**Consider the following schema for Order Database:**

**SALESMAN (*Salesman\_id, Name, City, Commission*)**

**CUSTOMER (*Customer\_id, Cust\_Name, City, Grade, Salesman\_id*)**

**ORDERS (*Ord\_No, Purchase\_Amt, Ord\_Date, Customer\_id, salesman\_id*)**

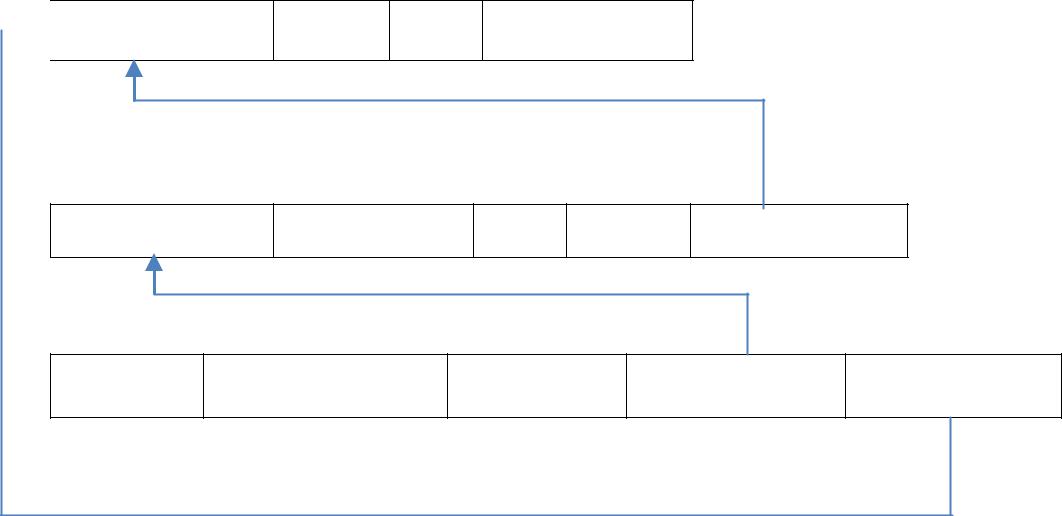
**Draw the conceptual schema. Write SQL queries to**

1. **Count the customers with grades above Bangalore’s average.**
2. **Find the name and numbers of all salesmen who had more than one customer.**
3. **List all salesmen and indicate those who have and don’t have customers in their cities**

**(Use UNION operation.)**

1. **Create a view that finds the salesman who has the customer with the highest order of a day.**
2. **Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.**

**Conceptual Schema**



***Salesman\_id*** *Name City* *Commission*

***Customer***

***Customer\_id*** *Cust\_Name City Grade Salesman\_id*

***Orders***

***Ord\_No*** *Purchase\_Amt Ord\_Date Customer\_id* *Salesman\_id*

1. **Count the customers with grades above Bangalore’s average.**

SELECT GRADE, COUNT (DISTINCT CUSTOMER\_ID) FROM CUSTOMER1

GROUP BY GRADE

HAVING GRADE > (SELECT AVG(GRADE) FROM CUSTOMER1

WHERE CITY='BANGALORE');

1. **Find the name and numbers of all salesmen who had more than one customer.**

SELECT SALESMAN\_ID, NAME FROM SALESMAN A

WHERE 1 < (SELECT COUNT (\*)

FROM CUSTOMER1

WHERE SALESMAN\_ID=A.SALESMAN\_ID);

1. **List all salesmen and indicate those who have and don’t have customers in their cities (Use UNION operation.)**

SELECT SALESMAN.SALESMAN\_ID, NAME, CUST\_NAME, COMMISSION FROM SALESMAN, CUSTOMER1

WHERE SALESMAN.CITY = CUSTOMER1.CITY UNION

SELECT SALESMAN\_ID, NAME, 'NO MATCH', COMMISSION FROM SALESMAN

WHERE NOT CITY = ANY (SELECT CITY

FROM CUSTOMER1) ORDER BY 2 DESC;

1. **Create a view that finds the salesman who has the customer with the highest order of a day.**

CREATE VIEW ELITSALESMAN AS

SELECT B.ORD\_DATE, A.SALESMAN\_ID, A.NAME FROM SALESMAN A, ORDERS B

WHERE A.SALESMAN\_ID = B.SALESMAN\_ID

AND B.PURCHASE\_AMT=(SELECT MAX (PURCHASE\_AMT)

FROM ORDERS C

WHERE C.ORD\_DATE = B.ORD\_DATE);

1. **Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.**

Use ON DELETE CASCADE at the end of foreign key definitions while creating child table orders and then execute the following:

Use ON DELETE SET NULL at the end of foreign key definitions while creating child table customers and then executes the following:

DELETE FROM SALESMAN

WHERE SALESMAN\_ID=1000;