This is a Company Database

```sql
DROP TABLE Employee;
DROP TABLE Branch;
DROP TABLE Client;
DROP TABLE Works_with;
DROP TABLE Branch_supplier;

CREATE TABLE Employee(
    empl_id  INT PRIMARY KEY,
    first_name VARCHAR(40),
    last_name VARCHAR(40),
    birth_day DATE,
    sex VARCHAR(1),
    salary INT,
    super_id INT,
    branch_id INT
);

CREATE TABLE Branch (
    branch_id INT PRIMARY KEY,
    branch_name VARCHAR(40),
    mgr_id INT,
    mgr_start_date DATE,
    FOREIGN KEY(mgr_id) REFERENCES Employee(empl_id) ON DELETE SET NULL
);

ALTER TABLE Employee ADD FOREIGN KEY(branch_id)
REFERENCES branch(branch_id) ON DELETE SET NULL;

ALTER TABLE EMPLOYEE ADD FOREIGN KEY(super_id)
REFERENCES Employee(empl_id) ON DELETE SET NULL;

CREATE TABLE Client(
    client_id INT PRIMARY KEY,
    client_name VARCHAR (40),
    branch_id INT,
    FOREIGN KEY(branch_id) REFERENCES branch(branch_id) ON DELETE SET NULL
);

CREATE TABLE Works_with(
    empl_id INT,
    client_id INT,
    total_sales INT,
    PRIMARY KEY(empl_id,client_id),
    FOREIGN KEY(empl_id) REFERENCES Employee(empl_id) ON DELETE CASCADE,
    FOREIGN KEY(client_id) REFERENCES Client(client_id) ON DELETE CASCADE
);

CREATE TABLE Branch_supplier(
    branch_id INT,
    supplier_name VARCHAR(40),
    supply_type VARCHAR(40),
    PRIMARY KEY(branch_id, supplier_name),
    FOREIGN KEY(branch_id) REFERENCES Branch(branch_id) ON DELETE CASCADE
);
```

```sql
--- Corporate
INSERT INTO Employee VALUES(100,'David','Wallace','1967-11-17', 'M', 250000, NULL ,NULL);
INSERT INTO Branch VALUES(1,'Corporate', 100, '2006-02-09');
UPDATE Employee SET branch_id = 1 WHERE empl_id = 100;

INSERT INTO Employee VALUES(101,'Jan','Levinson','1961-05-11','F',110000,100,1);

--- Scranton
INSERT INTO Employee VALUES(102,'Micheal', 'Scott', '1964-03-15','M',75000,100,NULL);
INSERT INTO Branch VALUES(2,'Scranton', 102, '1992-04-06');
UPDATE Employee SET branch_id = 2 WHERE empl_id = 102;
UPDATE Branch SET branch_name = 'Scranton' WHERE branch_id = 2;

INSERT INTO Employee VALUES(103,'Angela','Martin','1971-06-25','F',63000,102,2);
INSERT INTO Employee VALUES(104,'Kelly','Kapoor','1980-02-05','F',55000,102,2);
INSERT INTO Employee VALUES(105,'Stanley','Hudson','1958-02-19','M',69000,102,2);

--- Stamford
INSERT INTO Employee VALUES(106,'Josh','Porter','1969-09-05','M',78000,100,NULL);
INSERT INTO Branch VALUES(3,'Stamford',106,'1998-02-13');
UPDATE Employee SET branch_id = 3 WHERE empl_id = 106;
UPDATE Employee SET super_id = 100 WHERE empl_id = 106;
UPDATE Branch SET branch_name = 'Stamford' WHERE branch_id = 3;


INSERT INTO Employee VALUES(107,'Andy','Bernard','1973-07-22','M',65000,106,3);
INSERT INTO Employee VALUES(108,'Jim','Halpert','1978-10-01','M',71000,106,3);

--- BRANCH SUPPLIER
INSERT INTO Branch_supplier VALUES(2,'Hammer Mill','Paper');
INSERT INTO Branch_supplier VALUES(2,'Uni-ball','Writing Utensils');
INSERT INTO Branch_supplier VALUES(3,'Patriot Paper','Paper');
INSERT INTO Branch_supplier VALUES(2,'J.T. Forms & Labels','Custom Forms');
INSERT INTO Branch_supplier VALUES(3,'Uni-ball','Writing Utensils');
INSERT INTO Branch_supplier VALUES(3,'Hammer Mill','Paper');
INSERT INTO Branch_supplier VALUES(3,'Stamford Lables','Custom Forms');

--- Client
INSERT INTO Client VALUES(400,'Dunmore Highschool',2);
INSERT INTO Client VALUES(401,'Lackawana Country',2);
INSERT INTO Client VALUES(402,'FedEx',3);
INSERT INTO Client VALUES(403,'John Daly Law,LLC',3);
INSERT INTO Client VALUES(404,'Scranton Whitepages',2);
INSERT INTO Client VALUES(405,'Times Newspaper',3);
INSERT INTO Client VALUES(406,'FedEx',2);

--- Works With
INSERT INTO Works_with VALUES(105,400,55000);
INSERT INTO Works_with VALUES(102,401,267000);
INSERT INTO Works_with VALUES(108,402,22500);
INSERT INTO Works_with VALUES(107,403,5000);
INSERT INTO Works_with VALUES(108,403,12000);
INSERT INTO Works_with VALUES(105,404,33000);
INSERT INTO Works_with VALUES(107,405,26000);
INSERT INTO Works_with VALUES(102,406,15000);
INSERT INTO Works_with VALUES(105,406,130000);

select * from Employee;
```

```sql
select * from Branch;
select * from Client;
select * from Works_with;
select * from Branch_supplier;
--- find all employees ordered by salary
select * from Employee ORDER BY salary DESC; --- ASC
