

ASSIGNMENT 3 MANEESH S SHETTY

1. List all columns for all employees in the 'Engineering' department (DepartmentID = 1).

select * from employees where departmentid=1

employeeid	firstName	lastname	departmentid	hiredate	salary
101	Alice	Johnson	1	2022-01-15	75000
103	Charlie	Davis	1	2023-03-10	58000

2. Find the names of all departments located in 'Chicago'.

select deptname from departments where location="chicago";

deptname
Marketing

3. Show the total number of projects currently marked as 'Active'.

select count(projectid) as active_project from projects where status='active';

active_project
2

4. List the unique last names of all employees, sorted alphabetically

select DISTINCT lastname from employees order by lastname ASC;

lastname	1
Davis	
Hunt	
Johnson	
Prince	
Smith	

5. Retrieve the FirstName and LastName of employees who earn more than \$65,000 and were hired after January 1st, 2021.

select firstname ,lastname from employees where salary>65000 and hiredate>'01-01-2021';

firstname	lastname
Alice	Johnson
Diana	Prince

6. Calculate the average salary for each department; display the DepartmentID and the average salary.

```
SELECT d.deptname ,avg(e.salary) as avg_salary
```

```
from departments d join employees e on d.departmentid=e.departmentid GROUP by
d.departmentid;
```

deptname	avg_salary
Engineering	66500.0000
Marketing	63000.0000
Executive	90000.0000

7) List the ProjectName and the lead employee's FirstName by joining the Projects and Employees tables.

```
select p.projectname ,e.firstName from projects p join employees e
```

```
on e.employeeid =p.LeadEmployeeID ;
```

projectname	firstName
Alpha Tech	Alice
Beta Cloud	Diana
Gamma SEO	Bob
Delta Mobile	Alice

8. Find all employees who are not currently leading any project.

```
SELECT employeeid from employees where employeeid not in(SELECT leademployeeid from
projects);
```

employeeid
103
105

9. Show the names of departments that have no employees assigned to them.

SELECT departmentid from departments where departmentid not in(SELECT departmentid from employees);

departmentid
4

10. Find the employee(s) with the highest salary and display their full name and salary amount

SELECT firstname ,lastname, salary from employees where salary=(SELECT max(salary) from employees);

firstname	lastname	salary
Diana	Prince	90000

11. Calculate the total budget for all projects led by employees in the 'Engineering' department.

SELECT sum(p.budget) as budget from projects p join employees e on p.leademployeeid =e.employeeid join departments d on e.departmentid=d.departmentid where d.deptname="Engineering";

budget
230000

12. List all departments that have more than one employee, along with the count of employees in each.

select d.departmentid ,d.deptname from departments d join employees e on d.departmentid=e.departmentid GROUP by d.departmentid having count(e.employeeid)>1;

departmentid	deptname
1	Engineering
2	Marketing