6. **Which Elicitation Techniques can be used in this Project and Justify your selection of Elicitation Techniques? Prototyping Use case Specs Document Analysis Brainstorming Fertilizers, seeds, pesticides details from the manufacturers and should be able to display them to the Farmers. To gather the business requirements from the client, you went to SOONY and met Mr. Henry. When Mr. Henry was asked about the project and what are they expecting from the project, Mr. Henry stated that he is expecting to have a login for all its users (fertilizers, seeds, pesticides manufacturers and Farmers) , a product catalog of fertilizers, seeds, pesticides, a search option to search for products, payment process, and delivery tracking. After doing the stakeholder analysis, you have found out that Peter, Kevin, Ben are the key stakeholders and you have scheduled an appointment to meet them. After meeting with them and trying to gather the stakeholder requirements, Kevin said that, a Farmer should be able to browse through the products catalog once they visit the website and need to have a search option so that they can search for any product they need. Peter said that, if a farmer wants to buy any product or add them to buy-later list, they need to login first using their email id and password. If it is a new user, then they can create a new account by submitting their email ID and creating a secure password. Ben added saying that, Farmers needs to have an easy-to-use payment gateway which should include cash-on-delivery (COD), Credit/Debit card and UPI options so that the user's experience should be better. Kevin mentioned that, a user gets an email confirmation regarding their order status. A delivery tracker to track the whereabouts of their order. Identify Business Requirements (which includes Stakeholder Requirements) BR001 – Farmers should be able to search for available products in fertilizers, seeds, pesticides BR002 – Manufacturers should be able to upload and display their products in the application**

Answer –

Elicitation Techniques Suitable for This Project (with Justifications)

Given the project context—multiple stakeholder groups (Farmers, Manufacturers, Henry, Peter, Kevin, Ben), functional requirements (login, product catalog, search, payment, delivery tracking), and the need for clarity—the following elicitation techniques are most appropriate:

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1. Document Analysis

✓ Why Selected:

- **The business already works with fertilizer, seed, and pesticide manufacturers.**
- **They may have existing documents such as:**
    - **Product catalogs**
    - **Manufacturer brochures**
    - **Pricing sheets**
    - **Current process documents**
- **Analyzing these helps:**
    - **Understand current workflow**
    - **Identify any regulatory or mandatory information**
    - **Avoid repeating requirements the organization already handles**

✓ Relevance to Project:

Document analysis helps clearly define the data fields needed for BR001 (search) and BR002 (product upload), such as chemical composition, packaging, brand, size, etc.

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2. Interviews

✓ Why Selected:

- **There are multiple individual stakeholders with differing perspectives:**
    - **Mr. Henry → business owner**
    - **Peter / Kevin / Ben → operational stakeholders**
    - **Farmers → end users**
    - **Manufacturers → product suppliers**
- **Interviews allow you to gather specific, detailed expectations.**

✓ Relevance to Project:

- **Henry explained login, search, catalogue, payment, tracking.**
- **Kevin, Peter, Ben provided detailed feature expectations.**
- **Interviews helped capture stakeholder-specific needs which directly shaped BR001 & BR002.**

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3. Brainstorming

✓ Why Selected:

- **The team of stakeholders (Peter, Kevin, Ben) has diverse viewpoints.**
- **Brainstorming enables:**
    - **Rapid idea generation**
    - **Resolving conflicting expectations**
    - **Discovering additional product features**

✓ Relevance to Project:

You can brainstorm:

- **What catalog filters farmers need**
- **Extra product attributes**
- **What payment experiences will be easiest**
- **Possible integrations (SMS alerts, order pickup points, etc.)**

This technique supports refining BR001 and BR002 and uncovering new business requirements.

