

1. Insert data into table?

```
insert into emp values(1001,'sandeep',3,1,70000);  
insert into emp values(1002,'satish',3,1,60000);  
insert into emp values(1003,'anusha',5,1,25000);  
insert into emp values(1004,'krishna',5,1,30000);  
insert into emp values(1005,'padma',0,1,5000);  
insert into emp values(1006,'teju',7,2,45000);  
insert into emp values(1004,'krishna',5,1,30000);  
insert into emp values(1005,'padma',0,1,5000);
```

2. How to insert Distinct Records from Table A to Table B (both tables have same structure)

```
Insert INTO tableb (Col1, Col2, ...) SELECT DISTINCT Col1, Col2, ... FROM tablea
```

3. Find duplicate records from table?

```
select empid,name,salary,count(*) from emp group by empid,name,salary  
having count(*)>1;
```

4. How to ADD PARTITION in Hive?

```
ALTER TABLE Transaction ADD PARTITION (Day '2019-11-22') LOCATION  
'/apps/bank/cust_transactions/00';
```

5. How to Drop Partition in Hive?

```
Alter TABLE Transaction DROP IF EXISTS PARTITION (Day= '2019-11-22');
```

6. CTE?

CTE :Common table Expression is temporary named result set that you can reference within a select ,insert,update or delete .

SYNTAX: with cte name as (cte query)

7. Show all unique records details in table?

With cte as (select empid,name,salary,row_number() over(partition by empid,name,salary order by empid,name,salary) as rownumber from emp)select * from cte where rownumber=1;

8. Show all duplicates records details in table?

With cte as (Select empid,name,salary ,row_number()over(partition by empid,name,salary order by empid,name,salary) as row_number from emp) select * from cte;

9. Delete all the duplicate records in a table?

WITH CTE AS (SELECT empid,name,salary,ROW_NUMBER() OVER(PARTITION BY empid,name,salary ORDER BY empid,name,salary) As row_number FROM emp) delete from cte WHERE row_number > 1;

10.Find the manager name for the employee where empid and managerid are in the same table?

**select e.empid,e.name,m.name
from emp e
left join emp m
on e.empid=m.managerid;**

11.list of employees working in same department from one table?

**Select e.empid,e.name,e.dept
From emp e, emp e1
Where e.dept =e1.dept
And e.empid != e1.empid;**

12.Find distinct salary in table?

SELECT distinct(salary)as salary FROM emp ORDER BY salary DESC ;

13.Nth maximum salary in MySQL using LIMIT keyword?

SELECT salary FROM Employee ORDER BY salary DESC LIMIT N-1, 1;

14.Nth maximum salary in MySQL with out using LIMIT keyword?

```
SELECT name, salary
FROM emp e1
WHERE N-1 = (SELECT COUNT(DISTINCT salary)
FROM emp e2 WHERE e2.salary > e1.salary)
```

for the 2nd maximum you can replace N with 2, and for 3rd maximum replace N with 3

15.Find highest salary employee details?

```
select * from emp order by salary desc limit 1;
```

16.Find second highest salary's employee details?

```
select * from emp order by salary desc limit 1,1;
```

**limit 1,1 --- it will left first row gives second row and presents only one row
or**

```
select * from emp where salary in(select max(salary) from emp where
salary<(select max(salary) from emp));
```

17.Find third heighest salary employee details?

```
select * from emp order by salary desc limit 2,1;
```

limit 2,1 --- it will left two rows gives third row and presents only one row

or

```
SELECT TOP 1 salary FROM ( SELECT DISTINCT TOP 1 salary FROM emp ORDER
BY salary DESC ) RESULT ORDER BY salary;
```

18.To Find the Lowest Salary?

```
Select min(salary)as salary from emp;
```

19.How to select the first record of a table?

```
select * from emp order by empid limit 1;
```

20. Select first 10 rows?

```
select * from emp order by empid limit 10;
```

21. How to select the last record of a table?

```
select * from emp order by empid desc limit 1 ;
```

or

```
select * from emp  
where empid = (select min(empid) from emp);
```

22. Select last 10 rows?

```
SELECT * FROM table ORDER BY id DESC LIMIT 10
```

23. Find Max,min,avg salary from each department?

```
select avg(salary),max(salary),min(salary),deptid,count(*) from emp group by  
deptid;
```

