_name, projects.project\_name from projects join emp\_proj on projects.project\_id=emp\_proj.proj\_id JOIN employees on emp\_proj.emp\_id=employees.employee\_id JOIN departments on departments.department\_id=employees.department\_id

Task 18:

SELECT employees.first\_name, projects.project\_name, clients.client\_name from employees right join emp\_proj on emp\_proj.emp\_id=employees.employee\_id right JOIN projects on emp\_proj.proj\_id=projects.project\_id left JOIN clients ON projects.client\_id=clients.client\_id

Task 19:

SELECT departments.department\_name , employees.first\_name, salaries.amount FROM employees join salaries USING (employee\_id) RIGHT JOIN departments on employees.department\_id=departments.department\_id

Task 20:

SELECT employees.first\_name, projects.project\_name, departments.department\_name FROM employees LEFT join emp\_proj on emp\_proj.emp\_id=employees.employee\_id RIGHT JOIN projects on emp\_proj.proj\_id=projects.project\_id LEFT JOIN departments on departments.department\_id = employees.employee\_id

UNION

SELECT employees.first\_name, projects.project\_name, departments.department\_name FROM employees LEFT join emp\_proj on emp\_proj.emp\_id=employees.employee\_id RIGHT JOIN projects on emp\_proj.proj\_id=projects.project\_id RIGHT JOIN departments on departments.department\_id = employees.employee\_id

Task 21:

SELECT a.first\_name, b.first\_name as manager, departments.department\_name FROM employees a, employees b, departments where a.manager\_id=b.employee\_id and a.department\_id=b.department\_id and a.department\_id=departments.department\_id

Task 22:

SELECT employees.first\_name,departments.department\_name,projects.project\_name FROM employees CROSS JOIN projects CROSS JOIN departments

Task 23:

SELECT e.first\_name as emp\_name, p.project\_name as emp\_project, d.department\_name as sector FROM employees e, projects p, departments d, emp\_proj ej WHERE ej.emp\_id=e.employee\_id and ej.proj\_id=p.project\_id and d.department\_id=e.department\_id

Task 24:

SELECT sum(salaries.amount) , departments.department\_name FROM employees, salaries, departments where employees.employee\_id=salaries.employee\_id and departments.department\_id=employees.department\_id GROUP by departments.department\_name

Task 25:

SELECT employees.first\_name, employees.last\_name FROM employees , emp\_proj, projects, clients WHERE emp\_proj.emp\_id=employees.employee\_id and emp\_proj.proj\_id= projects.project\_id and clients.client\_id=projects.client\_id and clients.client\_name in ('Client A', 'Client B')

Task 26:

SELECT customers.customer\_name FROM customers JOIN orders USING (customer\_id) JOIN order\_items on order\_items.order\_id=orders.order\_id JOIN products on products.product\_id=order\_items.product\_id where products.product\_name='Product X'

Task 27:

SELECT employees.first\_name,locations.location\_name from employees join departments on departments.department\_id=employees.department\_id JOIN locations on locations.location\_id=departments.location\_id

Task 28:

SELECT sum(order\_items.quantity) , customers.customer\_name FROM customers, order\_items, orders where customers.customer\_id=orders.customer\_id and order\_items.order\_id=orders.order\_id GROUP by customers.customer\_name

Task 29:

SELECT customers.customer\_name FROM customers , order\_items, orders WHERE customers.customer\_id=orders.customer\_id and order\_items.order\_id=orders.order\_id GROUP BY customers.customer\_name HAVING sum(order\_items.quantity) > 12

Task 30:

Task 31:

Task 32:

SELECT employees.first\_name,projects.project\_name,departments.department\_name FROM departments, emp\_proj, employees, projects where employees.department\_id=departments.department\_id and emp\_proj.emp\_id=employees.employee\_id and projects.project\_id=emp\_proj.proj\_id ORDER BY departments.department\_name, projects.project\_name, employees.first\_name