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4. Prototyping

✓ Why Selected:

- **Farmers and manufacturers may not be familiar with technical terminology.**
- **Visual screens help them understand and clarify:**
    - **Login page**
    - **Product catalog interface**
    - **Search UI**
    - **Payment flow**
    - **Delivery tracker**

✓ Relevance to Project:

- **Prototyping is especially helpful for usability-focused requirements.**

- **Useful for Ben's requirement: easy payment gateway.**
- **Helps validate the product catalog layout—important for BR001 & BR002.**

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5. Use Case Specification

✓ Why Selected:

- **This project involves clear user interactions:**
  - **Login / Registration**
  - **Browse catalog**
  - **Search product**
  - **Add to wishlist or buy-later**
  - **Place order**
  - **Make payment**
  - **Track order**

7. Make suitable Assumptions and identify at least 10 Business Requirements.

- **The platform will be a web-based application accessible through desktop and mobile browsers.**
- **Both Farmers and Manufacturers must create accounts to use core features.**
- **The system will maintain a central product catalog for fertilizers, seeds, and pesticides.**
- **Manufacturers are responsible for uploading accurate product details.**
- **The application integrates with a third-party payment gateway to support UPI, Credit/Debit Cards, and COD.**
- **Delivery tracking will be handled through an integrated logistics API.**
- **Order confirmation and status updates will be sent via email notifications.**
- **The system stores user details securely and follows basic data protection guidelines.**
- **Only registered manufacturers can list products.**
- **Farmers should be able to manage their own wishlist (buy-later list).**

8. List your assumptions

1. **The system will be a web-based application accessible from desktops and mobile browsers.**
2. **Farmers and Manufacturers must create accounts to access personalized features such as uploading products, placing orders, and managing wishlists.**
3. **A centralized product catalog will store product details for fertilizers, seeds, and pesticides.**
4. **Manufacturers are responsible for uploading correct, complete, and legally compliant product information.**
5. **The platform will support standard payment options including UPI, Credit/Debit Card, and Cash-on-Delivery (COD).**
6. **The order delivery process will be handled by a third-party logistics partner, and tracking details will be integrated through an API.**
7. **Email notifications will be sent to users for events such as order confirmation, shipping updates, and password resets.**
8. **The system will follow basic data privacy and security standards, ensuring that passwords and sensitive data are encrypted.**
9. **Only registered and approved manufacturers can list products on the platform.**
10. **Farmers will be able to browse the catalog without logging in, but must log in to purchase or add items to a buy-later list.**
11. **All users must provide a valid email ID for registration and account verification.**
12. **The system will maintain role-based access, ensuring manufacturers and farmers see only the features relevant to them.**
13. **The platform will support English as the default language, with potential for multilingual support later.**
14. **The product catalog will include price, product description, usage instructions, packaging size, brand, and availability status.**
15. **Internet connectivity is required for users to access the platform and complete transactions.**

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9. Give Priority 1 to 10 numbers (1 being low priority – 10 being high priority) to these Requirements after discussions with the stakeholders Req ID Req Name Req Description BR001 Farmer Search for Products Priority Farmers should be able to search for available products in fertilizers, seeds, pesticides 8 BR002 Manufacturers upload their Products Manufacturers should be able to upload and display their products in the application 8 Once the requirements are finalized, as a business analyst, one of the major roles is to act as a liaison between the client and the project team. To gather the requirements correctly from the client side and then to deliver those requirements to the project team in a way they understand

To make the project team understand the requirements, you need to convert those requirements into UML diagrams and screen mock-ups.

Answer –

1. **The system will be a web-based application accessible from desktops and mobile browsers.**
2. **Farmers and Manufacturers must create accounts to access personalized features such as uploading products, placing orders, and managing wishlists.**
3. **A centralized product catalog will store product details for fertilizers, seeds, and pesticides.**
4. **Manufacturers are responsible for uploading correct, complete, and legally compliant product information.**
5. **The platform will support standard payment options including UPI, Credit/Debit Card, and Cash-on-Delivery (COD).**
6. **The order delivery process will be handled by a third-party logistics partner, and tracking details will be integrated through an API.**
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13. **The platform will support English as the default language, with potential for multilingual support later.**
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15. **Internet connectivity is required for users to access the platform and complete transactions.**

Draw use case diagram

<<Actor>>

Farmer

|

|

| | | | |

(Register) (Login) (Browse Products) (Search Products) (Add to Wishlist)

| |

| |

| <<include>>

|----------> (View Product Details)

|

|

| <<include>>

|----------> (Add to Cart)

|

|

(Make Payment)

|

<<extend>>

|

(Select Payment Method)

|

<<include>>

|

(Receive Confirmation Email)

|

<<extend>>

|

(Track Delivery)

Prepare use case specs for all use cases

UC01 – User Registration

Actor: Farmer, Manufacturer
Description: Allows users to create a new account.
Preconditions: User is not already registered.
Postconditions: User account is created and stored in the system.
Trigger: User selects “Create New Account”.

