SQL PRACTICE QUESTIONS WITH SOLUTIONS

SQL Interview Questions

Saturday, September 11, 2021 10:31 AM

1. SQL Interview Queries:

Ques.5. Write an SQL query to find the employee id whose salary lies in the range of 9000 and 15000.

Ans. Here, we can use the 'Between' operator with a where clause.

```
SELECT EmpId, Salary
FROM EmployeeSalary
WHERE Salary BETWEEN 9000 AND 15000;
```

2. Difference btw NOT vs !=

`!=` is a binary operator that returns true if its two arguments are not equal to each other.

`NOT` is a unary operator, which reverses its argument, a Boolean expression.

How could you think these are the same?

For example, this expression: `a < 10` is true when `a` is any value less than 10. This condition can be negated: `NOT a < 10`. Negating this condition makes it true in the opposite cases, i.e. when a not less than 10. It's the same as `a >= 10`.

The expression `a != 10` is true when `a` is any value less than 10 or any value greater than 10. This is a completely different case from a condition negated with `NOT`.

3. **Ques.10. Write an SQL query to fetch the employees whose name begins with any two characters, followed by a text "hn" and ending with any sequence of characters.**

Ans. For this question, we can create an SQL query using like operator with '_' and '%' wild card characters, where '_' matches a single character and '%' matches '0 or multiple characters'.

```
SELECT FullName
FROM EmployeeDetails
WHERE FullName LIKE '__hn%';
```

4.

Ques.12. Write an SQL query to fetch common records between two tables.

Ans. SQL Server – Using INTERSECT operator-

```
SELECT * FROM EmployeeSalary
INTERSECT
SELECT * FROM ManagerSalary;
```

5.

Ques.16. Write an SQL query to fetch the employee full names and replace the space with '-'.

Ans. Using 'Replace' function-

```
SELECT REPLACE(FullName, ' ', '-')
FROM EmployeeDetails;
```

6.

Ques.18. Write an SQL query to display both the EmpId and ManagerId together.

Ans. Here we can use the CONCAT command.

```
SELECT CONCAT(EmpId, ManagerId) as NewId
FROM EmployeeDetails;
```

7.

Ques.19. Write a query to fetch only the first name(string before space) from the FullName column of the EmployeeDetails table.

Ans. In this question, we are required to first fetch the location of the space character in the FullName field and then extract the first name out of the FullName field.

For finding the location we will use the LOCATE method in MySQL and CHARINDEX in SQL SERVER and for fetching the string before space, we will use the SUBSTRING OR MID method.

MySQL – using MID

```
SELECT MID(FullName, 1, LOCATE(' ',FullName))
FROM EmployeeDetails;
```

SQL Server – using SUBSTRING

```
SELECT SUBSTRING(FullName, 1, CHARINDEX(' ',FullName))
FROM EmployeeDetails;
```

8.

Ques.20. Write an SQL query to upper case the name of the employee and lower case the city values.

Ans. We can use SQL Upper and Lower functions to achieve the intended results.

```
SELECT UPPER(FullName), LOWER(City)
FROM EmployeeDetails;
```

9.

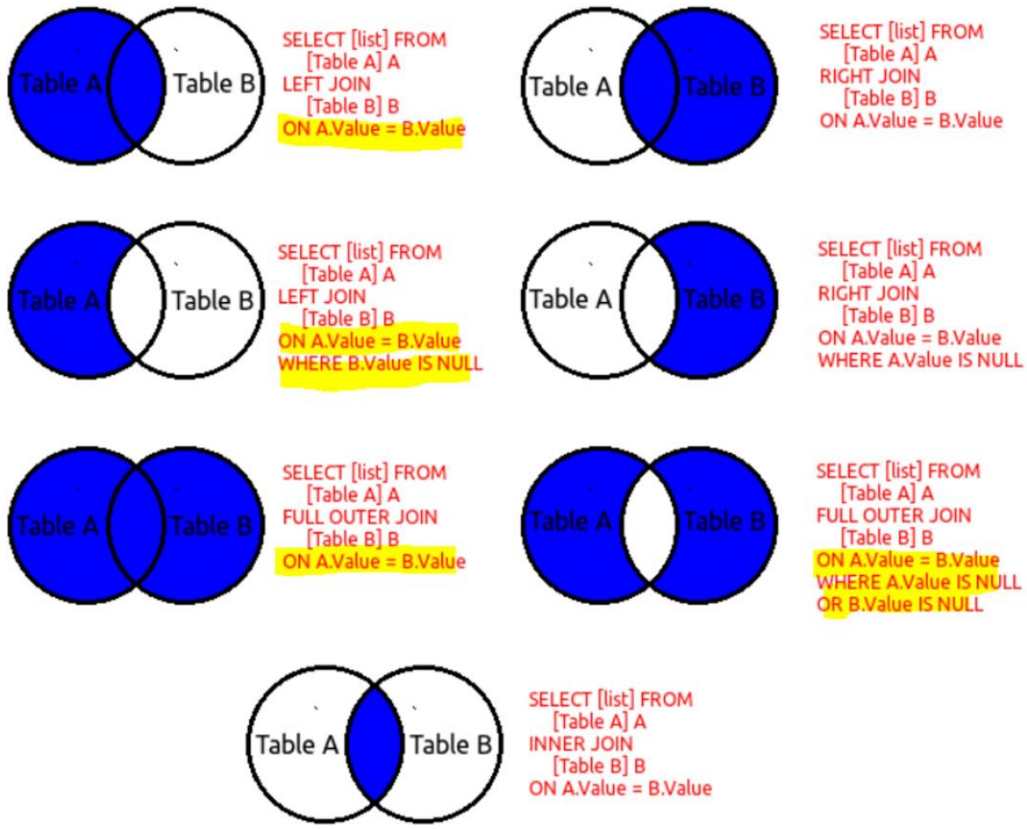
Ques.29. Write a query to fetch employee names and salary records. Display the employee details even if the salary record is not present for the employee.

