

What are Scalar functions and write a query?

- ➔ Scalar functions are database functions that return a single value for each input value passed to them.

Query:

select upper('codoid') from dual; ➔ CODOID

select lower('COdoid') from dual; ➔ codoid

select initcap('codoid') from dual; ➔ Codoid

select length('codoid') from dual; ➔ 6

Explain joins with example and output.

Types of join:

- Cross join/cartesian join
- Equi join/ inner join
- Left outer join
- Right outer join
- Full outer join
- Self join

1. Cross join:

Every row from the first table will be multiplied to the row in the second table.

Ex. select table1_column, table2_column from table1 cross join table2;

2. Equi join:

Equi join return the matching column values of the associated tables. It will not show the null values.

Ex. select table1_column, table2_column

from table1 , table2

where table1_column = table2_column;

3. Left outer Join:

Matched data from both the tables and unmatched data from left table.

Ex. select table1_column, table2_column

from table1 left outer join table2

on table1_column = table2_column;

4. Right outer join:

Matched data from both the tables and unmatched data from right table.

Ex. select table1_column, table2_column

from table1 right outer join table2

on table1_column = table2_column;

5. Full outer join:

Matched and unmatched data from both the tables

```
Ex. select table1_column, table2_column  
      from table1 full outer join table2  
      on table1_column = table2_column;
```

6. self join:

Joining same tables to get result.

```
Ex. select e1.first_name , e2.first_name  
      from employees e1 join employees e2  
      on e1.manager_id = e2.manager_id;
```

Write a SQL query to Rename the column name.

```
alter table table_name rename column old_column_name to new_column_name;
```

Write a SQL query to find duplicate records

```
select job_id, count(*) from employees group by job_id having count(*) >1;
```

How do we use the DISTINCT statement? What are its use?

The DISTINCT keyword is used to return only distinct or unique values in a query result. The use of distinct keyword is remove duplicates, perform calculations on unique values.

Remove duplicate from the table

```
Select DISTINCT department_id from employees;
```

Print max salary for a particular department

```
select * from employees;
```

```
select max(salary) from employees where department_id = 80;
```

Use different operators in SQL.

And operator:

```
Select first_name , salary from employees where first_name = 'David' and department_id = 60;
```

Or operator:

```
Select first_name , salary from employees where first_name = 'David' or department_id = 60;
```

What is Query to display first 5 Records from employees table.

```
select * from employees where rownum <=5;
```

What is Query to display last 5 Records from employees table.

```
select * from (select * from employees order by employee_id desc) where rownum <=5;
```

How to fetch 3rd highest salary using Rank function.

```
select salary from (select salary, rank() over (order by salary desc) as rank from employees) where rank=3;
```

How Can i create table with same structure with data of Employee table?

```
create table employees_copy as select * from employees;
```

Find Query to get information of Employee where Employee is not assigned to the department

```
select employee_id, first_name, last_name  
from employees  
where employee_id not in(select employee_id from departments where department_id  
=department_id);
```