Farm 2 Fork Presentation

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Introduction

At Farm 2 Fork we seek to increase the transparency of the food supply chain. Our application allows users to track the source of their products and enables businesses at every level of the supply chain to more efficiently execute transactions.

Goals

1. Provide a **transaction** and **inventory tracking service** for **food-supply industry members** – farmers, distributors, and customers (individual shoppers, grocery stores, farmers markets, etc.)

2: Provide a way for **customers** to look up a product of their choice, such that they can **track** which farm(s) **the product** came from.

3: Provide **sales overviews** for industry members – farmers and distributors

User Types

3Types of Farm 2 Fork app users

1: **Farmers** – inventory, sales, transactional records

2: **Distributors** – inventory, sales, purchases, transactional records

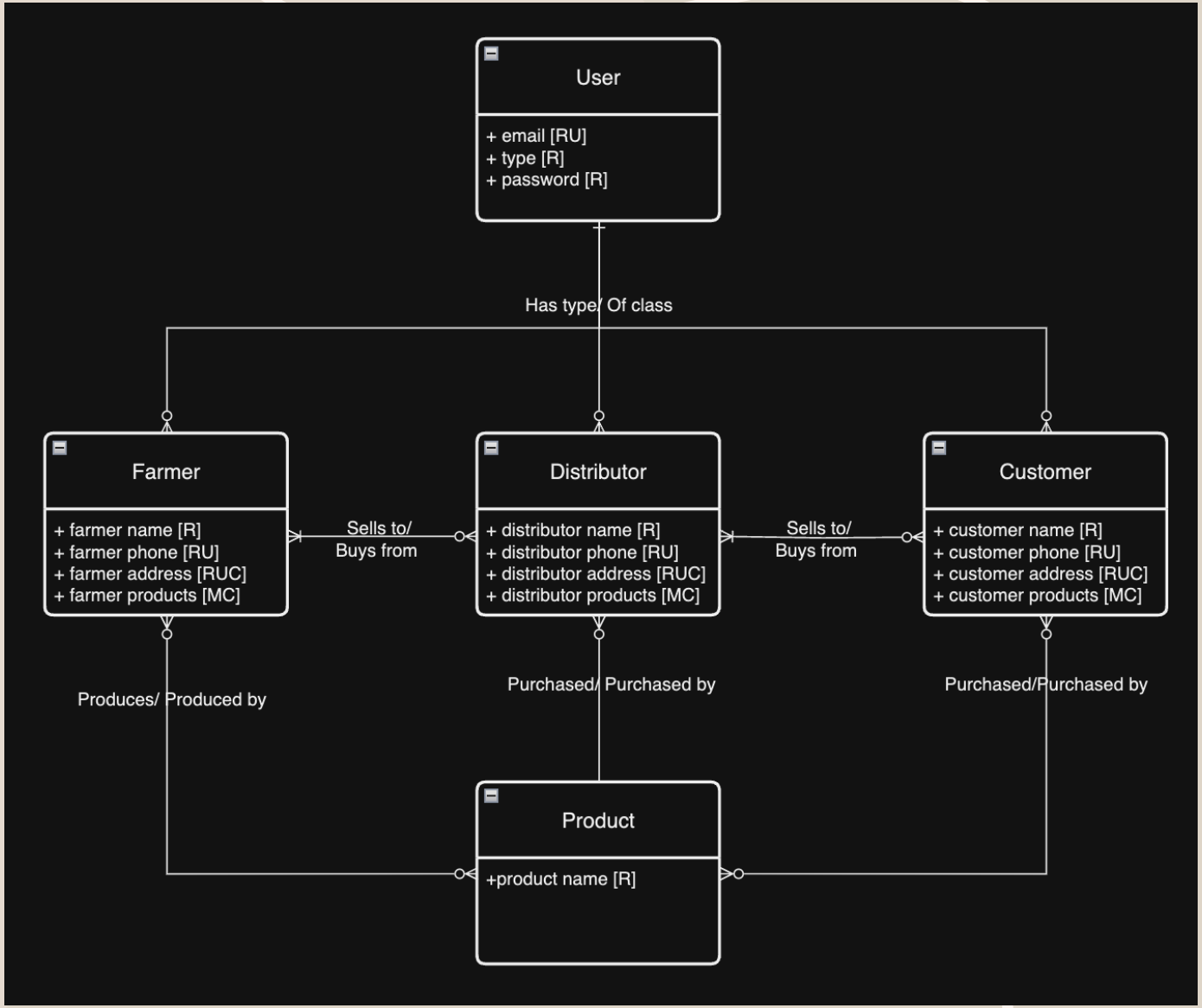
3: **Customers** – inventory, purchases, transactional records, track which farm each item came from