Basic Flow

1. **User clicks on “Register”.**
2. **User enters email ID and password.**
3. **User submits the form.**

4. **System validates email format and password strength.**
5. **System creates user account.**
6. **System displays success message.**

Alternate Flow

- **A1 – Email Already Exists**
    - **System shows "Email already registered" message.**

Exception

- **Invalid or weak password.**

UC02 – User Login

Actor: Farmer, Manufacturer
Description: Authenticate users to access platform features.
Preconditions: User must be registered.
Postconditions: User is successfully logged into account.
Trigger: User enters login credentials.

Basic Flow

1. **User enters email and password.**
2. **System validates credentials.**
3. **System logs in the user.**
4. **System redirects to the user dashboard.**

Alternate Flow

- **A1 – Wrong Password**
    - **System shows "Invalid credentials".**

Exception

- **Account locked after multiple failed attempts.**

UC03 – Browse Products

Actor: Farmer
Description: Farmer views the catalog of fertilizers, seeds, pesticides.
Preconditions: Product catalog is available.

Postconditions: Products are displayed on screen.
Trigger: Farmer clicks "Browse Products".

Basic Flow

1. **Farmer opens catalog page.**
2. **System displays categories and product listings.**
3. **Farmer scrolls or navigates categories.**

Alternate Flow

- **No products available → System shows "No items found".**

UC04 – Search Products

Actor: Farmer
Description: Farmer searches the product catalog.
Preconditions: Search bar is available; products exist.
Postconditions: Search results displayed.
Trigger: Farmer enters search text.

Basic Flow

1. **Farmer enters keyword.**
2. **System runs search.**
3. **System displays matching products.**
4. **Farmer selects an item for details.**

Alternate Flow

- **A1 – No search results**
    - **Display "No products match your search".**

UC05 – View Product Details (Include)

Actor: Farmer
Description: Farmer views detailed product information.
Preconditions: Product exists.
Postconditions: Product detail page shown.
Trigger: Farmer clicks on a product.

Basic Flow

1. **Farmer selects a product.**
2. **System opens product detail page.**
3. **System displays description, price, manufacturer, usage instructions, etc.**

UC06 – Add to Wishlist

Actor: Farmer
Description: Adds selected products to a buy-later list.
Preconditions: User must be logged in.
Postconditions: Product added to wishlist.
Trigger: Farmer clicks "Add to Wishlist".

Basic Flow

1. **Farmer clicks "Add to Wishlist".**
2. **System adds product to wishlist.**
3. **System shows confirmation.**

Exceptions

- **Wishlist full or data error.**

UC07 – Add to Cart (Include)

Actor: Farmer
Description: User adds product to the cart.
Preconditions: Product must exist. User must be logged in.
Postconditions: Cart updated.
Trigger: Farmer selects "Add to Cart".

Basic Flow

1. **User selects product.**
2. **System adds item to cart.**
3. **System shows "Item added to cart".**

UC08 – Make Payment

Actor: Farmer
Description: Completing the purchase of selected products.

Preconditions: User must be logged in; cart must have items.
Postconditions: Order placed successfully.
Trigger: User clicks "Proceed to Payment".

Basic Flow

1. **User reviews cart.**
2. **User selects "Proceed to Payment".**
3. **System shows payment method options (UPI, Card, COD).**
4. **User enters payment details.**
5. **System validates payment.**
6. **System confirms order.**
7. **System sends email confirmation (include UC11).**

Alternate Flow

- **COD chosen → skip payment gateway.**
- **Payment fails → show "Payment Failed".**

UC09 – Select Payment Method (Extend)

Actor: Farmer
Description: User selects method before completing order.
Preconditions: Cart exists.
Postconditions: Payment method selected.
Trigger: System asks for payment method.

Basic Flow

1. **User selects UPI, Card, or COD.**
2. **System proceeds based on choice.**

UC10 – Receive Confirmation Email (Include)

Actor: Farmer
Description: System sends order confirmation via email.
Trigger: Successful order placement.

