If you have any questions or suggestions regarding the notes, please feel free to reach out to me on WhatsApp: **Sanjay Yadav Phone: 8310206130**

Consider a Books and Authors table. Books includes Book_ID, Author_ID, Title, and Sales,
and Authors includes Author_ID, Author_Name.
Write a SQL query to find the authors who
have sold more than 1000 books and have written more than 3 books.

```
SELECT a.Author_Name
FROM Authors as a
JOIN Books as b ON a.Author_ID = b.Author_ID
GROUP BY a.Author_Name
HAVING SUM(b.Sales) > 1000
        AND COUNT(DISTINCT b.Book_ID) > 3;
```

==

list all the sales along with their corresponding product names, ensuring to
include sales even if their corresponding product details are missing.

```
SELECT s.Sale_ID, s.Product_ID, s.Quantity_Sold, s.Sale_Date, p.Product_Name
FROM Sales s
LEFT JOIN Products p ON s.Product_ID = p.Product_ID
```

==

You are given Employees and Departments tables. Employees includes Emp_ID, Name,
Salary, and Dept_ID, and Departments includes Dept_ID, Dept_Name. Write a SQL query to
find departments that pay an average salary higher than the average salary of all
departments.

```
SELECT d.Dept_Name
FROM departments d
JOIN Employees e ON d.Dept_ID = e.Dept_ID
GROUP BY d.Dept_ID, d.Dept_Name
HAVING AVG(e.Salary) > (
        SELECT AVG(Salary) FROM Employees
)
```

===

Given orders and customers tables, print each city where there are more than 10 customers and their order_quantity is more than 10000.

```
SELECT c.city
FROM customers c
JOIN orders o ON o.cid = c.cid
GROUP BY c.city
HAVING COUNT(c.cid) > 10
        AND SUM(o.order_quantity) > 10000;
```

===

Given orders and customers tables, print customers who have total order_quantity more than average of all customers order_quantity

```
SELECT c.customers_name
FROM customers c
JOIN orders o ON c.cid = o.cid
GROUP BY c.customers_name
HAVING SUM(o.order_quantity) > (
        SELECT AVG(order_quantity) FROM orders
)
```

==

Given students and courses tables, print course name and details of students enrolled into that course. Print NA if no student enrolled.

```
SELECT c.course_name, COALESCE(s.student_name, 'NA') as student_name
FROM courses c
LEFT JOIN students s
ON s.sid = c.sid
```

==

Get 4th higest salary from emp

```
SELECT id, name
FROM emp e1
where 4-1 = (
        SELECT count(DISTINCT salary) FROM emp e2
        WHERE e2.salary > e1.salary
)
```

===

Students and Courses table. Students has columns Student_ID, Name, Course_ID and courses has columns Course_ID, Course_Name, Credits. Write a query to list all courses and names of students enrolled in them, making sure to include courses with no students enrolled.

Students -------------------	Courses -------------
Student_ID, Name, Course_ID	Course_ID, Course_Name, Credits

```
SELECT c.course_name, s.student_name
FROM Courses c
LEFT JOIN Students s ON c.Course_ID = s.Course_ID
```

==

Orders--------------------	Customers------------------------
Order_ID, Customer_ID, Order_Amount	Customer_ID, Customer_Name, City

1. Write a SQL query to list all cities with at least one premium customer.

2. Premium Customer is someone who has placed more than 10 orders with total order value exceeding $10,000.

```
SELECT DISTINCT c.City
FROM Customers c
JOIN Orders o ON c.Customer_ID = o.Customer_ID
GROUP BY c.Customer_ID, c.City
HAVING COUNT(o.Customer_ID) > 10 AND SUM(o.Order_Amount) > 10000;
```

=====================================

Get nth salary

```
SELECT DISTINCT(salary3)
FROM employee_info
ORDER BY salary DESC
LIMIT 2,1; // it will start fetch from 3 record and 1 row

SELECT * FROM
(SELECT name, salary,
dense_rank() over(ORDER BY salary DESC) as salary_rank
FROM emplyoyee_info) as temp
where salary_rank = 3;
```

========================

Find duplicate rows in a table

```
SELECT *, count(empid)
FROM EMployeeInfo
GROUP BY empid
HAVING count(empid) > 1;
```

===========================

Calculate the even and odd records

For Even

```
SELECT * FROM EmployeeInfo
WHERE MOD(EmpID,2) = 0;
```

For Odd

```
SELECT * FROM EmployeeInfo
WHERE MOD(EmpID,2) = 1;
```

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How do you copy all rows of a table using SQL query

```
CREATE TABLE EmpDetail AS SELECT * FROM EmployeeInfo
```

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Copy only schema not record just false where condition

```
CREATE TABLE EmpDetails AS
SELECT * FROM EmployeeInfo
WHERE 3=4;
```