

S5

Problem Statement:

Relations: Employee(emp_id, employee_name, street, city), Works(employee_name, company_name, salary), Company(company_name, city), Manages(employee_name, manager_name).

Queries: employees of TCS; names & company sorted; change city of InfoSys employees to Bangalore; employees of TechM with salary>10000; add Asset column to Company.

Code:

```
-- S5: Schema and queries (MySQL)
CREATE TABLE Employee (
    emp_id INT PRIMARY KEY,
    employee_name VARCHAR(100) UNIQUE,
    street VARCHAR(150),
    city VARCHAR(100)
);

CREATE TABLE Company (
    company_name VARCHAR(100) PRIMARY KEY,
    city VARCHAR(100),
    asset DECIMAL(18,2)
);

CREATE TABLE Works (
    employee_name VARCHAR(100),
    company_name VARCHAR(100),
    salary DECIMAL(12,2),
    PRIMARY KEY (employee_name, company_name),
    FOREIGN KEY (employee_name) REFERENCES Employee(employee_name),
    FOREIGN KEY (company_name) REFERENCES Company(company_name)
);

CREATE TABLE Manages (
    employee_name VARCHAR(100) PRIMARY KEY,
    manager_name VARCHAR(100),
    FOREIGN KEY (employee_name) REFERENCES Employee(employee_name),
    FOREIGN KEY (manager_name) REFERENCES Employee(employee_name)
);

-- 1. Employees who work for 'TCS'
SELECT e.employee_name
FROM Employee e
JOIN Works w ON e.employee_name = w.employee_name
WHERE w.company_name = 'TCS';

-- 2. Names and company names sorted ascending company, descending employee
SELECT w.company_name, w.employee_name
FROM Works w
ORDER BY w.company_name ASC, w.employee_name DESC;

-- 3. Change city of employees working with InfoSys to 'Bangalore'
UPDATE Employee e
SET city = 'Bangalore'
WHERE e.employee_name IN (
    SELECT w.employee_name FROM Works w WHERE w.company_name = 'InfoSys'
);
```

```
-- 4. Employees who work for 'TechM' and earn > 10000
SELECT e.employee_name, e.street, e.city
FROM Employee e
JOIN Works w ON e.employee_name = w.employee_name
WHERE w.company_name = 'TechM' AND w.salary > 10000;

-- 5. Add Column Asset to Company table
ALTER TABLE Company ADD COLUMN assets DECIMAL(18,2) DEFAULT 0;
```