Philter: A Product Validator

Software Design and Requirement Specification

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Chapter 1

Requirement Specification

1.1 Functional Requirement

TABLE 1.1: Functional Req

ID	Name	Description	Priority
FR-01-01	metamask Connection	The web has to be connected to Metamask otherwise it will won't work at all	1
FR-01-02	Authentication	Manufacture must be authenticated through metamask	1
FR-02-01	Add Product	The manufacture will add the product	1
FR-02-01	Add Distributor	The Manufacture will Add Distributor	1
FR-02-03	Analysis	The Manufacture analyse the product fakeness	1
FR-02-04	Track Product	The manufacture can track the product and check the history of product	2
FR-02-04	Track Distributor	The Manufacture can track the distributor and check the distributor	2
FR-03-01	Security	The Main purpose is the security of the system	1

1.2 Non-functional Requirement

Table 1.2: Non-Functional Requirement

ID	Name	Description	Priority
NR-01-01	Modes	The user can choose between light dark modes.	2
NR-01-02	Availability	The system is available to assigned user all the time.	1
NR-01-03	Scalability	The system can be scaled whenever need arrives.	1
NR-01-04	Performance	Stronger the internet connection stronger is the performance of the system. System will also be optimized for slower connection.	3
NR-02-01	Security	The hacker can hack the web app but can never retrieve the systems data at any cost.	2

Chapter 2

Design specification

2.1 Wireframes

Connect to MetaMask
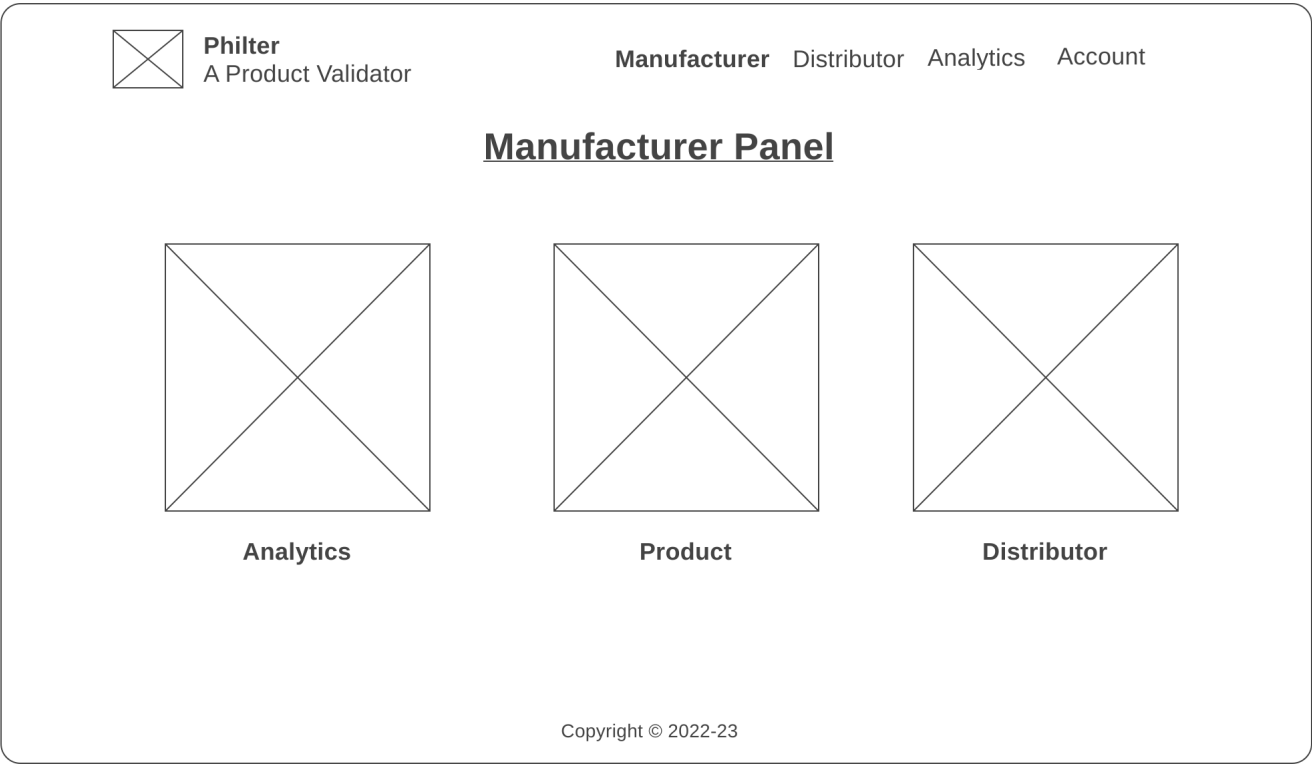
FIGURE 2.1: Connect to metamask
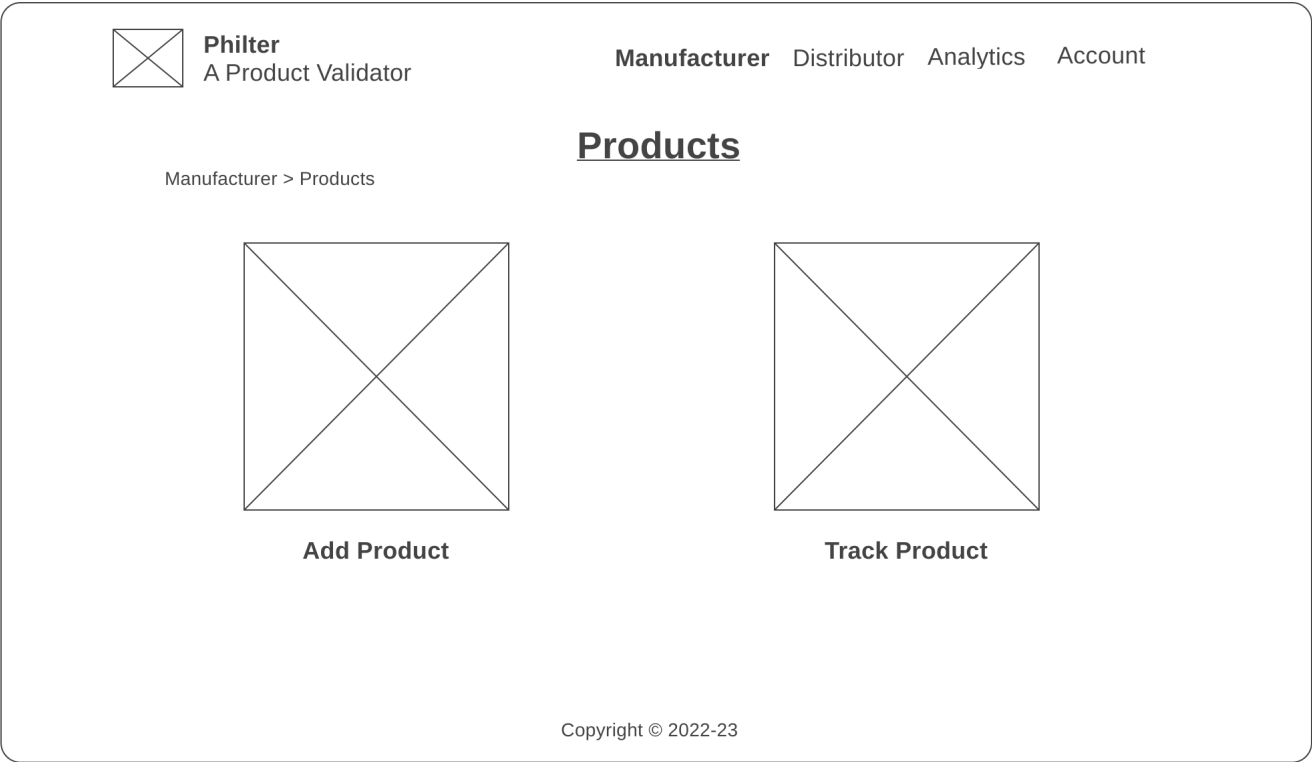
FIGURE 2.2: Manufacture Panel

