Subquery : -

Find the avg salary : -
Question 1 - Find the employee who's salary is more than the avg salary earned by all emp
Select * from emp
Where salary > (Select AVG(salary) from emp)
Scalar subquery
Select e.* from emp e
Join (select avg(salary) sal from emp) acg_sal
    On e.salary > avg_sal.sal
Question - find the emp who earn the highest salary in each dept
Select * from emp
Where (dept_name , salary) in (Select dept_name , MAX(salary) as M
From emp
Group BY depat_name
Order By M DECS)
Question - find department who do not have any emp
Select * from dept
Where dept NOT IN (Select distinct(dept_name from employee)
—correlate subquery
Question - find emp in each department who earns more than avg salary in that dept
Select AVG(salary) dept_name
From emp
 Where dept_name = "specific dept"
Select * from emp e1
Where salary > (Select AVG(salary) dept_name
                From emp e2
                Where e1.dept_name = e2.dept_name
)
Select AVG(total_sales) as avg_tol
From (Select store_name , SUM(price * quantity) as total_sales
        From sales
        Group By Store_name) x
Select *
From (Select store_name , SUM(price * quantity) as total_sales
        From sales
        Group By Store_name) sales
JOIN (Select AVG(total_sales) as AVG_total
        From (Select store_name , SUM(price * quantity) as total_sales
        From sales
        Group By Store_name) x) avg_sales
ON sales.total_sales > avg_sales.sales ;
— with clause
With sales as (Select store_name , SUM(price * quantity) as total_sales
        From sales
        Group By Store_name)
Select *
From sales
JOIN (Select AVG(total_sales) as AVG_total

```
        From sales ) avg_sales
ON sales.total_sales > avg_sales.sales ;
Clause in which Sub query can be used
— select
—From
—Where
—Having
Select *
,(Case when salary > (select avg(salary) from emp)
                then 'Higher than average'
                else null
        end ) as remarks
From emp
Better writing
Select *
, ( case when salary > avg_sal.sal
                        then ' Higher than average'
                else null
        end ) as remarks
From employee
 Cross Join ( select avg(salary) sal from emp ) avg_sal;
Having claues —
Select store_name , sum(quantity)
From sales
Group by store_name
Having sum(quantity) > (select avg(quantity) from sales) ;
```