Basic Flow

1. **System generates email.**
2. **System sends email to the user.**
3. **User receives confirmation.**

UC11 – Track Delivery

Actor: Farmer
Description: Track order shipment status.
Preconditions: Order placed and dispatched.
Postconditions: Delivery status shown.
Trigger: User selects "Track Order".

Basic Flow

1. **User clicks "Track Delivery".**
2. **System fetches logistics status.**
3. **System displays real-time tracking details.**

Alternate Flow

- **Status Unavailable → Show "Tracking unavailable right now".**

UC12 – Upload Products

Actor: Manufacturer
Description: Manufacturer uploads product details to catalog.
Preconditions: Manufacturer is logged in.
Postconditions: Product added to catalog.
Trigger: Manufacturer selects "Upload Product".

Basic Flow

1. **Manufacturer fills product form.**
2. **System validates fields.**
3. **System saves product details.**
4. **Product appears in catalog.**

Exceptions

- **Missing mandatory fields.**

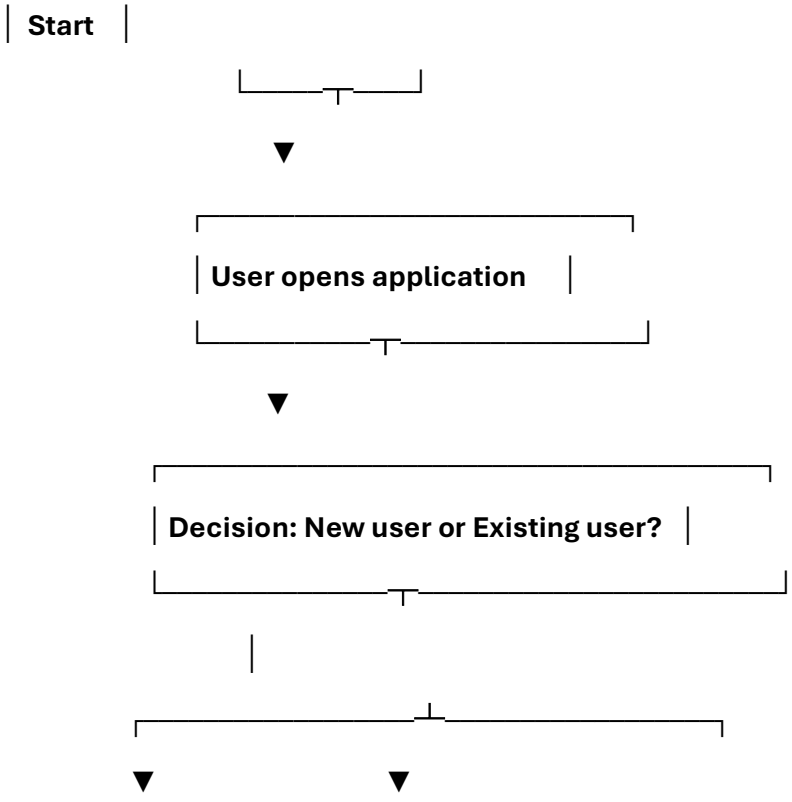
UC13 – Manage Products (Include)