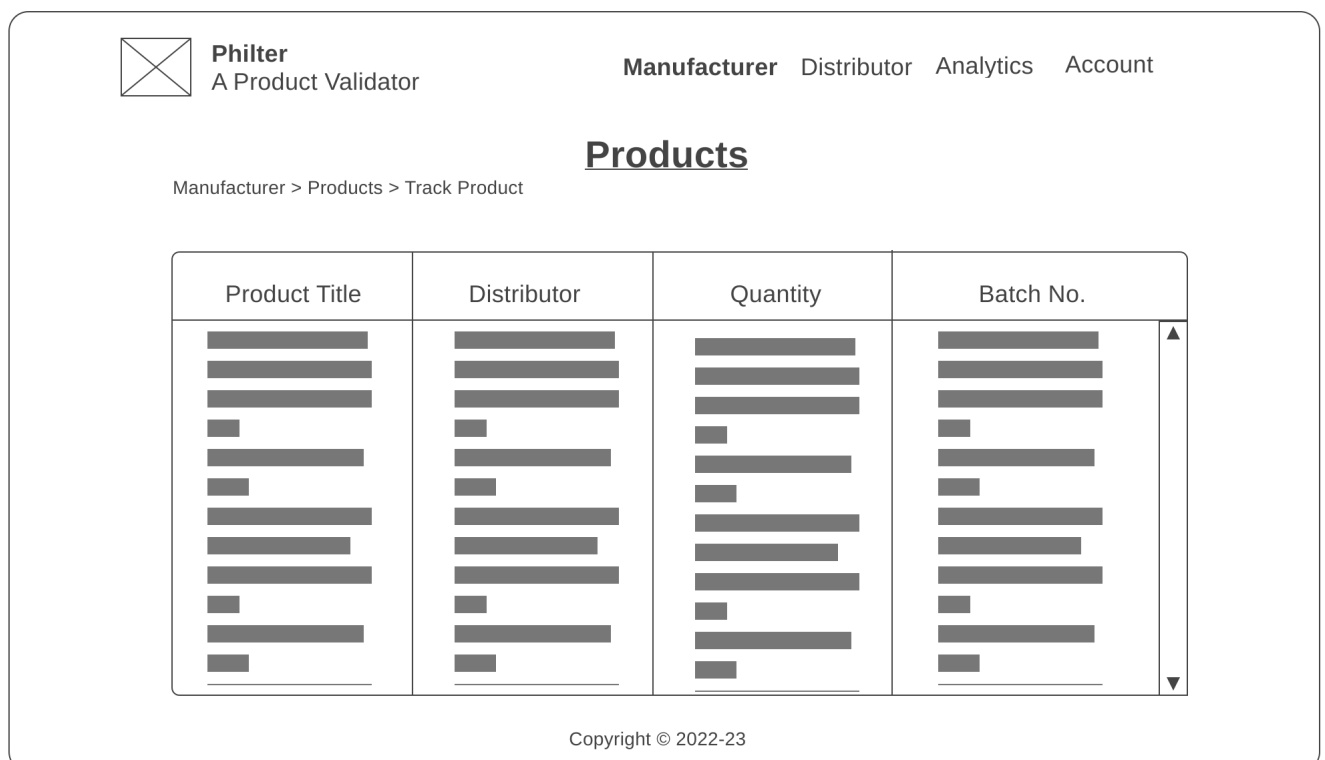
FIGURE 2.3: Product
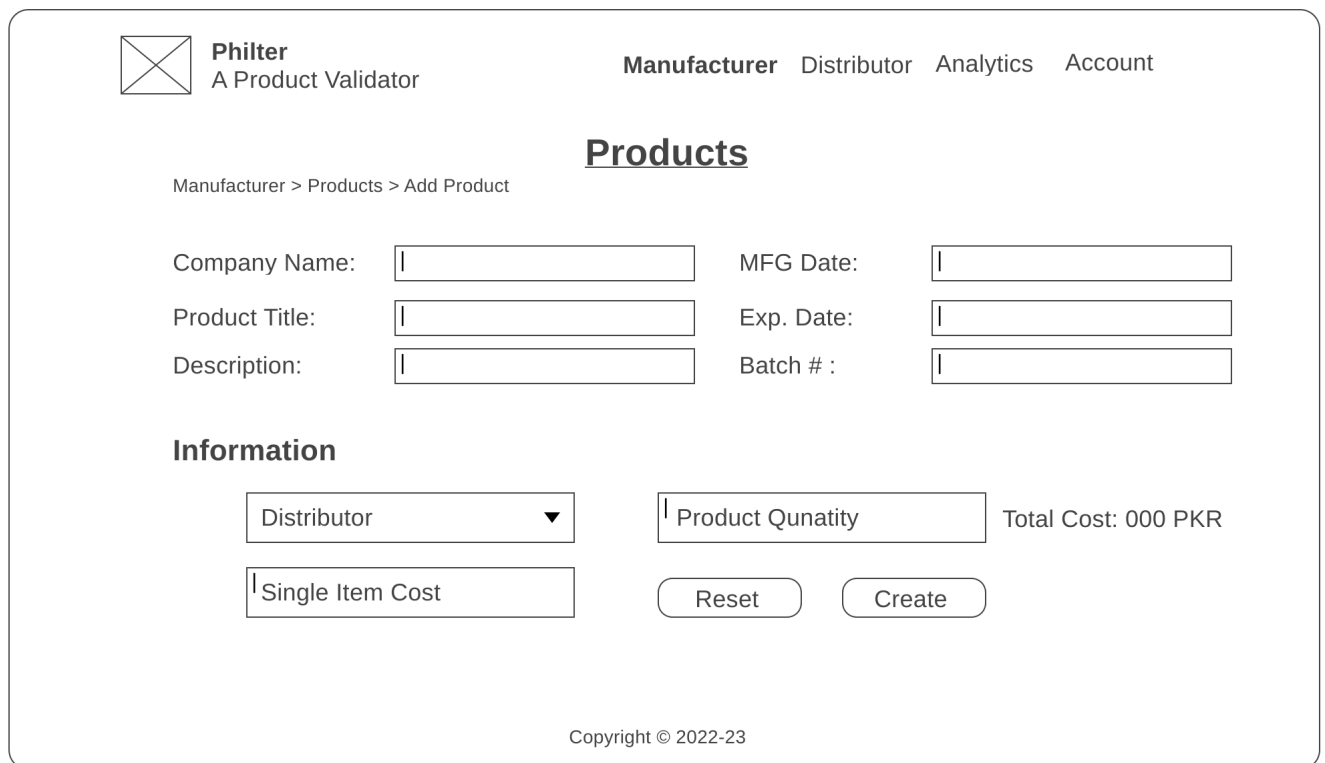
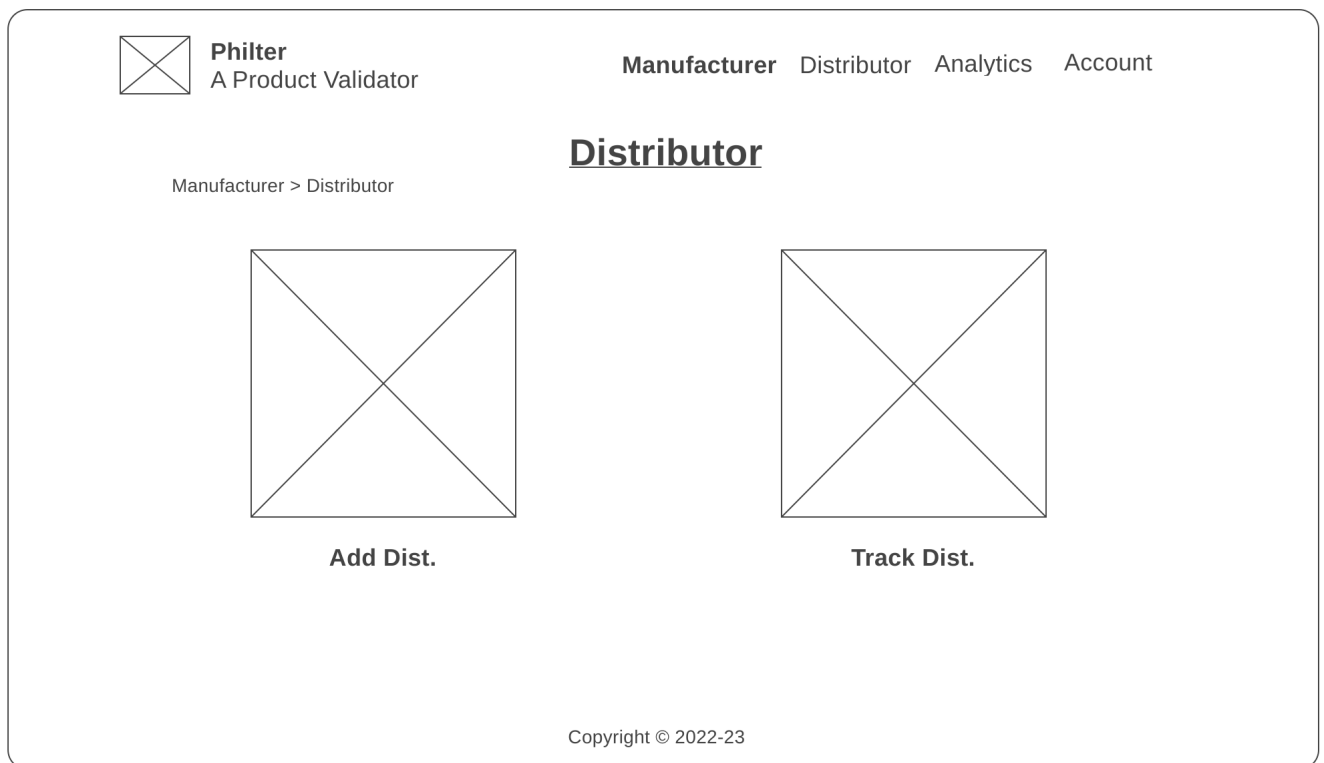**FIGURE 2.4: Add Product**