--- find all employees ordered by sex then firstname
select * from Employee ORDER BY first_name;  --- sex
--- find the first 5 employee
select * from Employee LIMIT 5;
--- Find the firstname and lastanme of all employee
select first_name , last_name FROM Employee;
--- Set the forename and surname names of all Employee
SELECT first_name AS forename, last_name AS surname FROM Employee;
--- Find out all the different genders
SELECT DISTINCT sex FROM employee;
--- Find all male employees
SELECT * FROM Employee WHERE sex = 'M';
--- Find all employees at branch 2
SELECT * FROM Employee WHERE branch_id = 2;
--- Find all employee`s ids and names who were born after 1969
SELECT empl_id , first_name,last_name FROM Employee WHERE birth_day >= 1970-01-01;
--- Find all female employees at branch 2
SELECT * FROM Employee WHERE branch_id = 2 AND sex = 'F';
--- Find all Employees who are female & born after 1969 or who make over 80000
SELECT * FROM  Employee WHERE(birth_day >= '1970-01-01' AND sex = 'F') OR salary > 80000;
--- Find all employee born between 1970 and 1975
SELECT * FROM Employee WHERE birth_day BETWEEN '1970-01-01' AND '1975-01-01';
--- Find all employees named Jim, Michael, Johnny or David
SELECT * FROM Employee WHERE first_name IN ('Jim','Micheal','Johnny','David');
--- Find the no.of Employees
select COUNT(super_id) FROM employee;
--- Find the no.of females born after 1970
SELECT COUNT(empl_id) FROM Employee WHERE sex = 'F' AND birth_day > '1971-01-01';
--- Find the Average of all employees salary
SELECT AVG(salary) FROM Employee WHERE sex = 'M';
--- Find the SUM of all employees salary
SELECT SUM(salary) FROM employee ;
--- find out how many males and females there are
SELECT COUNT(sex) , sex FROM employee GROUP BY sex;

--- Find out totalsales of each salesman
SELECT SUM(total_sales), empl_id FROM Works_with GROUP BY empl_id;
--- Find out totalsales of each salesman
SELECT SUM(total_sales), client_id FROM Works_with GROUP BY client_id;

--- % = any # characters, _= one character---
--- Find  any client's whom are an LLC
SELECT * FROM Client WHERE client_name LIKE '%LLC';
--- Find any Branch Supplier who are in the labels business
SELECT * FROM Branch_supplier WHERE supplier_name LIKE '% Labels%';
--- Find any employee born in October or February
SELECT * FROM Employee WHERE birth_day LIKE '____-10%';
--- Find any client's who are in school's
SELECT * FROM Client WHERE client_name LIKE '%school%';

---- Union ----
--- Find a list of Employee , Client and Branch Names set column name is CompanyNames
```

```sql
SELECT first_name AS Company_Names FROM Employee UNION SELECT branch_name FROM Branch
UNION SELECT Client_name FROM Client;
--- Find a list of all clients and branch supplier names
SELECT client_name , Client.branch_id FROM Client UNION
SELECT supplier_name , Branch_supplier.branch_id FROM Branch_supplier;
--- Find a list of all money spent or earned hy the company
SELECT salary FROM Employee UNION SELECT total_sales FROM Works_with;

INSERT INTO Branch VALUES(4,'Buffalo',NULL,NULL);

---JOIN---
--- find all branches and the names of their mangaers
SELECT Employee.empl_id , Employee.first_name , Branch.branch_name FROM Employee
JOIN Branch ON Employee.empl_id = Branch.mgr_id;
--- LEFT JOIN
SELECT Employee.empl_id , Employee.first_name , Branch.branch_name FROM Employee
LEFT JOIN Branch ON Employee.empl_id = Branch.mgr_id;
--- RIGHT JOIN
SELECT Employee.empl_id , Employee.first_name , Branch.branch_name FROM Employee
RIGHT JOIN Branch ON Employee.empl_id = Branch.mgr_id;

--- Nested Queries
--- find names of all employee's who have sold over 30.000 to a single client
SELECT Employee.first_name, Employee.last_name FROM Employee WHERE Employee.empl_id IN(
    SELECT Works_with.empl_id FROM works_with WHERE Works_with.total_sales > 30000);
--- Find all client's who are handled by the branch that Micheal scott manages
--- Assumes you know Michael's ID
SELECT Client.client_name FROM Client WHERE Client.branch_id = (
    SELECT Branch.branch_id FROM Branch WHERE Branch.mgr_id = 102 LIMIT 1);

--- ON DELETE
DELETE FROM Employee WHERE empl_id = 102;
SELECT * FROM Employee;
SELECT * FROM Branch;

DELETE FROM Branch WHERE branch_id = 2;
SELECT * FROM Branch_supplier;
```