MUST REMEMBER

SQL FUNCTIONS AS A DATA ANALYST

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1. COUNT()

```sql
SELECT COUNT(*)
FROM employees
WHERE department = 'Sales';
```

This query counts how many employees work in the Sales department.

2. SUM()

```sql
SELECT SUM(salary)
FROM employees
WHERE department = 'Sales';
```

This query calculates the total salary paid to employees in the Sales department.

3. AVG()

```
SELECT AVG(salary)
FROM employees
WHERE department = 'Sales';
```

his query computes the average salary of employees in the Sales department.

4. MAX()

```
SELECT MAX(salary)
FROM employees
WHERE department = 'Sales';
```

This query finds the highest salary in the Sales department.

5. MIN()

```
SELECT MIN(salary)
FROM employees
WHERE department = 'Sales';
```

This query finds the lowest salary in the Sales department.

6. GROUP BY

```
SELECT department, COUNT(*)
FROM employees
GROUP BY department;
```

This query counts the number of employees in each department.

7. HAVING

```sql
SELECT department, COUNT(*)
FROM employees
GROUP BY department
HAVING COUNT(*) > 10;
```

This query finds departments with more than 10 employees.

8. COALESCE()

```sql
SELECT name, COALESCE(phone, 'N/A')
FROM employees;
```

This query returns the phone number if it exists, or 'N/A' if the phone number is null.

9. CASE

```
SELECT name,
       CASE
           WHEN salary > 100000 THEN 'High'
           WHEN salary > 50000 THEN 'Medium'
           ELSE 'Low'
       END AS salary_range
FROM employees;
```

This query categorizes employees' salaries into 'High', 'Medium', or 'Low' ranges.

10. JOIN

```
SELECT e.name, d.department_name
FROM employees e
JOIN departments d ON e.department_id = d.id;
```

This query retrieves employees' names along with their corresponding department names

11. DISTINCT

```sql
SELECT DISTINCT department
FROM employees;
```

This query lists each department only once, even if there are multiple employees in the same department.

12. SUBSTRING()

```sql
SELECT SUBSTRING(name, 1, 3)
FROM employees;
```

This query returns the first three characters of each employee's name.

13. CONCAT()

```sql
SELECT CONCAT(first_name, ' ', last_name) AS full_name
FROM employees;
```

This query combines the first and last names of employees into a single full name.

14. LEFT()

```sql
SELECT LEFT(name, 5)
FROM employees;
```

This query returns the first five characters of each employee's name.

15. RIGHT()

```
SELECT RIGHT(phone, 4)
FROM employees;
```

This query returns the last four digits of each employee's phone number.

16. TRIM()

```
SELECT TRIM(name)
FROM employees;
```

This query removes any spaces before or after the employees' names.

17. REPLACE()

```sql
SELECT REPLACE(phone, '-', '')
FROM employees;
```

This query removes dashes from the phone numbers by replacing them with an empty string.

18. CHARLENGTH()

```sql
SELECT CHAR_LENGTH(name)
FROM employees;
```

This query returns the number of characters in each employee's name.

19. ROUND()

```
SELECT ROUND(salary, 2)
FROM employees;
```

This query rounds the salary to two decimal places.

20. DATE_FORMAT()

```
SELECT DATE_FORMAT(hire_date, '%Y-%m-%d')
FROM employees;
```

his query formats the hire date in the 'YYYY-MM-DD' format.

21. DATEDIFF()

```
SELECT DATEDIFF(CURDATE(), hire_date) AS days_worked
FROM employees;
```

This query calculates the number of days each employee has worked since their hire date.

22. IFNULL()

```
SELECT name, IFNULL(phone, 'Not Provided') AS
phone_number
FROM employees;
```

This query returns 'Not Provided' if the phone number is null.

23. ORDER BY

```
SELECT name, salary
FROM employees
ORDER BY salary DESC;
```

This query orders the employees by salary, from highest to lowest

24. LIMIT

```
SELECT *
FROM employees
LIMIT 5;
```

This query returns only the first five rows of the employees table.

25. IN

```
SELECT name
FROM employees
WHERE department IN ('Sales', 'Marketing');
```

This query selects employees who work in either Sales or Marketing.

JOIN NOW

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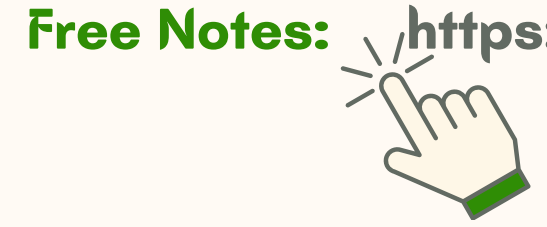

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