# Farm2Market App - SQL Schema Definitions

This document contains the SQL code for creating the database schema of the Farm2Market application. Each table is defined to support core functionalities such as user management, listings, reservations, transactions, reviews, and more.

## users Table

CREATE TABLE users (  
 user\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 username VARCHAR(50) NOT NULL UNIQUE,  
 first\_name VARCHAR(50),  
 last\_name VARCHAR(50),  
 email VARCHAR(100) NOT NULL UNIQUE,  
 phone\_number VARCHAR(20),  
 password\_hash VARCHAR(255),  
 user\_type ENUM('Farmer', 'Buyer', 'Admin') NOT NULL,  
 is\_approved BOOLEAN DEFAULT FALSE,  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP  
);

## farmer\_profiles Table

CREATE TABLE farmer\_profiles (  
 farmer\_id INT PRIMARY KEY,  
 location VARCHAR(100),  
 trust\_badge BOOLEAN DEFAULT FALSE,  
 FOREIGN KEY (farmer\_id) REFERENCES users(user\_id)  
);

## buyer\_profiles Table

CREATE TABLE buyer\_profiles (  
 buyer\_id INT PRIMARY KEY,  
 location VARCHAR(100),  
 FOREIGN KEY (buyer\_id) REFERENCES users(user\_id)  
);

## categories Table

CREATE TABLE categories (  
 category\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 name VARCHAR(100) NOT NULL  
);

## farmer\_listings Table

CREATE TABLE farmer\_listings (  
 listing\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 farmer\_id INT,  
 product\_name VARCHAR(100),  
 description TEXT,  
 price DECIMAL(10,2),  
 quantity INT,  
 image\_url VARCHAR(255),  
 status ENUM('Available', 'Sold', 'Reserved') DEFAULT 'Available',  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (farmer\_id) REFERENCES users(user\_id)  
);

## product\_categories Table

CREATE TABLE product\_categories (  
 listing\_id INT,  
 category\_id INT,  
 PRIMARY KEY (listing\_id, category\_id),  
 FOREIGN KEY (listing\_id) REFERENCES farmer\_listings(listing\_id),  
 FOREIGN KEY (category\_id) REFERENCES categories(category\_id)  
);

## reservations Table

CREATE TABLE reservations (  
 reservation\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 buyer\_id INT,  
 listing\_id INT,  
 quantity INT,  
 status ENUM('Pending', 'Approved', 'Rejected', 'Completed') DEFAULT 'Pending',  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (buyer\_id) REFERENCES users(user\_id),  
 FOREIGN KEY (listing\_id) REFERENCES farmer\_listings(listing\_id)  
);

## transactions Table

CREATE TABLE transactions (  
 transaction\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 reservation\_id INT,  
 buyer\_id INT,  
 farmer\_id INT,  
 payment\_method ENUM('MoMo', 'Cash', 'PayPal'),  
 receipt\_url VARCHAR(255),  
 status ENUM('Pending', 'Successful', 'Failed') DEFAULT 'Pending',  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (reservation\_id) REFERENCES reservations(reservation\_id),  
 FOREIGN KEY (buyer\_id) REFERENCES users(user\_id),  
 FOREIGN KEY (farmer\_id) REFERENCES users(user\_id)  
);

## reviews Table

CREATE TABLE reviews (  
 review\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 buyer\_id INT,  
 farmer\_id INT,  
 rating INT CHECK (rating >= 1 AND rating <= 5),  
 review\_text TEXT,  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (buyer\_id) REFERENCES users(user\_id),  
 FOREIGN KEY (farmer\_id) REFERENCES users(user\_id)  
);

## notifications Table

CREATE TABLE notifications (  
 notification\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 user\_id INT,  
 message TEXT,  
 status ENUM('Read', 'Unread') DEFAULT 'Unread',  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (user\_id) REFERENCES users(user\_id)  
);

## admin\_moderation Table

CREATE TABLE admin\_moderation (  
 action\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 admin\_id INT,  
 target\_user\_id INT,  
 action\_type ENUM('Approve Farmer', 'Reject Listing', 'Suspend User'),  
 reason TEXT,  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (admin\_id) REFERENCES users(user\_id),  
 FOREIGN KEY (target\_user\_id) REFERENCES users(user\_id)  
);

## alerts Table

CREATE TABLE alerts (  
 alert\_id INT AUTO\_INCREMENT PRIMARY KEY,  
 farmer\_id INT,  
 message TEXT,  
 severity ENUM('Low', 'Moderate', 'High'),  
 created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP,  
 FOREIGN KEY (farmer\_id) REFERENCES users(user\_id)  
);