24. Show single (same row) from table twice in results?

```
Select deptname from dept d where d.deptname = 'it'  
Union all  
Select deptname from dept d where d.deptname= 'it';
```

25. Find the departments that have less than 3 employees?

```
Select e.deptid ,d.deptname  
From emp e Join dept d  
On e.deptid =d.deptid  
group by e.deptid,d.deptname having count(empid)<3;
```

26. Calculate even and odd records?

Even:

```
Select * from emp where mod(empid,2)=0;
```

Odd:

```
Select * from emp where mod(empid,2)=1;
```

27. How do you copy all rows of table?

```
Create table e1 as select * from emp;  
create table salary as select empid,salary from emp;
```

28. create empty table?

```
Create table e1 as select * from emp where 3=4;
```

29. Join two tables?

```
Select e.empid,e.name,d.deptname From emp e Join dept d On e.deptid =  
d.deptid;
```

30. Fetch details of employee whose name ends with alphabet "A" and contains 5 alphabet?

```
Select * from emp where name like '____a';
```

Like – Operator

_ Underscore: wildcard

31. Difference between where and having?

Where

It will filter at row level (to individual row)

EX:

```
select * from emp where salary>50000;
```

Having

- will filter at group level (aggregates)
- Having cannot be used without group by clause

EX:

```
select count(salary),deptid from emp group by deptid having  
count(salary)>1;
```

Where and having:

Ex:

```
select count(ID) ,country from emp where country!=india group by  
country  
having count(Id)>=9;
```

32. Difference between natural join and inner join?

Natural join: no need to mention common column names

EX:

```
select * from  
student s  
natural join marks m;
```

Inner join: explicitly mention common columns

EX:

```
select * from  
student S  
inner join marks m  
on s.id =m.id;
```

33.Sql case statements?

- Multiple if –then- else statement
- If no condition is true ,then it returns the values in else clause

Syntax:

```
Case  
When condition1 then result1  
When condition2 then result2  
When condition3 then result3  
Else result  
End;
```

EX-1: search condition

```
select empid,name,  
case  
when salary >1000 then 'salary is greter then 100'  
when salary >10000 then 'salary is greter then 1000'  
else 'salary less than 10'  
end as greatsalary  
from emp;
```

EX-2: case value

```
Case gender  
When 'M' then 'male'  
When 'F' then 'female'  
End;
```

EX-3: update

```

Update emp
set rating = case
when rating>3 then 'excellent'
when rating=3 then 'acceptable'
when rating<3 then 'not good'
else 'satisfactory'
end

```

34.Sql constraints?

Every column in table will have constraints

- Not null
- Unique
- Primary key
- Foreign key
- Check

35.what are Views?

- Virtual table
- Selecting fields from one or more tables present in db
- Can a have condition

Syntax:

```

Create view Name AS
Select column1,
From tablename
Where condition;

```

EX: single table

```

Create view high salary as
Select empid,name,salary
From students
Where empid<100;

```

EX-1: multiple table

```

Create view details as
Select s.name,m.marks
From students s ,marks m
Where s.id = m.id;

```

36. Given two tables created as follows

```
create table test_a(id numeric);
```

```
create table test_b(id numeric);
```

```
insert into test_a(id) values
```

```
(10),
```

```
(20),
```

```
(30),
```

```
(40),
```

```
(50);
```

```
insert into test_b(id) values
```

```
(10),
```

```
(30),
```

```
(50);
```

Write a query to fetch values in table test_a that are and not in test_b without using the NOT keyword.

```
select a.id  
from test_a a  
left join test_b b on a.id = b.id  
where b.id is null;
```

37. Given a table dbo.users where the column user_id is a unique numeric identifier, how can you efficiently select the first 100 odd user_id values from the table?

```
Select * from users where mod(userid,2)=1 orderby userid desc limit 100;
```

38. Roll back in case of truncate, delete, drop?

Delete records can roll back in all db

Drop and truncate can't roll back in sql

Drop and truncate can roll back in Postgresql

39. Assume a schema of Emp (Id, Name, DeptId) , Dept (Id, Name). If there are 10 records in the Emp table and 5 records in the Dept table, how many rows will be displayed in the result of the following SQL query:


```
Select * From Emp, Dept
```

The query will result in 50 rows as a “cartesian product” or “cross join”, which is the default whenever the ‘where’ clause is omitted.