Database Implementation

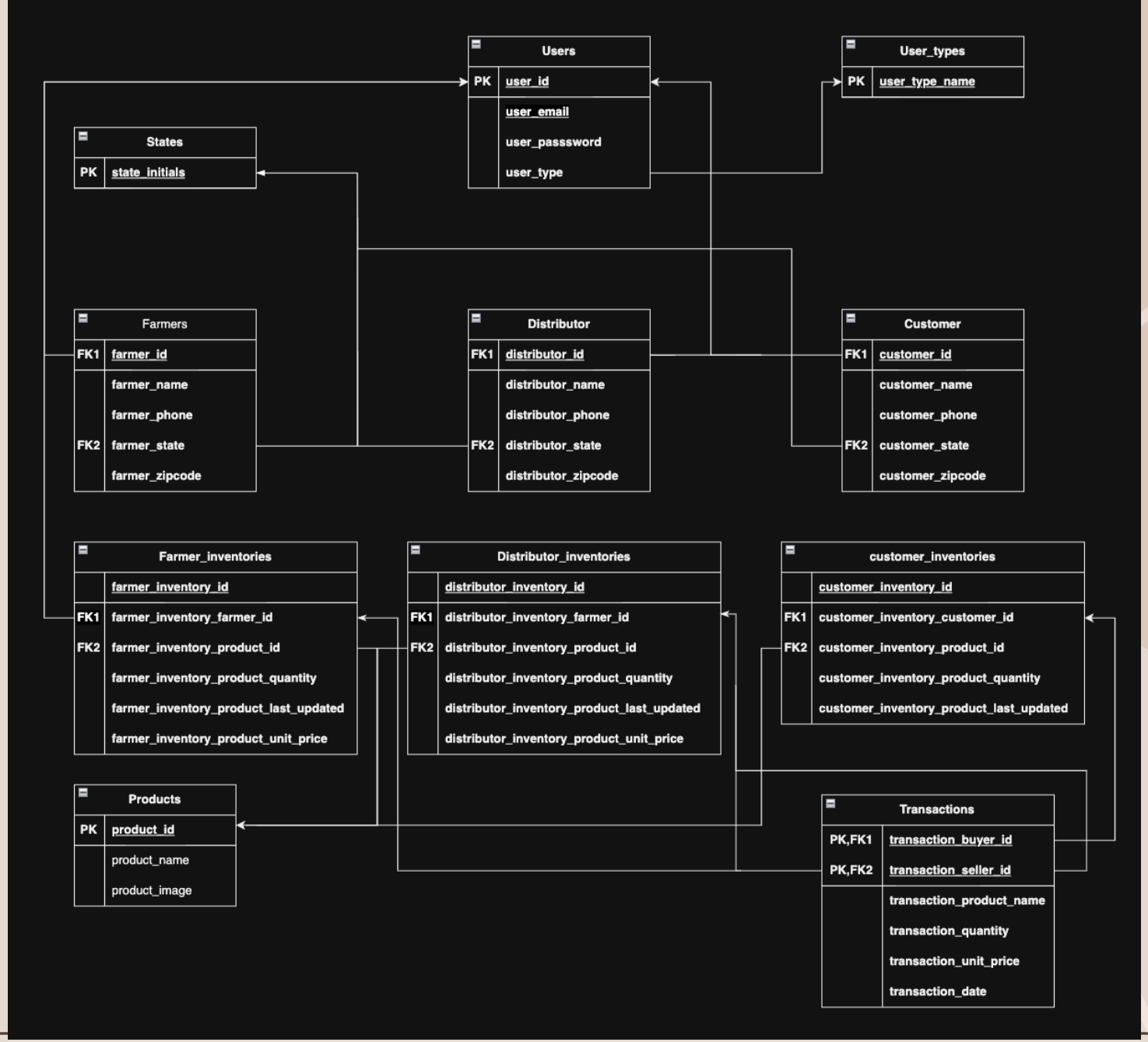
- Implemented **identity columns** for inventory management, ensuring seamless data entry and retrieval.
- Leveraged **foreign key constraints** for cross-table integrity, particularly for user-role distinctions and location consistency.

