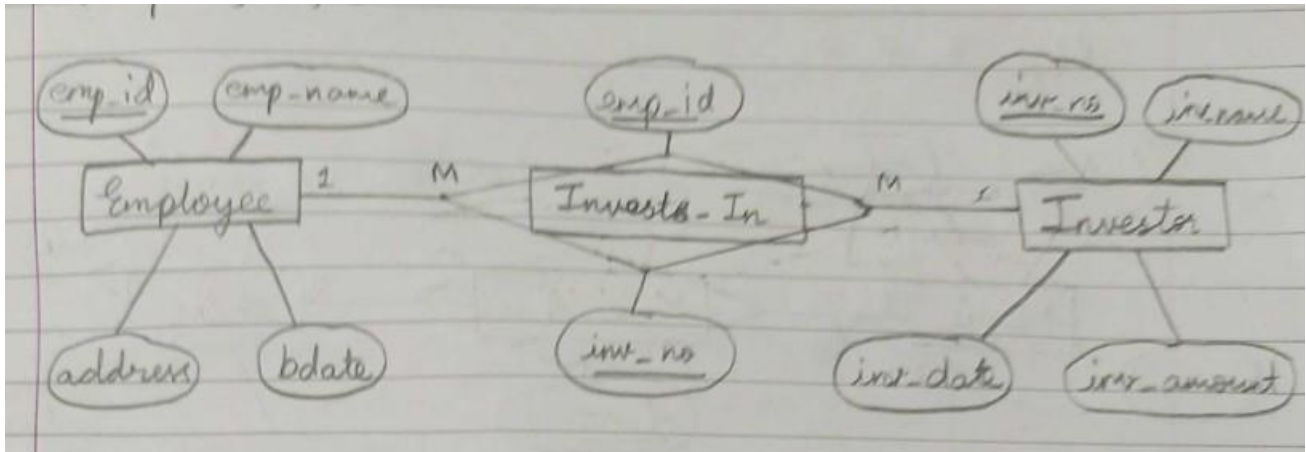## Q1) Practical Questions on PostgresSQL

Employee (<u>emp_id</u>, emp_name,address,bdate)Investor
(<u>inv_no</u>, inv_name,inv_date,inv_amt)

An employee may invest in one or more investments, hence he can be an investor. But aninvestor need not be an employee of the firm.
Assume appropriate data types for all the attributes.

a) Draw the ER diagram for above relational schema and normalize it in 3NF.

b) Create the above database in 3NF form in PostgresSQL using constraints.

CREATE TABLE Employee (emp_id SERIAL PRIMARY KEY, emp_name VARCHAR(100) NOT NULL, address VARCHAR(255), bdate DATE);

CREATE TABLE Investor (inv_no SERIAL PRIMARY KEY, inv_name VARCHAR(100) NOT NULL, inv_date DATE, inv_amt NUMERIC(10, 2));

CREATE TABLE Employee_Investor (emp_id INTEGER REFERENCES Employee(emp_id), inv_no INTEGER REFERENCES Investor(inv_no), PRIMARY KEY (emp_id, inv_no));

INSERT INTO Employee (emp_name, address, bdate) VALUES ('John Doe', '123 Main St, New York', '1990-01-15'), ('Sarah Smith', '456 Oak St, Los Angeles', '1985-05-20'), ('Michael Johnson', '789 Pine St, Chicago', '1982-08-10');

INSERT INTO Investor (inv_name, inv_date, inv_amt) VALUES ('Investor 1', '2023-01-01', 8000), ('Investor 2', '2023-02-15', 12000), ('Investor 3', '2023-03-20', 5000), ('Investor 4', '2023-04-10', 15000);

INSERT INTO Employee_Investor (emp_id, inv_no) VALUES (1, 1), (1, 2), (2, 3), (3, 4);

Q2) Using above database, solve the following queries:

a) List the names of customers who are either employees, or investors or both.
   SELECT emp_name FROM Employee UNION SELECT inv_name FROM Investor UNION SELECT emp_name FROM Employee WHERE emp_id IN (SELECT emp_id FROM Employee_Investor);

b) Delete the employee whose names starts with 'S'
   DELETE FROM Employee WHERE emp_name LIKE 'S%';

c) List the employees who are living in Mumbai city.
   SELECT emp_name FROM Employee WHERE address LIKE '%Mumbai%';

d) Update amount to Rs. 50000 of investors having amount less than Rs 10,000.
   UPDATE Investor SET inv_amt = 50000 WHERE inv_amt < 10000;