1) /\*TeacherId Subject

1 Maths

1 Physics

3 Physics

4 Maths

5 English \*/

create table assign4\_1(TeacherId smallint,Subject varchar(10));

insert into assign4\_1 values(1,'Maths'),(1,'Physics'),(3,'Physics'),(4,'Maths'),(5,'English')

/\*Write a query to get the list of TeacherId who teach only Maths but not physics (4)\*/

select TeacherId from assign4\_1 where subject='Maths' except select TeacherId from assign4\_1 where subject='Physics'

/\*Write a query to get the list of TeacherId who teach both maths and physics (1)\*/

select TeacherId from assign4\_1 where subject='Maths' intersect select TeacherId from assign4\_1 where subject='Physics'

/\*Write a query to get the list of TeacherId who doesn’t teach maths (3,5)\*/

select TeacherId from assign4\_1 where subject!='Maths' except select TeacherId from assign4\_1 where subject='Maths'

2) /\* EID Dept Sal

1 1 100

2 1 1000

3 1 10000

4 2 1000

5 2 50

6 3 80 \*/

/\*empids with 2nd highest salary of each department \*/

Select Dept,Max(Sal) from (Select E1.Dept,E1.Sal from assign4\_2 E1,(Select Dept,Max(Sal) as Sal from assign4\_2 group by Dept) E2 Where E1.Dept = E2.Dept And E1.Sal<E2.Sal) E Group by Dept

--OR

select \* from(select top(2) name,salary from assign5\_7 order by salary desc) as a except

select \* from(select top(1) name,salary from assign5\_7 order by salary desc) as b

--OR

;with cte2(name,salary,rank) as(select name,salary,dense\_rank() over(partition by dept order by salary desc) from assign5\_7 as rank)

select name,salary from cte2 where rank=2

--Incorrect. What if i ask to get the 100 highest salary in 10000 employees. Always get the big picture while writing queries.

/\*which department has highest salary\*/

select top(1) with ties dept,max(sal) as maximum\_salary from assign4\_2 group by dept order by maximum\_salary desc

/\* (OR)\*/

select Dept,Sal from assign4\_2 where Sal=(select max(Sal) from assign4\_2)

/\*which department has highest number of employees\*/

select top(1) with ties count(\*) as number\_of\_employee from assign4\_2 group by Dept order by number\_of\_employee desc

/\*which department has highest average salary.\*/

select top(1) Dept,avg(Sal) as average\_salary from assign4\_2 group by Dept order by average\_salary desc