FIGURE 2.5: Track Product

Philter
A Product Validator

Manufacturer Distributor Analytics Account

Distributor

Manufacturer > Distributor
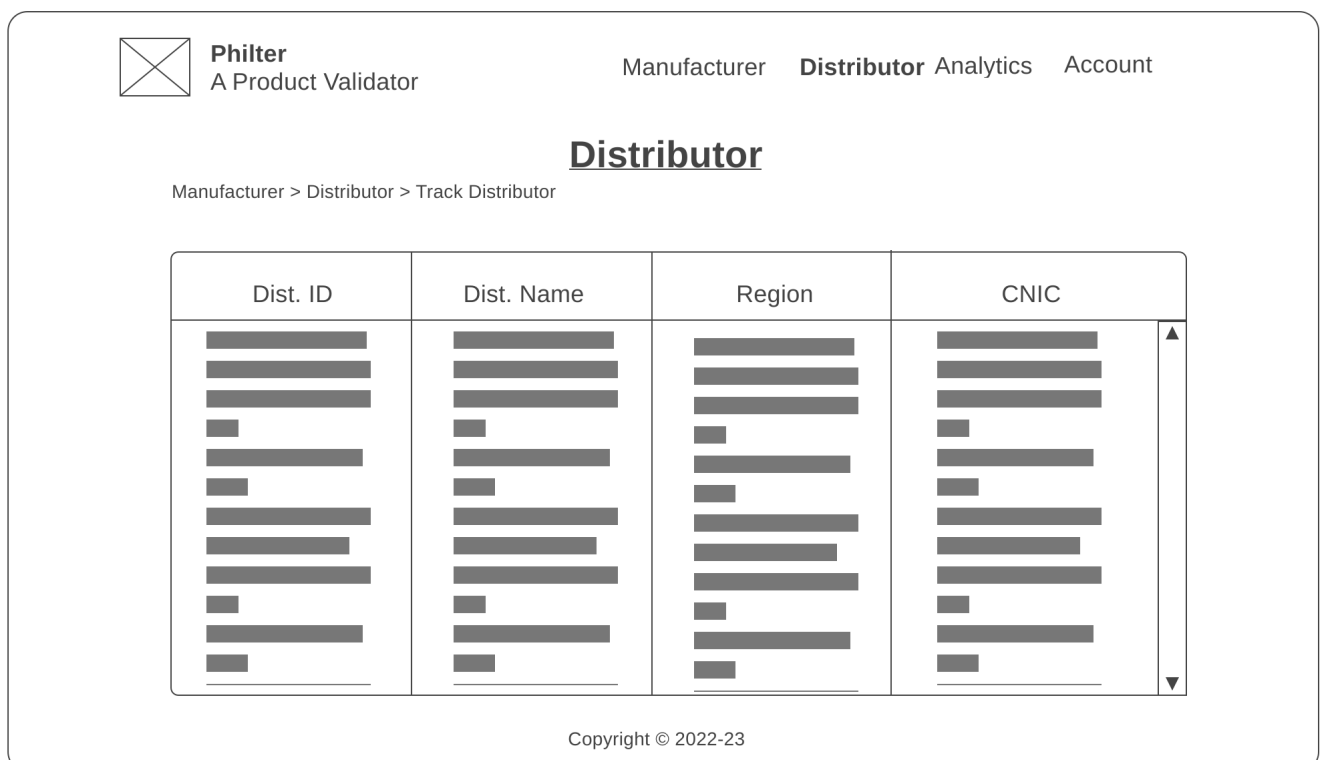
Add Dist.

Track Dist.

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FIGURE 2.6: Distributor

Philter
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Manufacturer **Distributor** Analytics Account

Distributor

Manufacturer > Distributor > Track Distributor

Dist. ID	Dist. Name	Region	CNIC

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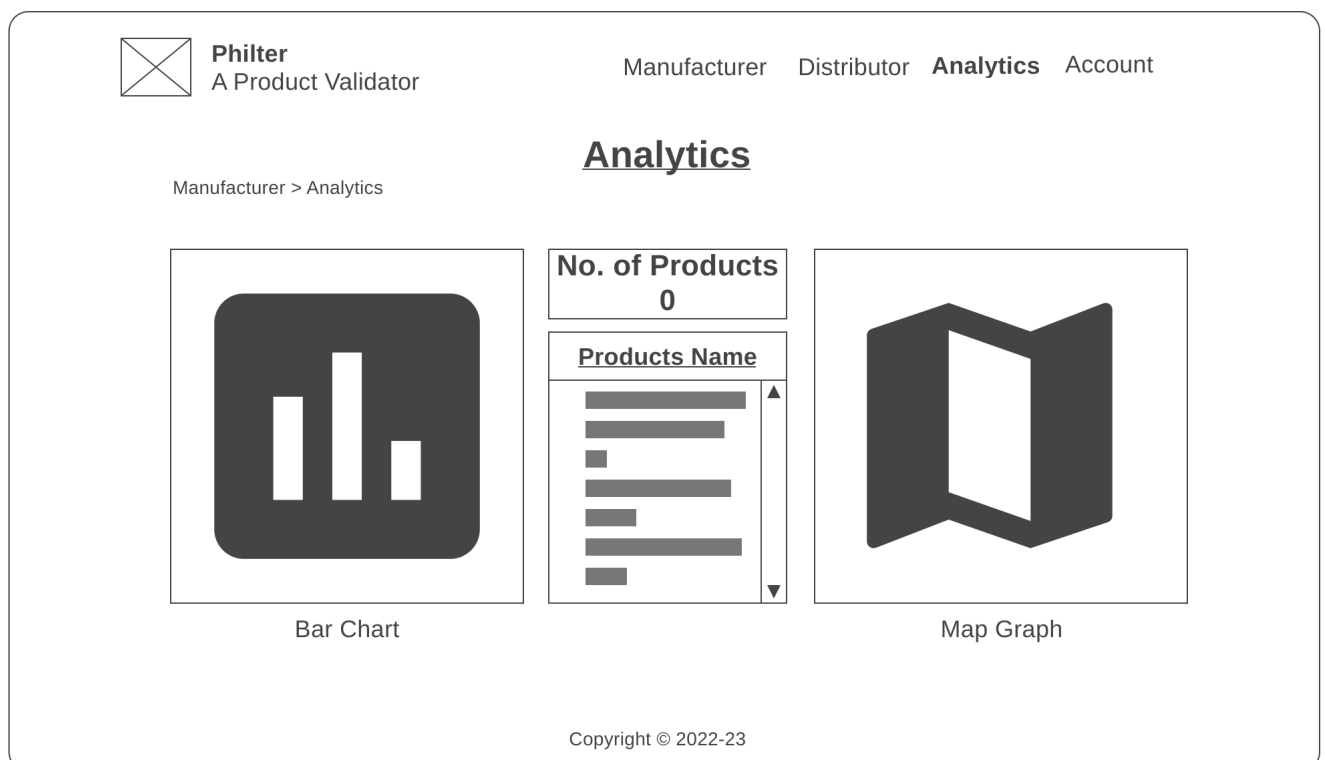FIGURE 2.7: Track Distributor

FIGURE 2.8: Add Distributor

FIGURE 2.9: Analytics
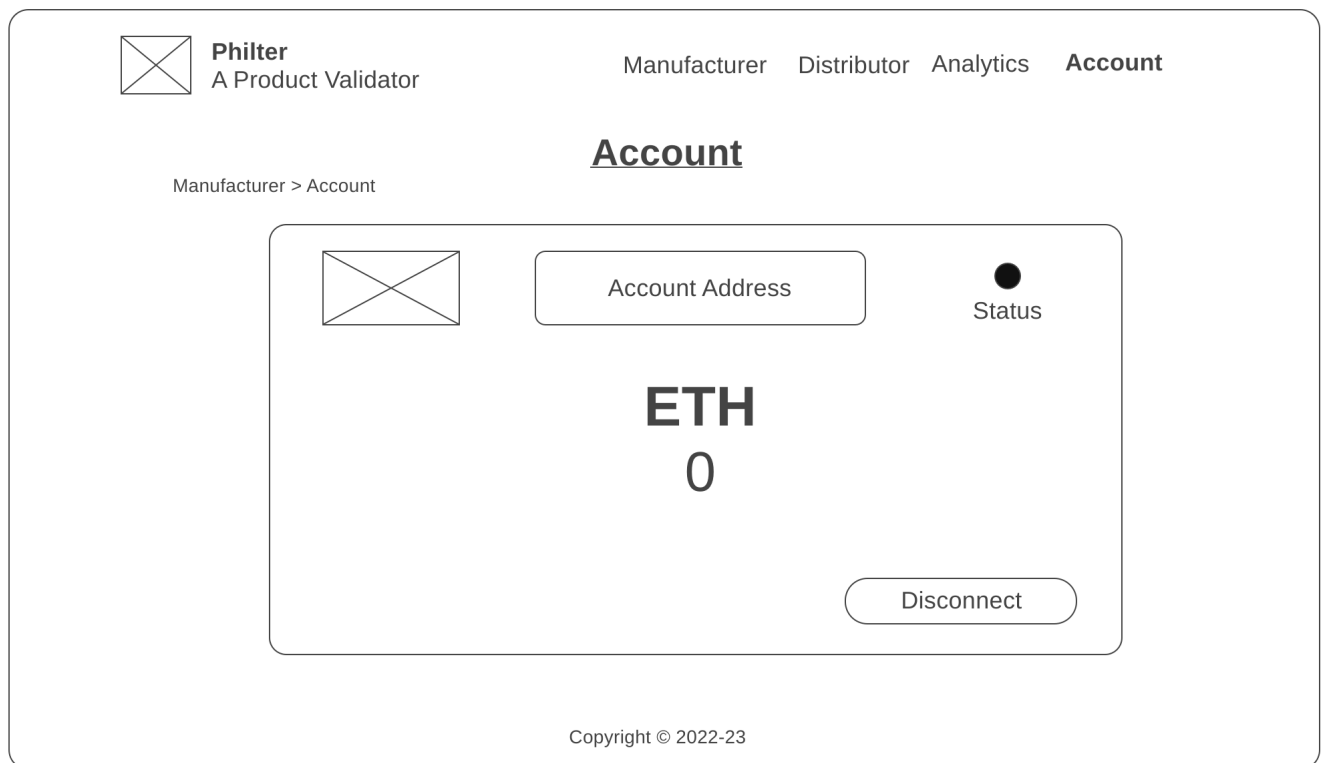
FIGURE 2.10: Account
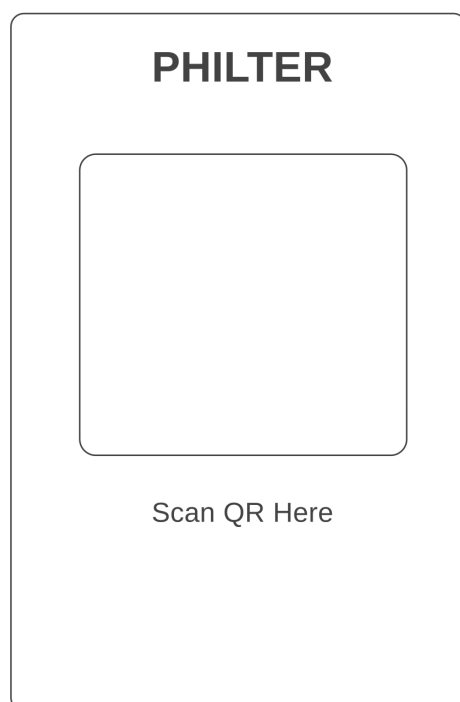
FIGURE 2.11: Philter

