Lab sheet 5
PMDS506P Database Management systems.

Q1. Create the following tables and answer the following questions. The salesman table is

salesman_id	name	city	commission
5001	James Hoog	New York	0.15
5002	Nail Knite	Paris	0.13
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5007	Paul Adam	Rome	0.13
5003	Lauson Hen	San Jose	0.12

And the customers table is,

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3007	Brad Davis	New York	200	5001
3005	Graham Zusi	California	200	5002
3008	Julian Green	London	300	5002
3004	Fabian Johnson	Paris	300	5006
3009	Geoff Cameron	Berlin	100	5003
3003	Jozy Altidor	Moscow	200	5007
3001	Brad Guzan	London	100	5005

1. Retrieve all customers and their corresponding salesmen's names using an inner join.
2. Find all customers and their respective salesmen where the customer's city is the same as the salesman's city.
3. Show all customers along with their salesmen's details who have a grade higher than 200.
4. Find customers in Paris and their corresponding salesmen’s names.
5. Retrieve the customer_id and the name of the salesman who serves them.
6. List all customers whose salesmen have a commission greater than 0.12.
7. Find the total number of customers each salesman has, using an inner join.
8. Retrieve all salesmen who have at least one customer.
9. Retrieve all salesmen and their customers using a left outer join.
10. List all customers and their respective salesmen using a right outer join.
11. Find all salesmen who have no customers.
12. Retrieve all customers even if they don't have a corresponding salesman.
13. List all salesmen and customers, including those without a match in the other table.

14. Show all salesmen along with the customer names they serve, even if the salesman has no customers.
15. Find all salesmen in Paris and list their customers, including those who don't have any customers.
16. Show all customers and their corresponding salesmen's details using a full outer join.
17. List salesmen who are from the same city as other salesmen.
18. Find pairs of salesmen working in the same city
19. Find salesmen in New York who have colleagues also in New York.
20. List all salesmen pairs who are from different cities.
21. Retrieve the Cartesian product of all salesmen and customers.
22. List all pairs of customers with all pairs of salesmen using a cross join
23. Perform a natural join to retrieve all customers and their corresponding salesmen.
24. Find all customers with a salesman in the same city using a natural join.
25. Show the customer_id and name of salesmen for all customers using a natural join.

Q2. Using the same tables in Q1, use subqueries idea to find the following.

1. Find the names of all salesmen who have customers in the city of "New York."
2. Retrieve the cust_name of customers whose salesman has a commission greater than 0.13.
3. List all salesmen who serve more than two customers.
4. Find the names of customers who have the same city as any salesman.
5. Retrieve the details of the salesman with the highest commission.
6. List the customer_id and cust_name of customers whose salesmen work in "Paris.
7. List all customers who are served by salesmen from cities other than their own.
8. Retrieve the name of salesmen whose commission is greater than the commission of any salesman from "London."