Ans. This is again one of the very common interview questions in which the interviewer just wants to check the basic knowledge of SQL JOINS.

Here, we can use left join with EmployeeDetail table on the left side of the EmployeeSalary table.

```
SELECT E.FullName, S.Salary
FROM EmployeeDetails E
LEFT JOIN
EmployeeSalary S
ON E.EmpId = S.EmpId;
```

10.



11.

Ques.32. Write an SQL query to fetch duplicate records from EmployeeDetails (without considering the primary key – EmpId).

Ans. In order to find duplicate records from the table, we can use GROUP BY on all the fields and then use the HAVING clause to return only those fields whose count is greater than 1 i.e. the rows having duplicate records.

```
SELECT FullName, ManagerId, DateOfJoining, City, COUNT(*)
FROM EmployeeDetails
GROUP BY FullName, ManagerId, DateOfJoining, City
HAVING COUNT(*) > 1;
```

12.

Ques.33. Write an SQL query to remove duplicates from a table without using a temporary table.

Ans. Here, we can use delete with alias and inner join. We will check for the equality of all the matching records and them remove the row with higher EmpId.

```
DELETE E1 FROM EmployeeDetails E1
INNER JOIN EmployeeDetails E2
WHERE E1.EmpId > E2.EmpId
AND E1.FullName = E2.FullName
AND E1.ManagerId = E2.ManagerId
AND E1.DateOfJoining = E2.DateOfJoining
AND E1.City = E2.City;
```

13.

Ques.34. Write an SQL query to fetch only odd rows from the table.

Ans. In case we have an auto-increment field e.g. EmpId then we can simply use the below query-

```
SELECT * FROM EmployeeDetails
WHERE MOD (EmpId, 2) <> 0;
```

In case we don't have such a field then we can use the below queries.

Using Row_number in SQL server and checking that the remainder when divided by 2 is 1-

```
SELECT E.EmpId, E.Project, E.Salary
FROM (
    SELECT *, Row_Number() OVER(ORDER BY EmpId) AS RowNumber
    FROM EmployeeSalary
) E
WHERE E.RowNumber % 2 = 1;
```

14.

Ques.36. Write an SQL query to create a new table with data and structure copied from another table.

Ans.

```
CREATE TABLE NewTable
SELECT * FROM EmployeeSalary;
```

15.

Ques.37. Write an SQL query to create an empty table with the same structure as some other table.

Ans. Here, we can use the same query as above with False 'WHERE' condition-

```
CREATE TABLE NewTable
SELECT * FROM EmployeeSalary where 1=0;
```

A query like this can be used to ping the database. The clause:

```
WHERE 1=0
```

Ensures that non data is sent back, so no CPU charge, no Network traffic or other resource consumption.

A query like that can test for:

- server availability
- CUST_ATTR49 table existence
- ID column existence
- Keeping a connection alive
- Cause a trigger to fire without changing any rows (with the where clause, but not in a select query)
- manage many OR conditions in dynamic queries (e.g `WHERE 1=0 OR <condition>`)

16.

how to fetch last second row
records ????
and anyone sugest me the most asking sql queries in mnc

Reply

Snehasish Choudhury
September 23, 2020 at 1:01 pm

```
SELECT TOP 1 *
FROM (SELECT TOP 2 * FROM Table1 ORDER BY RowID DESC) X
ORDER BY RowID
```

17.

Suppose there is a table with 3 attr :
city 1 city2 Distance
Hyd. goa. 500
goa. Hyd. 500

These tuples represent the same information , so write an SQL query to remove these type of duplicates.

```
with city_same as (

select c.* from city c1

inner join city c2 on c1.city1=c2.city2 and c1.city2=c2.city1
)
Delete from city_same where c1.distance=c2.distance
```

18.

The SQL query to calculate second highest salary in database table name as Emp

Query: 1

```
SQL> select min(salary) from
(select distinct salary from emp order by salary desc)
where rownum < 3;
```

19.

The SQL query to calculate second highest salary in database table name as Emp

Query: 2

```
select * from(
select ename, salary, dense_rank()
over(order by salary desc)rank from Emp)
where rank = & num;
```

20.

The SQL EXCEPT clause/operator is used to **combine two SELECT statements** and returns rows from the first SELECT statement that are not returned by the second SELECT statement. This means EXCEPT returns only rows, which are not available in the second SELECT statement.

14. How will you extract only different data from 2 different tables?

```
(
        SELECT id FROM table1
        EXCEPT
        SELECT id FROM table2
)
UNION
(
        SELECT id FROM table2
        EXCEPT
        SELECT id FROM table1
)
```