FIGURE 2.12: Fake Product

FIGURE 2.13: Real Product

FIGURE 2.14: FeedBack Form

2.2 Use case

FIGURE 2.15: WholeSystem

2.2.1 Add Product

Table 2.1: Add Product

Use Case	Add Product
ID	1
Use Case Description	The user will add product details and quantities to create the QR codes.
Actors	Manufacturer.
Trigger	Add product panel will open.
Pre-Condition	The system must be connected to MetaMask.
Post-Condition	The Product's QR will be generated
Main Scenario	Click on add product And All the credientials
Extension	For Missing Field , the system will show error

2.2.2 Track Product

Table 2.2: Track Product

Use Case	Track Product
ID	2
Use Case Description	The user will be able to check which distributor has been added.
Actors	Manufacturer.
Trigger	The distributor history will be opened.
Pre-Condition	The system must be connected to MetaMask.
Post-Condition	The complete distributors record will be shown.
Main Scenario	Click The track to check which product is add in the list
Extension	It search is invalid then it show error

2.2.3 Add Distributor

TABLE 2.3: Add Distributor

Use Case	Add Distributor
ID	3
Use Case Description	The user will add distributors who will distribute the products.
Actors	Manufacturer.
Trigger	Add distributor panel will open.
Pre-Condition	The system must be connected to MetaMask.
Post-Condition	A new distributor will be added.
Main Scenario	Manufacture can add distributor by click on add distributor.
Extension	If field is miss then it will show error message

2.2.4 QR Scanner

TABLE 2.4: QR scanner

Use Case	QR Scanner
ID	4
Use Case Description	The consumer will open the app and scan the product's QR code for validation.
Actors	Consumer.
Trigger	QR code scanner will be open.
Pre-Condition	The system must be connected to internet.
Post-Condition	The product's validation message will be shown.
Main Scenario	click on scanner(philter) to scan the product
Extension	If product is fake it will show error

2.3 Activity Diagram
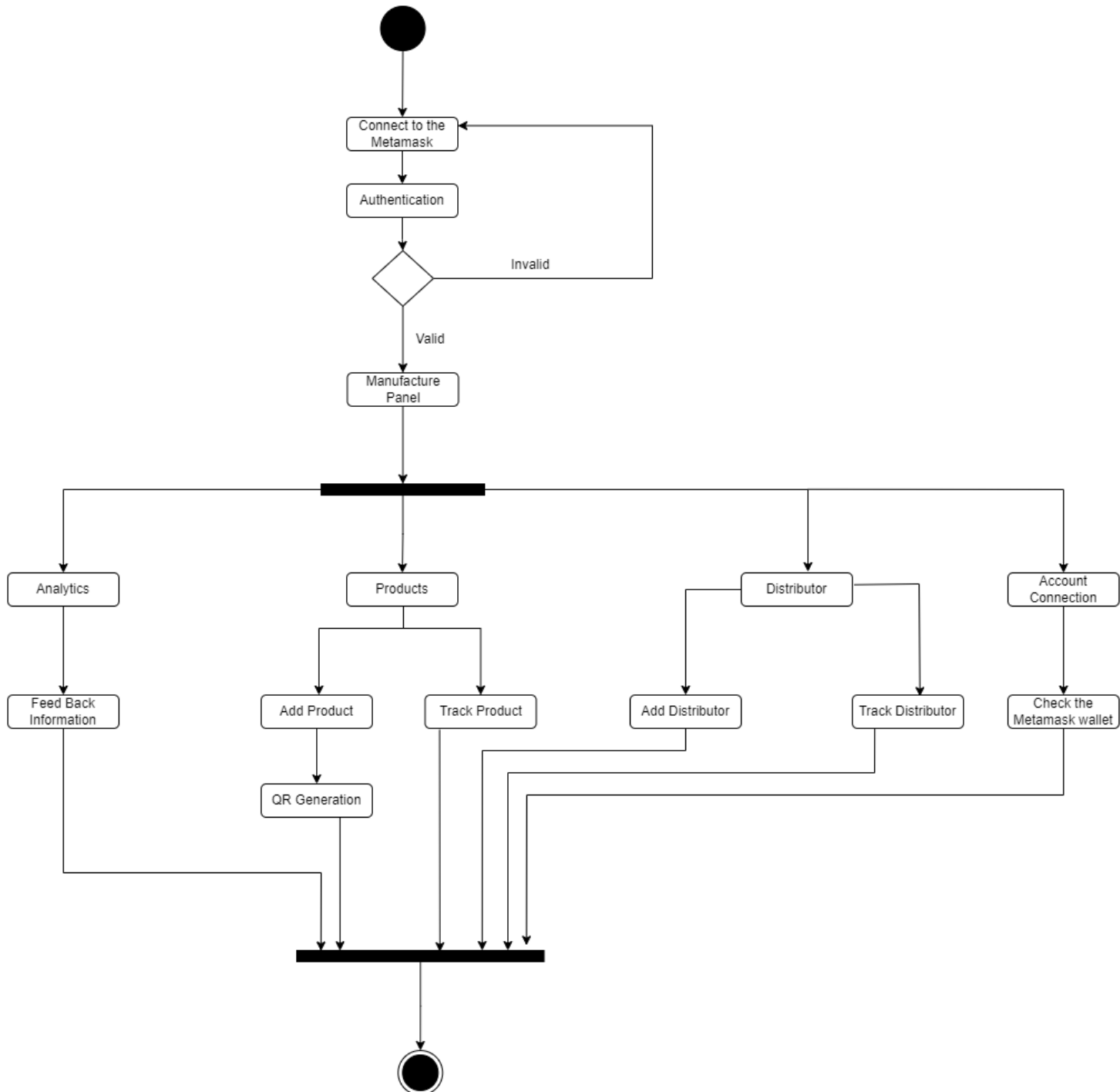
2.3.1 Manufacturer Flow
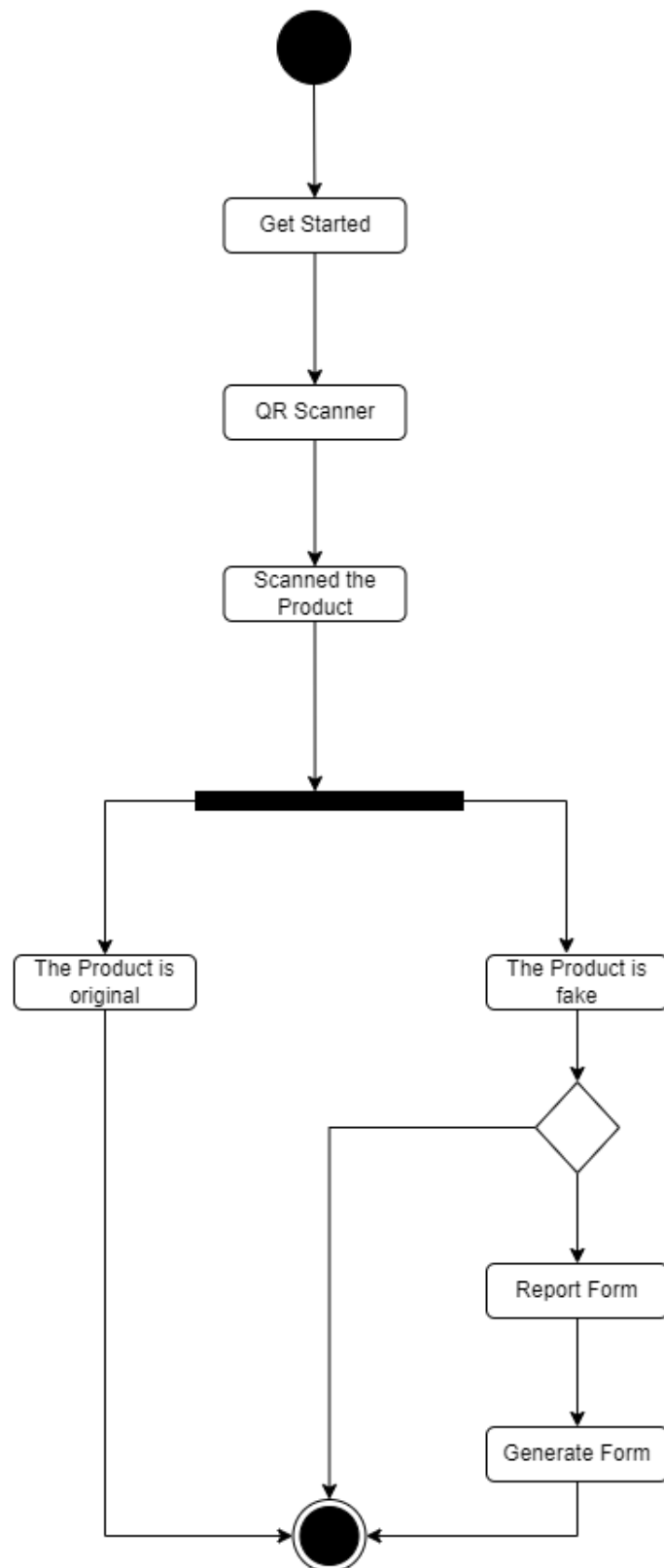

