D B M S   L A B
Sheet – 4

Assignment No. - 8

> *Write the SQL commands to create the following relational schemas:*

Customer (<u>cust_id</u>, cust_name, annual_revenue, cust_type)

Cust_id must be between 100 and 10,000.

Cust_type must be 'MANUFACTURER', 'WHOLESALER', or 'RETAILER'.

Shipment (<u>shipment_no, cust_id</u>, weight, truck_no, destination, ship_date)

Foreign keys: cust_id references customer on delete cascade, truck_no references truck
                on delete set null, destination references city.

Weight must be under 1000.

Truck (<u>truck_no</u>, driver_name)

City (<u>city_name</u>, population)

> *Express the following queries in SQL:*

1) Give names of customer who have sent packages (shipments) to Kolkata, Chennai and Munbai.
2) List the names of the driver who have delivered shipments weighing over 200 pounds.
3) Retrieve the maximum and minimum weights of the shipments. Rename the output as Max_Weight and Min_Weight respectively.
4) For each customer, what is the average weight of package sent by the customer?
5) List the names and populations of cities that have received a shipment weighing over 100 pounds.
6) List cities that have received shipments from every customer.
7) For each city, what is the maximum weight of a package sent to that city?
8) List the name and annual revenue of customers whose shipments have been delivered by truck driver 'IQBAL'.
9) List drivers who have delivered shipments to every city.
10) For each city, with population over 1 million, what is the minimum weight of a package sent to that city.

Assignment No. – 9

➤ *Write SQL commands to create the following tables as well as to insert sufficient number of values in the tables:*

EMP (<u>EMPNO</u>, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO)
        EMPNO must be between 7000 and 8000.
        ENAME must not exceed 10 characters.
        JOB must be in ('Clerk','Salesman','Manager','Analyst','President').
        MGR is the manager's EMPNO.
        COMM must be under 1500 and defaults to 0.

DEPT (<u>DEPTNO</u>, DNAME, LOC)
        DEPTNO must start with 'D'.
        DNAME must be 'Accounting' or 'Sales' or 'Research' or 'Operations'.

➤ *Now, Perform the following queries on the EMP and DEPT tables:*

1) Display the difference between highest and lowest salary of each department in descending order. Label the column as "Difference".
2) List all the employees' employee number and name along with their immediate managers' employee number and name.
3) Create a query that will display the total number of employees and the total number of employees who were hired only in 2020. Give the column headings as "TOTAL" and "TOTAL_2020" respectively.
4) Display the manager number and the salary of the lowest paid employee under that manager. Exclude anyone whose manager is not known. Exclude any group where the minimum salaryis less than 1000. Sort the output in descending order of salary.
5) Assume that there are some departments where no employee is assigned. Now, write a query to display the department name, location name, number of employees, and the average salary for all the employees in that department. Label the columns as "DNAME", "LOCATION", "NUMBER OF PEOPLE", and "AVERAGE SALARY" respectively. Round the averge salary to two decimal places. The outcome of the query must include the details of the departments where no employee is assigned and in that case the "AVERAGE SALARY" for that department is to be displayed as 0 (zero).