

Consider following Relation

```
Employee(emp_id,employee_name,street,city)
Works(employee_name,company_name,salary)
Company(company_name,city)
Manages(employee_name,manager_name)
```

Create above tables with appropriate constraints like primary key, foreign key, not null etc.

1. Change the city of employee working with InfoSys to "Bangalore"

2. Find the names of all employees who earn more than the average salary of all employees

of their company. Assume that all people work for at most one company.

3. Find the names, street address, and cities of residence for all employees who work for 'TechM'

and earn more than \$10,000.

4. Change name of table Manages to Management.

5. Create Simple and Unique index on employee table.

6. Display index Information

-- Create tables with constraints

```
CREATE TABLE Employee (
    emp_id INT PRIMARY KEY,
    employee_name VARCHAR(255) NOT NULL,
    street VARCHAR(255),
    city VARCHAR(255)
);
```

```
CREATE TABLE Works (
    employee_name VARCHAR(255),
    company_name VARCHAR(255),
    salary DECIMAL(10, 2),
    PRIMARY KEY (employee_name, company_name),
    FOREIGN KEY (employee_name) REFERENCES Employee(employee_name)
);
```

```
CREATE TABLE Company (
    company_name VARCHAR(255) PRIMARY KEY,
    city VARCHAR(255)
);
```

```
CREATE TABLE Management (
    employee_name VARCHAR(255),
    manager_name VARCHAR(255),
    PRIMARY KEY (employee_name),
    FOREIGN KEY (employee_name) REFERENCES Employee(employee_name)
);
```

-- Insert data into tables

```
INSERT INTO Employee VALUES (1, 'John Doe', '123 Main St', 'New York');
```

```
INSERT INTO Employee VALUES (2, 'Alice Smith', '456 Oak St', 'San Francisco');
```

-- Add more employee records as needed

```
INSERT INTO Works VALUES ('John Doe', 'InfoSys', 12000.00);
```

```
INSERT INTO Works VALUES ('Alice Smith', 'TechM', 15000.00);
```

-- Add more Works records as needed

```

INSERT INTO Company VALUES ('InfoSys', 'Mumbai');
INSERT INTO Company VALUES ('TechM', 'Bangalore');
-- Add more Company records as needed

-- Queries
-- 1. Change the city of employees working with InfoSys to 'Bangalore'.
UPDATE Employee
SET city = 'Bangalore'
WHERE employee_name IN (SELECT employee_name FROM Works WHERE company_name =
'InfoSys');

-- 2. Find the names of all employees who earn more than the average
-- salary of all employees of their company.
WITH AvgSalaries AS (
    SELECT W.company_name, AVG(W.salary) AS avg_salary
    FROM Works W
    GROUP BY W.company_name
)
SELECT E.employee_name
FROM Employee E
JOIN Works W ON E.employee_name = W.employee_name
JOIN AvgSalaries A ON W.company_name = A.company_name
WHERE W.salary > A.avg_salary;

-- 3. Find the names, street address, and cities of residence for
-- all employees who work for 'TechM' and earn more than $10,000.
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 > 10000.00;

-- 4. Change the name of the table Manages to Management.
ALTER TABLE Manages
RENAME TO Management;

-- 5. Create Simple and Unique index on employee table.
CREATE UNIQUE INDEX idx_employee_name ON Employee(employee_name);

-- 6. Display index Information.
SHOW INDEX FROM Employee;

```