FIGURE 2.16: Activity Diagram

2.3.2 User Flow

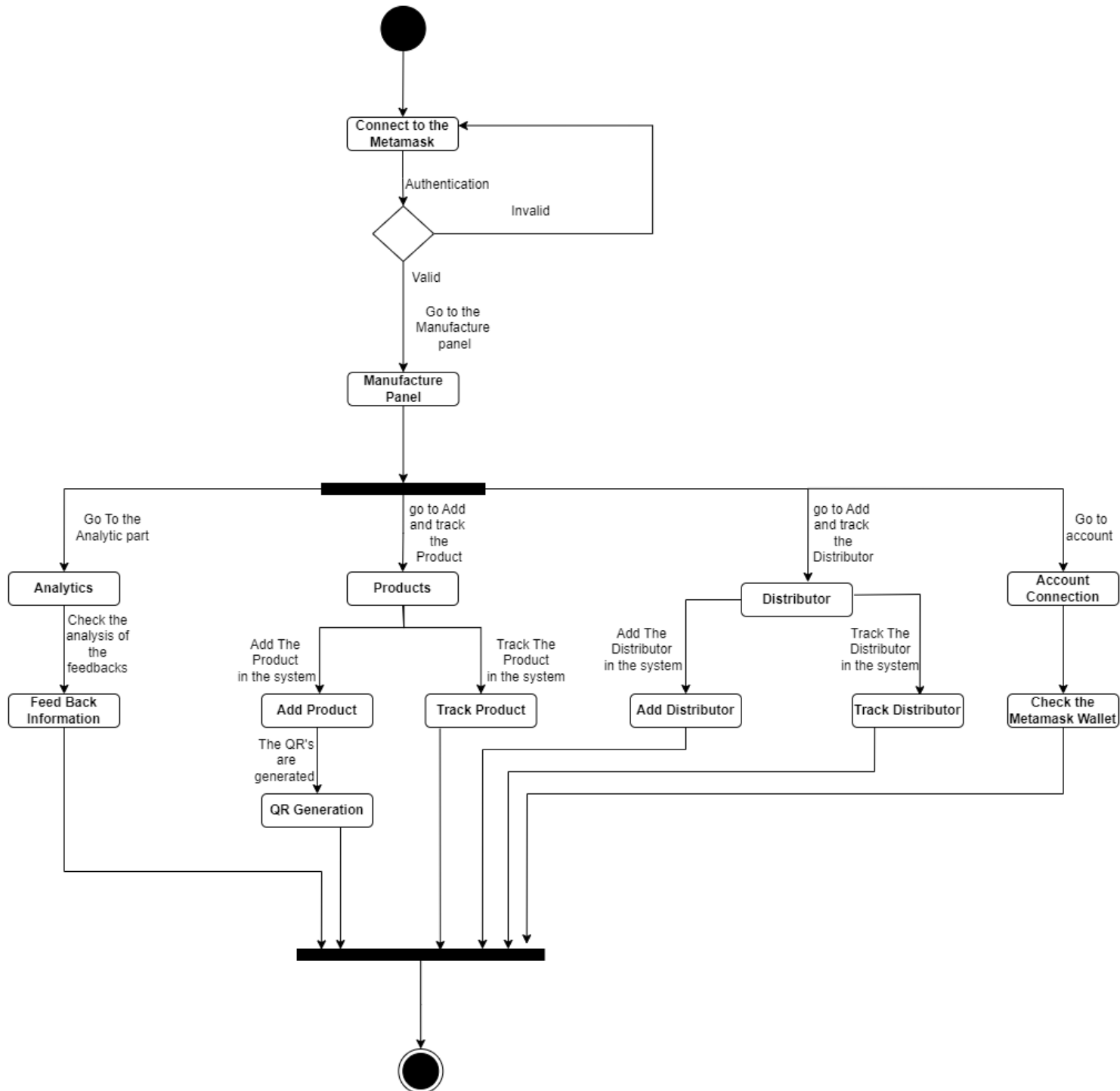## 2.4 State Diagram

2.4.1 Manufacturer Flow

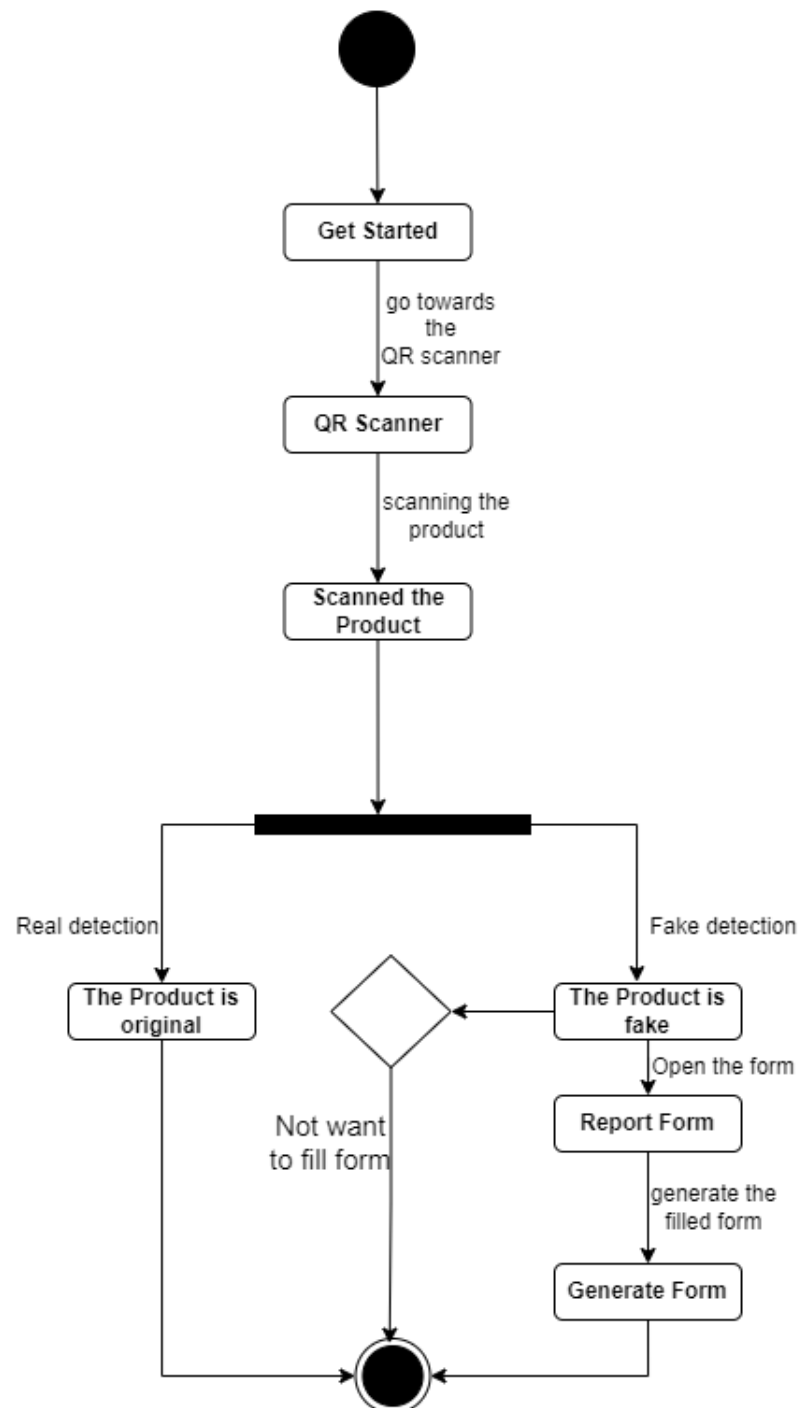FIGURE 2.18: State Diagram

2.4.2 User Flow

FIGURE 2.19: State Diagram