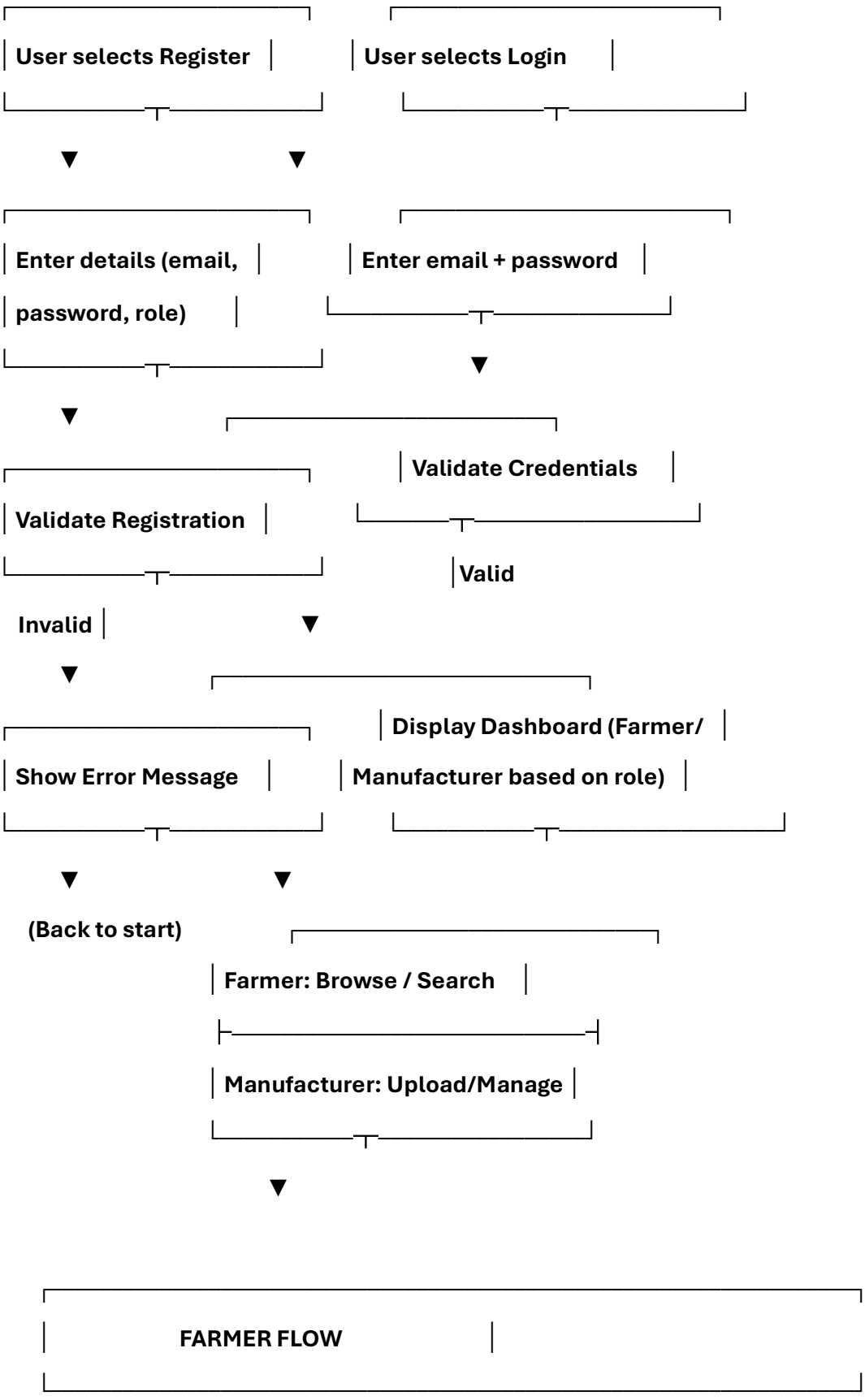
Actor: Manufacturer
Description: Modify, update, or delete product listings.
Preconditions: Product exists.
Postconditions: Product updated or removed.
Trigger: Manufacturer selects “Manage Products”.

