**Database Creation // colabDB**

CREATE DATABASE colabDB;

**Create tables**

**1. Farmer Table**

create table farmer (

farmer\_id SERIAL PRIMARY KEY,

name VARCHAR(200) NOT NULL,

phone\_number VARCHAR(15) UNIQUE NOT NULL,

location VARCHAR(255) NOT NULL,

age INT CHECK (age > 18),

experience INT DEFAULT 0 CHECK (experience >= 0)

);

**2. Crop Table**

create table crop (

crop\_id SERIAL PRIMARY KEY,

crop\_name VARCHAR(100) UNIQUE NOT NULL,

season VARCHAR(50) NOT NULL,

average\_yield\_per\_acre INT NOT NULL

);

**3. Community Table (Crop-wise Farmer Groups)**

create table community (

community\_id SERIAL PRIMARY KEY,

crop\_id INT NOT NULL REFERENCES crop(crop\_id) ON DELETE CASCADE ON UPDATE CASCADE,

created\_by INT NOT NULL REFERENCES farmer(farmer\_id) ON DELETE CASCADE ON UPDATE CASCADE,

created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

**4. Marketplace Table:**

create table marketplace (

product\_id SERIAL PRIMARY KEY,

product\_name VARCHAR(200) NOT NULL,

category VARCHAR(100) NOT NULL,

price\_per\_unit DECIMAL(10,2) NOT NULL,

quantity\_available INT NOT NULL CHECK (quantity\_available > 0),

farmer\_id INT NOT NULL REFERENCES farmer(farmer\_id) ON DELETE CASCADE ON UPDATE CASCADE

);

**5. Transactions Table**

create table transaction (

transaction\_id SERIAL PRIMARY KEY,

buyer\_name VARCHAR(200) NOT NULL,

quantity INT CHECK (quantity > 0),

total\_price DECIMAL(10,2) NOT NULL,

transaction\_date TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

farmer\_id INT REFERENCES farmer(farmer\_id) ON DELETE CASCADE ON UPDATE CASCADE,

product\_id INT REFERENCES marketplace(product\_id) ON DELETE CASCADE ON UPDATE CASCADE

);

**6. Government Support Table**

create table governmentSupport (

support\_id SERIAL PRIMARY KEY,

scheme\_name VARCHAR(200) NOT NULL,

description TEXT NOT NULL,

eligibility\_criteria TEXT NOT NULL,

subsidy\_amount DECIMAL(10,2),

application\_deadline DATE

);

**7. Company Registrations Table**

create table company (

company\_id SERIAL PRIMARY KEY,

company\_name VARCHAR(200) NOT NULL,

service\_type VARCHAR(200) NOT NULL,

contact\_person VARCHAR(200) NOT NULL,

phone\_number VARCHAR(15) UNIQUE NOT NULL,

email VARCHAR(100) UNIQUE NOT NULL

);

**8. Crop Pricing Table**

create table cropPricing (

price\_id SERIAL PRIMARY KEY,

crop\_id INT NOT NULL REFERENCES crop(crop\_id) ON DELETE CASCADE ON UPDATE CASCADE,

price\_per\_quintal DECIMAL(10,2) NOT NULL,

recorded\_date TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

**Inserting Data in Tables:**

**1. Farmers Table**

Insert into farmer (name, phone\_number, location, age, experience) values

('Rajesh Patil', '9876543210', 'Maharashtra', 45, 20),

('Suresh Sharma', '9823456789', 'Punjab', 38, 15),

('Amit Verma', '9911223344', 'Uttar Pradesh', 50, 25);

**2. Insert Crops**

Insert into crop (crop\_name, season, average\_yield\_per\_acre) values

('Wheat', 'Winter', 3000),

('Rice', 'Kharif', 3500),

('Sugarcane', 'Annual', 7000);

**3. Insert Communities**

Insert into community (crop\_id, created\_by) values

(1, 1),

(2, 2),

(3, 3);

**4. Insert Marketplace Products**

Insert into marketplace (product\_name, category, price\_per\_unit, quantity\_available, farmer\_id) values

('Organic Wheat', 'Grains', 25.50, 100, 1),

('Basmati Rice', 'Grains', 45.00, 200, 2),

('Jaggery', 'Processed Goods', 50.00, 150, 3);

**5. Insert Transactions**

Insert into transaction (buyer\_name, farmer\_id, product\_id, quantity, total\_price) values

('Supermarket A', 1, 1, 50, 1275.00),

('Wholesaler B', 2, 2, 100, 4500.00);

**6. Insert Government Schemes**

Insert into governmentSupport (scheme\_name, description, eligibility\_criteria, subsidy\_amount, application\_deadline) values

('PM Kisan Yojana', 'Financial aid for small farmers', 'Landholding < 2 hectares', 6000.00, '2025-12-31'),

('Irrigation Subsidy', 'Drip irrigation support', 'For farmers using less than 10 acres', 50000.00, '2025-06-30');

**7. Insert Companies**

Insert into company (company\_name, service\_type, contact\_person, phone\_number, email) values

('AgroTech Pvt Ltd', 'Fertilizer Supplier', 'Ramesh Kulkarni', '9867543210', 'contact@agrotech.com'),

('FarmEquip Ltd', 'Tractor Leasing', 'Amit Bhosale', '9834567890', 'info@farmequip.com');

**8. Insert Crop Pricing**

Insert into cropPricing (crop\_id, price\_per\_quintal) values

(1, 2200.50),

(2, 3200.00),

(3, 2800.75);