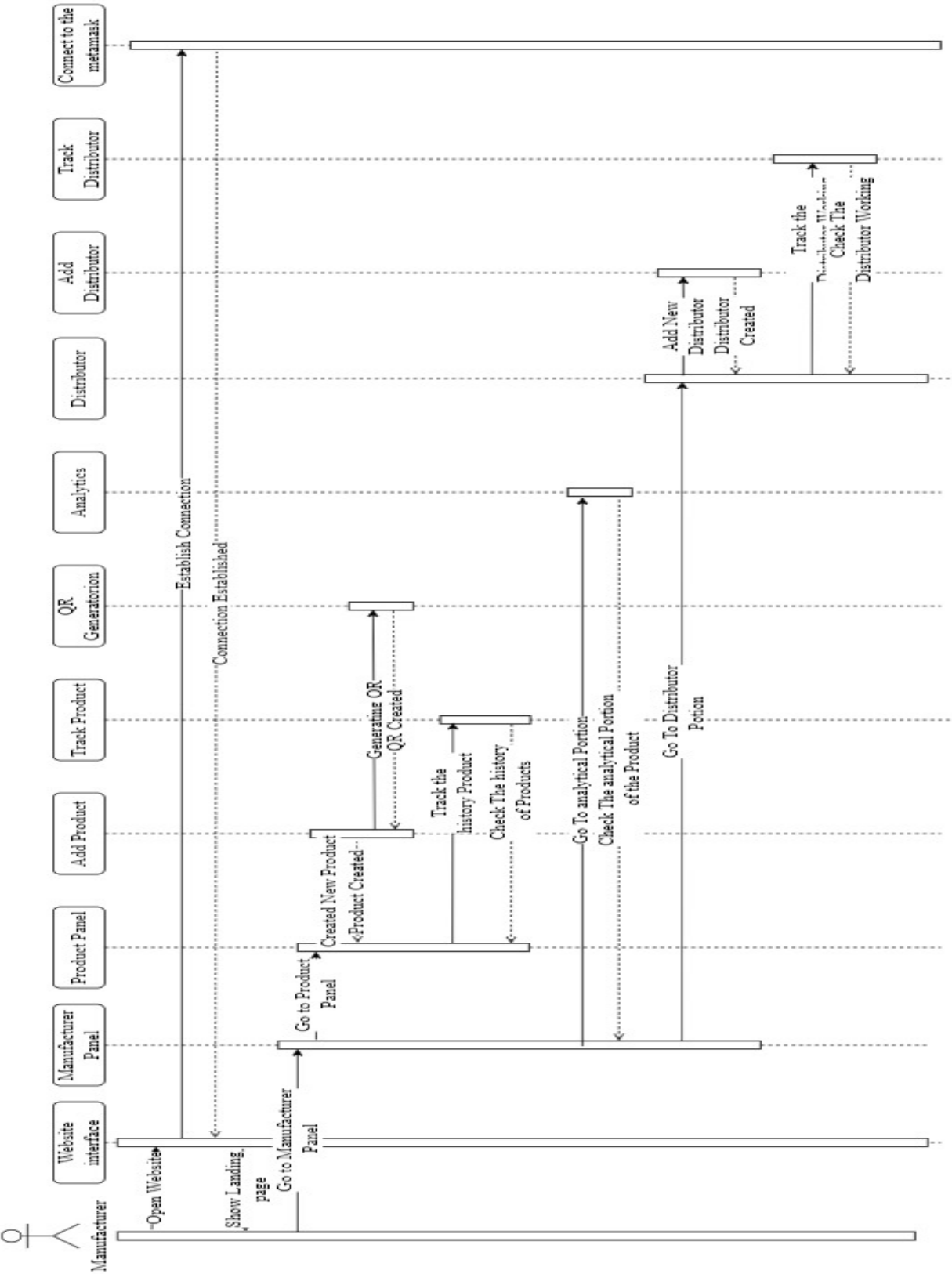## 2.5 Sequence Diagram

2.5.1 Manufacturer Flow
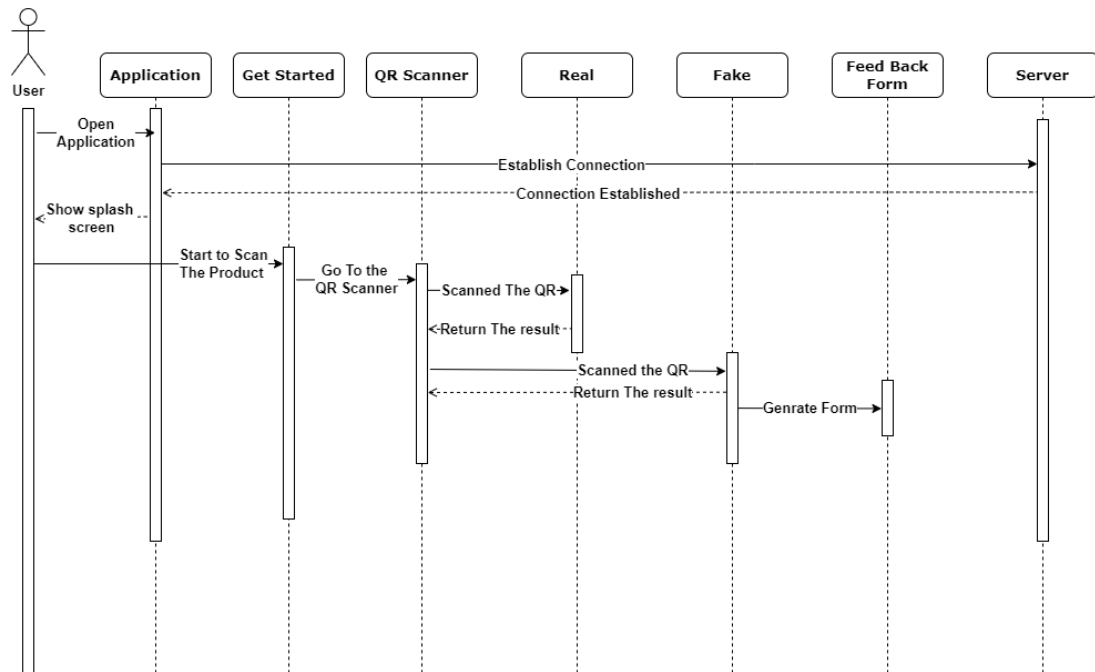
FIGURE 2.20: Sequence Diagram

2.5.2   User Flow

FIGURE 2.21: Sequence Diagram

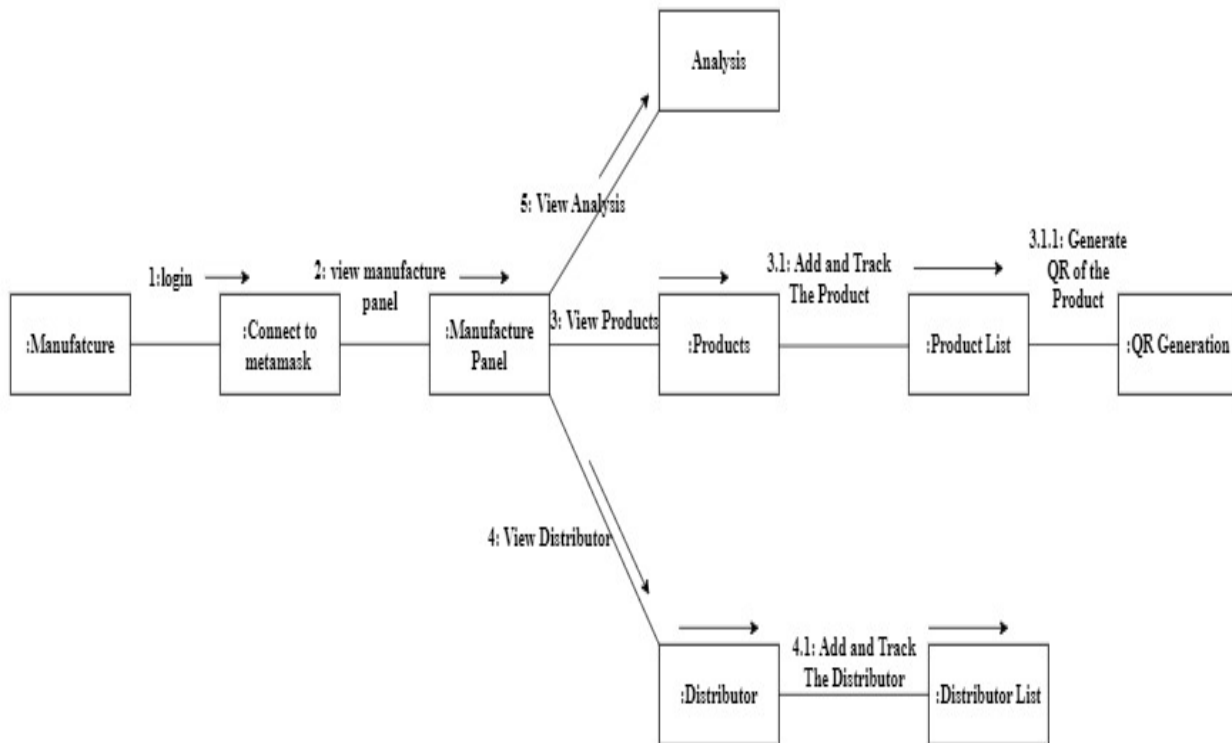## 2.6 Collaboration Diagram

2.6.1 Manufacture Flow