Conceptual Model

- Two main entities: Users and Products
- Users exist as Farmers, Distributors, Customers
- Transactions exist between farmers and distributors and distributors and customers



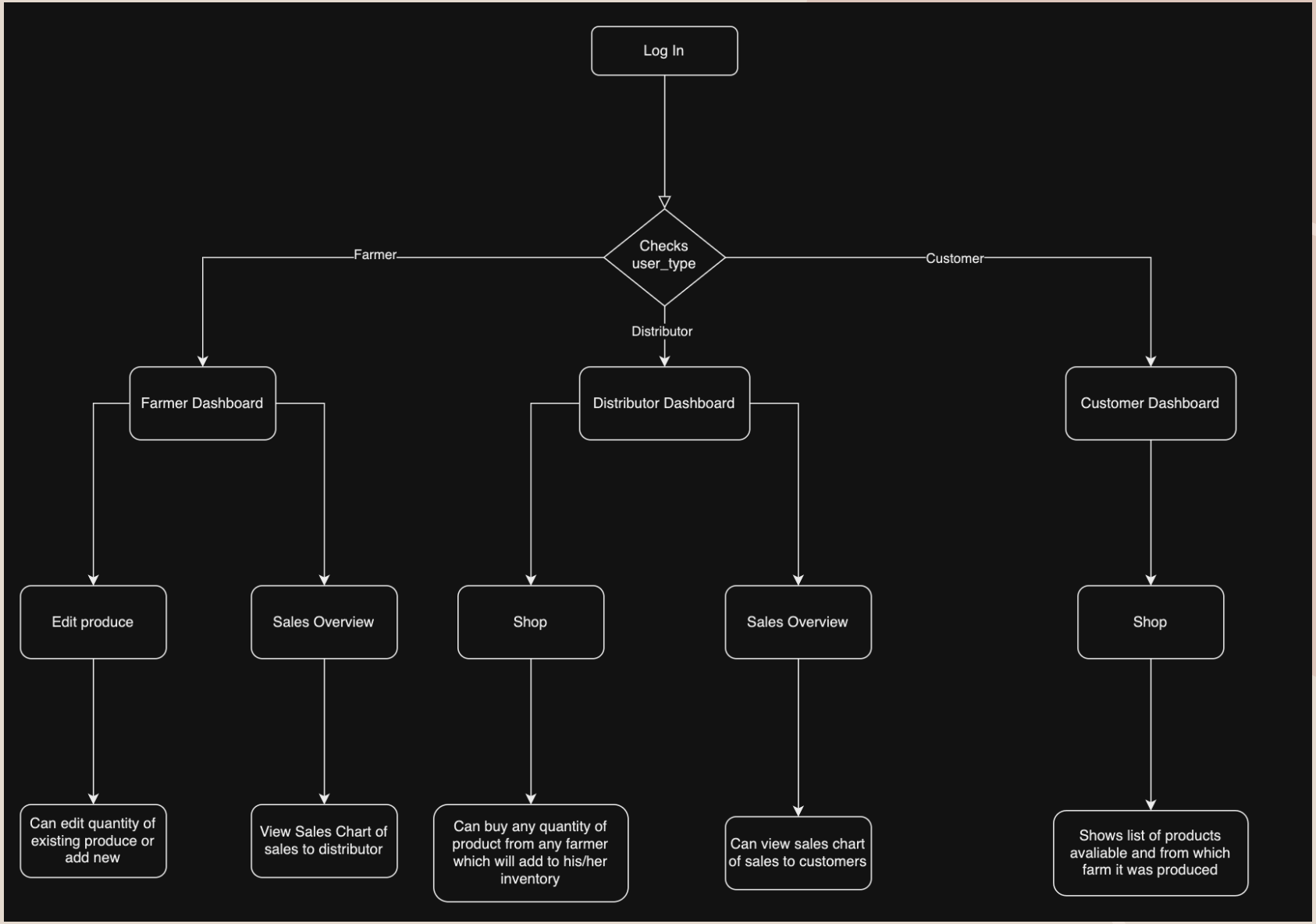
Logical Diagram



Notable Database Features

- **Structured User Roles:** Distinct tables for Farmers, Distributors, and Customers linked to centralized user authentication.
- **Real-Time Inventory Tracking:** Automated timestamping captures the latest updates across Farmer, Distributor, and Customer inventories.
- **Location-Based Data Integrity**: Dedicated States table linked to user tables ensures consistent location referencing.