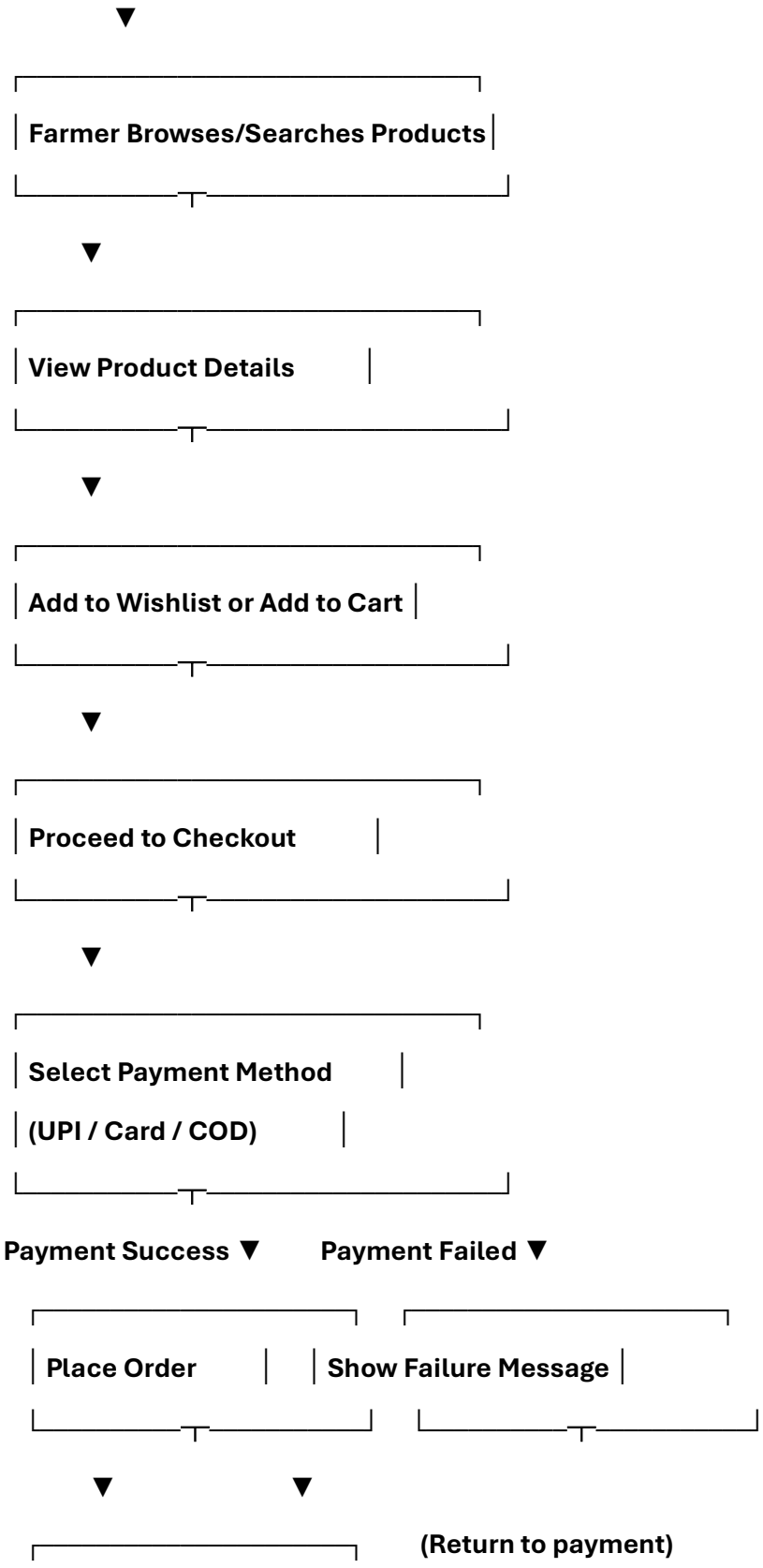
Basic Flow

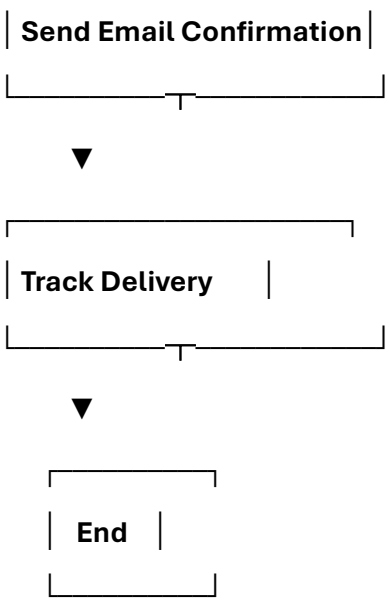
1. **Manufacturer opens product list.**
2. **Selects Edit/Delete.**
3. **System updates catalog.**

12. Activity Diagrams




User selects Register
User selects Login
Enter details (email, password, role)
Enter email + password
Validate Credentials
Validate Registration
Valid
Invalid
Display Dashboard (Farmer/ Manufacturer based on role)
Show Error Message
(Back to start)
Farmer: Browse / Search
Manufacturer: Upload/Manage
FARMER FLOW


Farmer Browses/Searches Products
View Product Details
Add to Wishlist or Add to Cart
Proceed to Checkout
Select Payment Method
(UPI / Card / COD)
Payment Success
Payment Failed
Place Order
Show Failure Message
(Return to payment)


Send Email Confirmation
Track Delivery
End