Top 10 SQL interview Questions and Answers

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1.How to find duplicates in a given table?

```
1
2   #1.How to find duplicates in a given table?
3
4   select emp1_id, count(*) as cnt from challenge.emp1_c4
5   group by emp1_id
6   having count(*) > 1;
```

2.How to delete duplicates?

```
1
2   # 2.How to delete duplicates? ( Delete duplicate rows while keeping the first occurrence )
3
4   with ranking as (
5   select * ,
6   row_number() over(partition by emp1_id order by emp1_id) as rnk
7   #PARTITION BY: Groups rows with the same values in the specified columns
8   #ORDER BY: Determines which row to keep
9   from
10  challenge.emp1_c4)
11  delete from ranking
12  where rnk > 1;
```

3.Employees who are not present in department table?

```
   1   # 3.Employees who are not present in department table?
   2
   3   SELECT
   4        e.emp1_id, e.emp1_name
   5   FROM
   6        emp1_c4 AS e
   7              LEFT JOIN
   8        department_c4 AS d ON e.department_id = d.dept_id
   9   WHERE
  10        d.dept_id IS NULL;
  11
```

4.Second highest salary in each department?

```
   1   4.Second highest salary in each department?
   2
   3   with ranking as (
   4   select * , dense_rank() over(partition by department_id order by salary desc) as rnk
   5   from
   6   challenge.emp1_c4 )
   7   select * from ranking
   8   where rnk = 2;
```

5.Find the employee(s) with the highest salary in each department.

```
1   5.Find the employee(s) with the highest salary in each department.
2
3   with ranking as (
4   select * , dense_rank() over(partition by department_id order by salary desc) as rnk
5   from
6   challenge.emp1_c4 )
7   select * from ranking
8   where rnk = 1;
```

6.Write a query to find the second-highest salary from the "Employee" table.

```
1   6.Write a query to find the second-highest salary from the "Employee" table.
2
3   with ranking as (
4   select * , dense_rank() over(order by salary desc) as rnk
5   from
6   challenge.emp1_c4 )
7   select * from ranking
8   where rnk = 2;
9
```

7.Write a SQL query to fetch the department with the highest number of employees.

```
1   7.Write a SQL query to fetch the department with the highest number of employees.
2
3
4   SELECT
5       department_id, COUNT(*) AS Number_of_employees
6   FROM
7       challenge.emp_c4
8   GROUP BY department_id
9   ORDER BY Number_of_employees DESC
10  LIMIT 1;
11
```

8.Write a query to find employees with salaries above the average salary.

```
1   8.Write a query to find employees with salaries above the average salary.
2
3   SELECT
4       *
5   FROM
6       challenge.emp_c4
7   WHERE
8       salary > (SELECT
9                   AVG(salary)
10          FROM
11              challenge.emp_c4);
12
```

9.Self Join, employee salary > manager salary?

```
9.Self Join, employee salary > manager salary?

SELECT
    t1.emp1_id, t1.emp1_name
FROM
    challenge.emp1_c4 AS t1
        JOIN
    challenge.emp1_c4 AS t2 ON t1.manager_id = t2.emp1_id
WHERE
    t1.salary > t2.salary;
```

10.total salary expense for each department

```
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SELECT
    department_id, SUM(salary) AS Salary_expense
FROM
    challenge.emp1_c4
GROUP BY department_id
order by Salary_expense desc;
```

Create & Insert Statements

```sql
create table emp1_c4(

emp1_c4_id int,

emp1_c4_name varchar(20),

department_c4_id int,

salary int,

manager_id int,

emp1_c4_age int);


insert into emp1_c4

values

(1, 'Ankit', 100,10000, 4, 39);

insert into emp1_c4

values (2, 'Mohit', 100, 15000, 5, 48);

insert into emp1_c4

values (3, 'Vikas', 100, 10000,4,37);

insert into emp1_c4

values (4, 'Rohit', 100, 5000, 2, 16);

insert into emp1_c4

values (5, 'Mudit', 200, 12000, 6,55);

insert into emp1_c4

values (6, 'Agam', 200, 12000,2, 14);

insert into emp1_c4

values (7, 'Sanjay', 200, 9000, 2,13);

insert into emp1_c4

values (8, 'Ashish', 200,5000,2,12);

insert into emp1_c4

values (9, 'Mukesh',300,6000,6,51);
```

```sql
insert into emp1_c4

values (10, 'Rakesh',300,7000,6,50);

insert into emp1_c4

values (10, 'Ajit',300,10000,6,50);


CREATE TABLE department_c4(


dept_id INT,

dept_name VARCHAR(10)

);


INSERT INTO department_c4 values(100,'Analytics');

INSERT INTO department_c4 values(300,'IT');
```