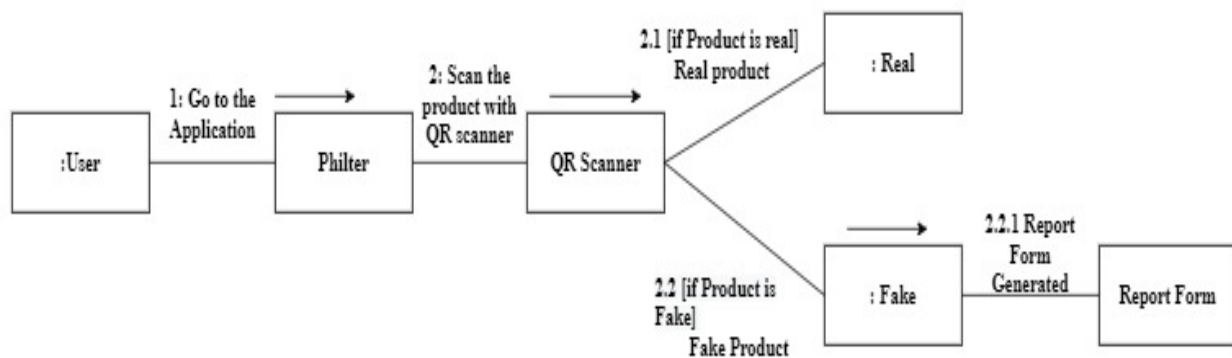FIGURE 2.22: Collaboration Diagram

2.6.2 User Flow

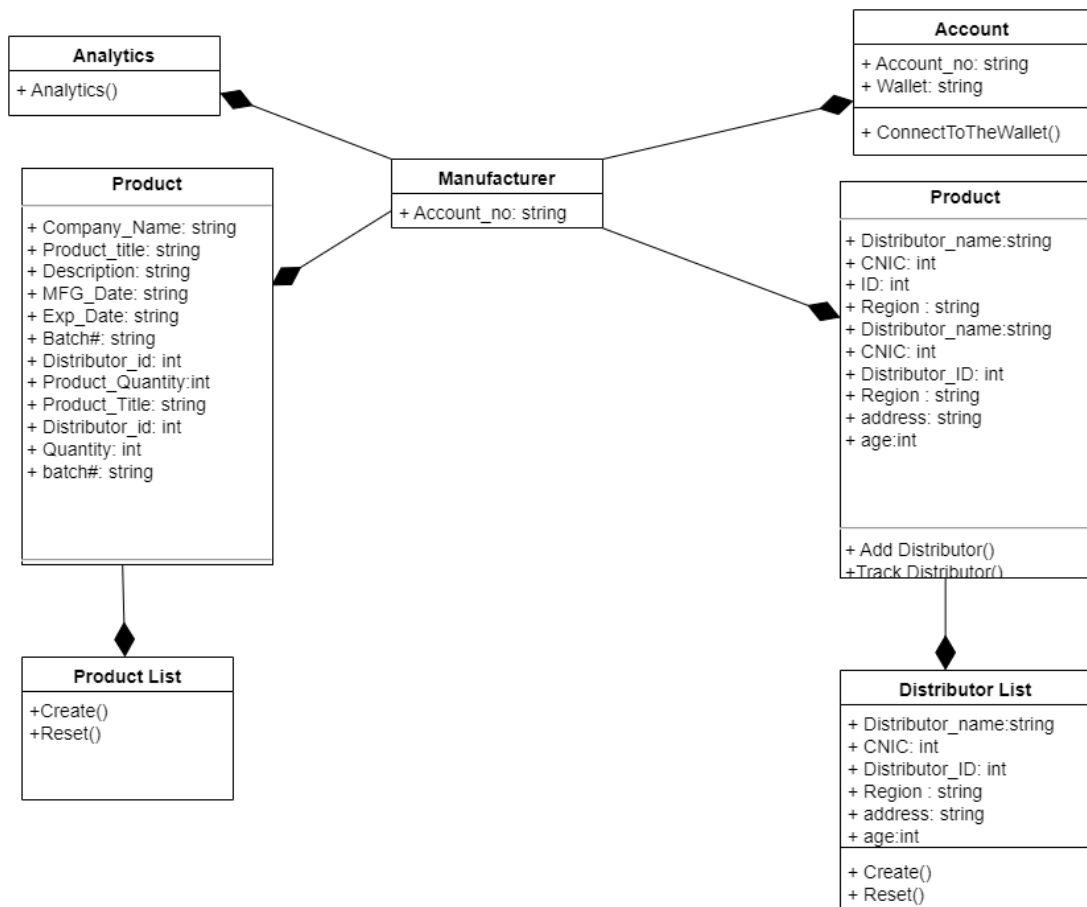FIGURE 2.23: Collaboration Diagram

2.7 Class Diagram

FIGURE 2.24: Class Diagram
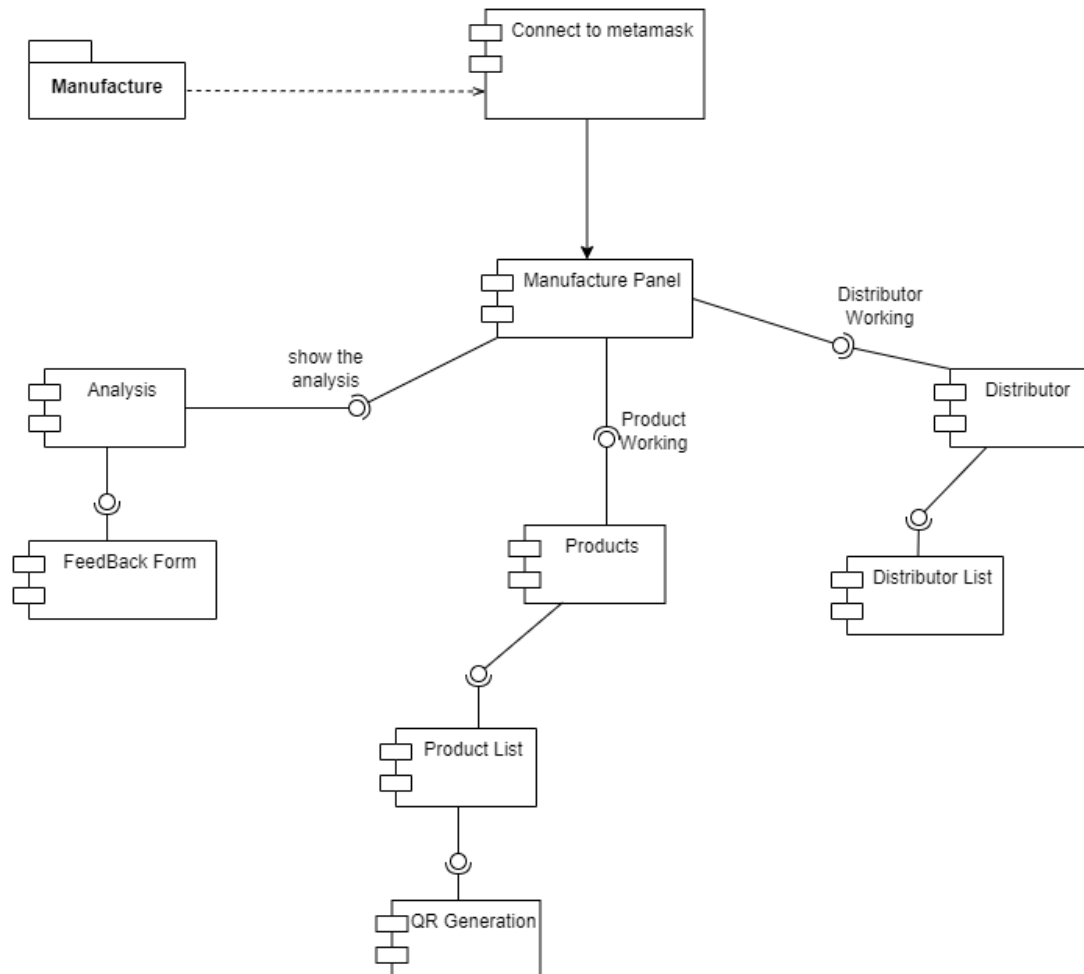
2.8 Component Diagram