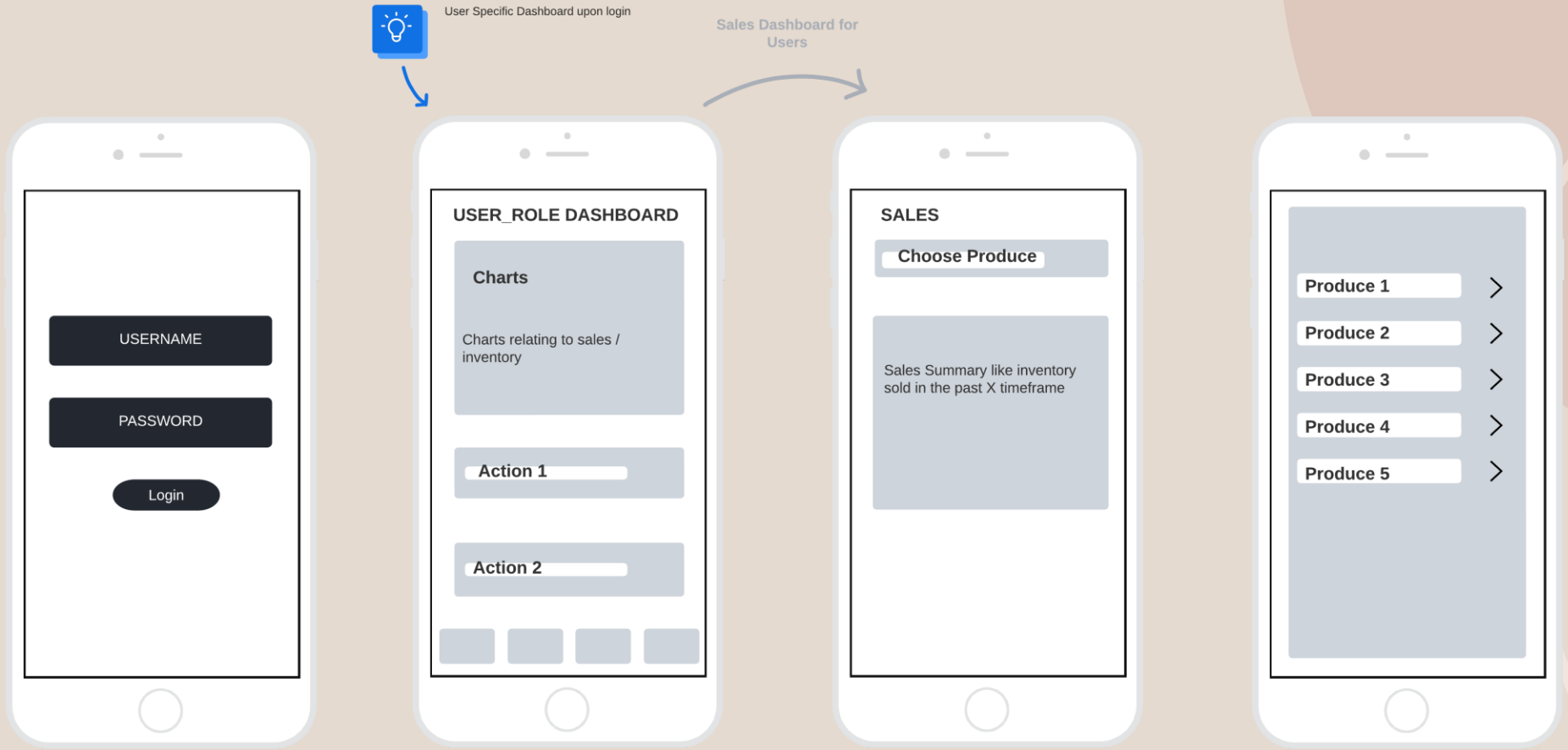
User Story


Log In
Checks user_type
Farmer
Customer
Distributor
Farmer Dashboard
Distributor Dashboard
Customer Dashboard
Edit produce
Sales Overview
Shop
Sales Overview
Shop
Can edit quantity of existing produce or add new
View Sales Chart of sales to distributor
Can buy any quantity of product from any farmer which will add to his/her inventory
Can view sales chart of sales to customers
Shows list of products avaliable and from which farm it was produced

PowerApps Development/Integration

- First, we created the database with all its tables and inserted data into it through the azure cloud portal.
- We then connected our database to our app where we could access the data.
- Now that our database is connected, we can then query the data/tables necessary to make the shopping lists, inventory column charts and the sales graphs.
- Also, we have the functionality to update the tables with existing data or add new data through the app itself.

Application Wireframe



Notable App Features

- **Dashboards:** Every User Class gets a custom dashboard.
- Includes Inventory Dashboards, Sales Dashboards.
- **Farmers** can Edit Produce including adding products and inventory on the fly & See Sales
- **Distributors** can Buy & Sell Produce from every other farmer
- **Customers** can take a glance at the entire supply chain, promoting visibility.

Data Insertion

- Data was generated using a custom python script that adhered to our external data Logic.
- This script generated a data file in the format of SQL commands.

The end