**OVER()** clause to define a set of rows

**PARTITION BY** clause to define a subset of data in a partition

**Order by in partition** clause to sort

Dense rank don’t have gap between rank.

<https://www.sqlshack.com/overview-of-sql-rank-functions/>

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Diff date – Diffdate(‘month’, tdate, GETDATE()) 🡪 return diff between cureent vs given date like tdate

Question 1: How to find nth highest salary in sql

SELECT TOP 1 \* from (select TOP 5 \* from Employees order by Salary desc) RESULT order by Salary asc;

-------------------------------------

dense\_rank():-

with result as (

select salary,

dense\_rank() over (order by salary desc) as denserank ##create row number over salary

from employees

)

select TOP 1 \* from result where denserank = 4 order by Salary

-------------------------------------

ROW\_NUMBER():-

Another option is row number but for same salary it will create different row number unlike dense rank

ROW\_NUMBER() OVER (ORDER BY SALARY DESC) AS ROWNUMBER

<https://www.youtube.com/watch?v=fvPddKyHxpQ&list=PL6n9fhu94yhXcztdLO7i6mdyaegC8CJwR&index=1>

**Questions 2: SQL query to get organization hierarchy**

select e.EmployeeName as ManagerName, null from Employees as e

where e.ManagerID is null

union

select e1.EmployeeName as ManagerName, e.EmployeeName as EmployeeName from Employees as e

join Employees as e1 on e.EmployeeId = e1.ManagerID

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Declare @ID int ;

Set @ID =7;

WITH EmployeeCTE as(

select EmployeeId, EmployeeName, ManagerID

from Employees where ManagerID is NULL

union all

select e.EmployeeID, e.EmployeeName, e.ManagerID from Employees as e

join EmployeeCTE as ec on

ec.EmployeeId = e.ManagerID

)

select ec.EmployeeName, ISNULL(ee.EmployeeName, 'No Boss') from EmployeeCTE

as ec left join EmployeeCTE as ee

on ee.EmployeeID = ec.ManagerID

**Part 4 Delete duplicate rows in sql**

with ec as (

select \*, ROW\_NUMBER() OVER(PARTITION BY ID ORDER BY ID DESC) RowNumber from Employees

)

select \* from ec WHERE RowNumber = 1

delete from (select \*, ROW\_NUMBER() OVER(PARTITION BY ID ORDER BY ID DESC) rn from Employees) Employees --------------- not working

**Part 5 SQL query to find employees hired in last n months**

select \* from Employees where DATEDIFF(YEAR, HireDate, GETDATE()) between 0 and 3