2.8.1 Manufacturer Flow
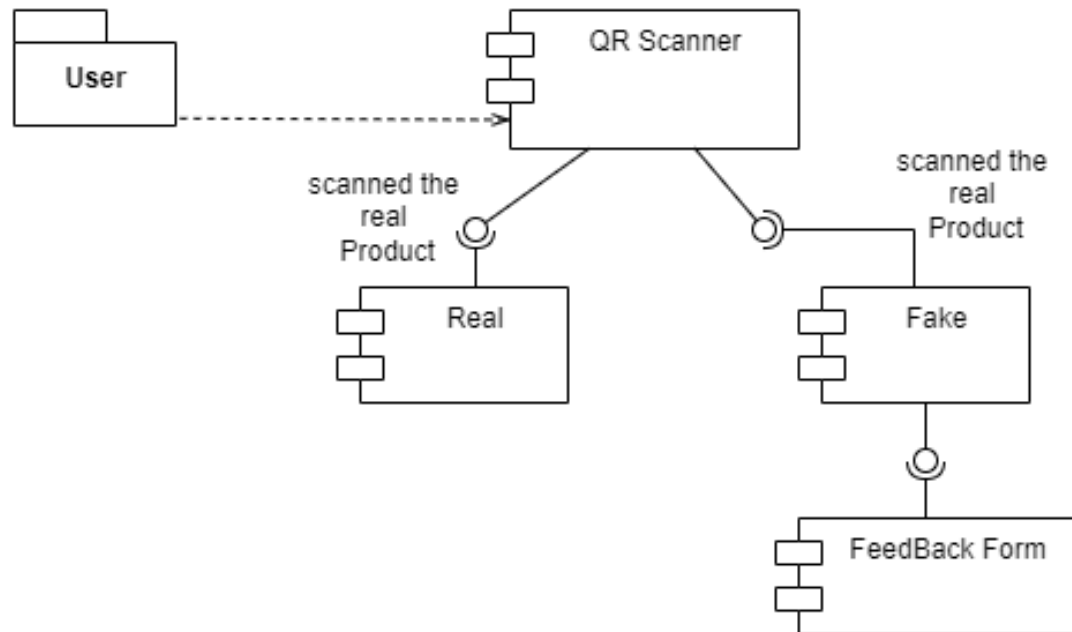

FIGURE 2.25: Component Diagram

2.8.2 User Flow

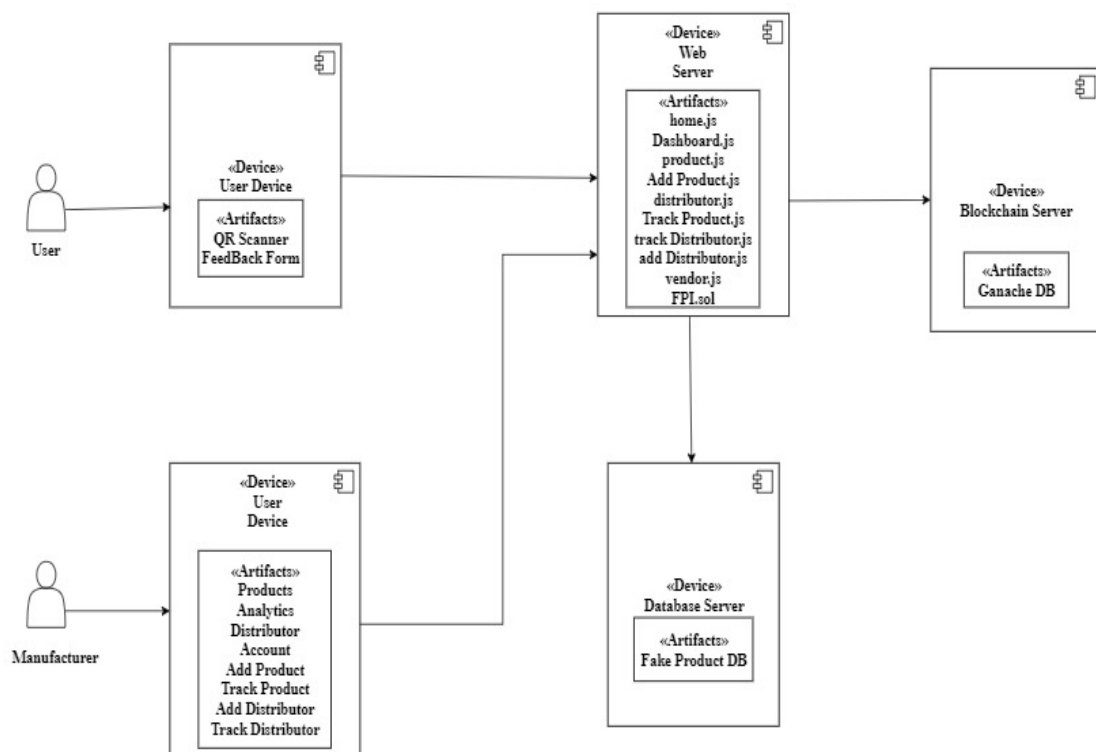
FIGURE 2.26: Component Diagram

2.9 Deployment Diagram
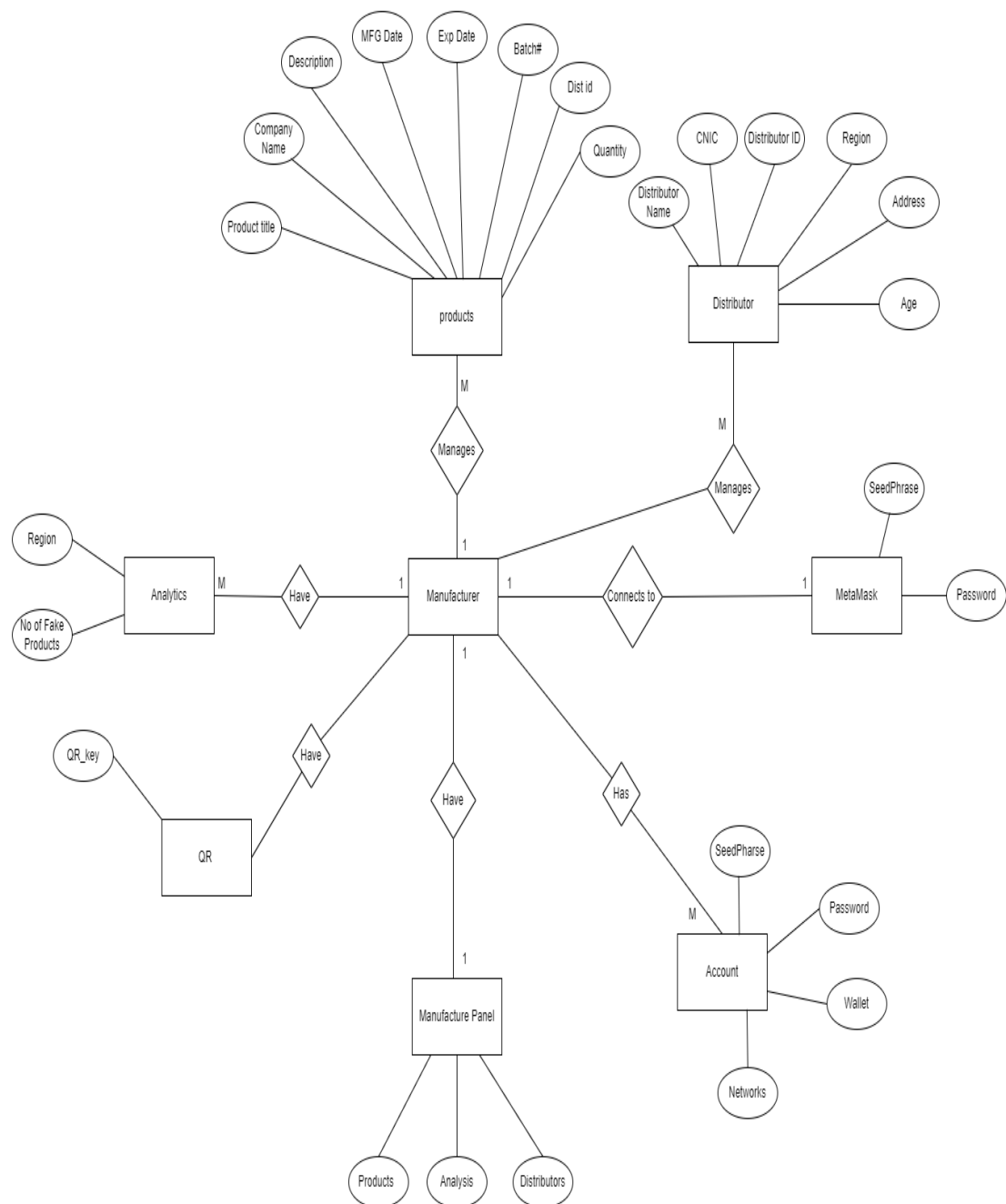

FIGURE 2.27: Deployment Diagram

2.10   ER Diagram