



Blockchain-Enabled Prawn Quality Tracking System

Assignment:3

Course Title: System Analysis and Design

Course ID: CSE307

Submitted to:

Sabrina Alam

Lecturer

Department of Computer Science and Engineering

Independent University, Bangladesh

Submitted by:

Name	Id	Section
Md Asif Intesar	2022430	2
Mohammad Azwad Saadat Sarwar	1910902	3
Taiseer Rakiin Ahad	1911242	3
Avijit Saha	1930109	3
Md Yakub Hossain	1830968	3

Date of Submission: 23/08/2023

Table of Contents

1. Entity Relationship Diagram	3
2. Logical Data Flow Diagrams	4
3. Physical Data Flow Diagrams.....	6
4. Activity Diagrams	7
5. Sequence and Communication Diagrams From Use Case Scenarios.....	10
6. Class Diagram	13
7. Statechart Diagrams.....	14
8. CRUD matrix.....	15

1. Entity Relationship Diagram

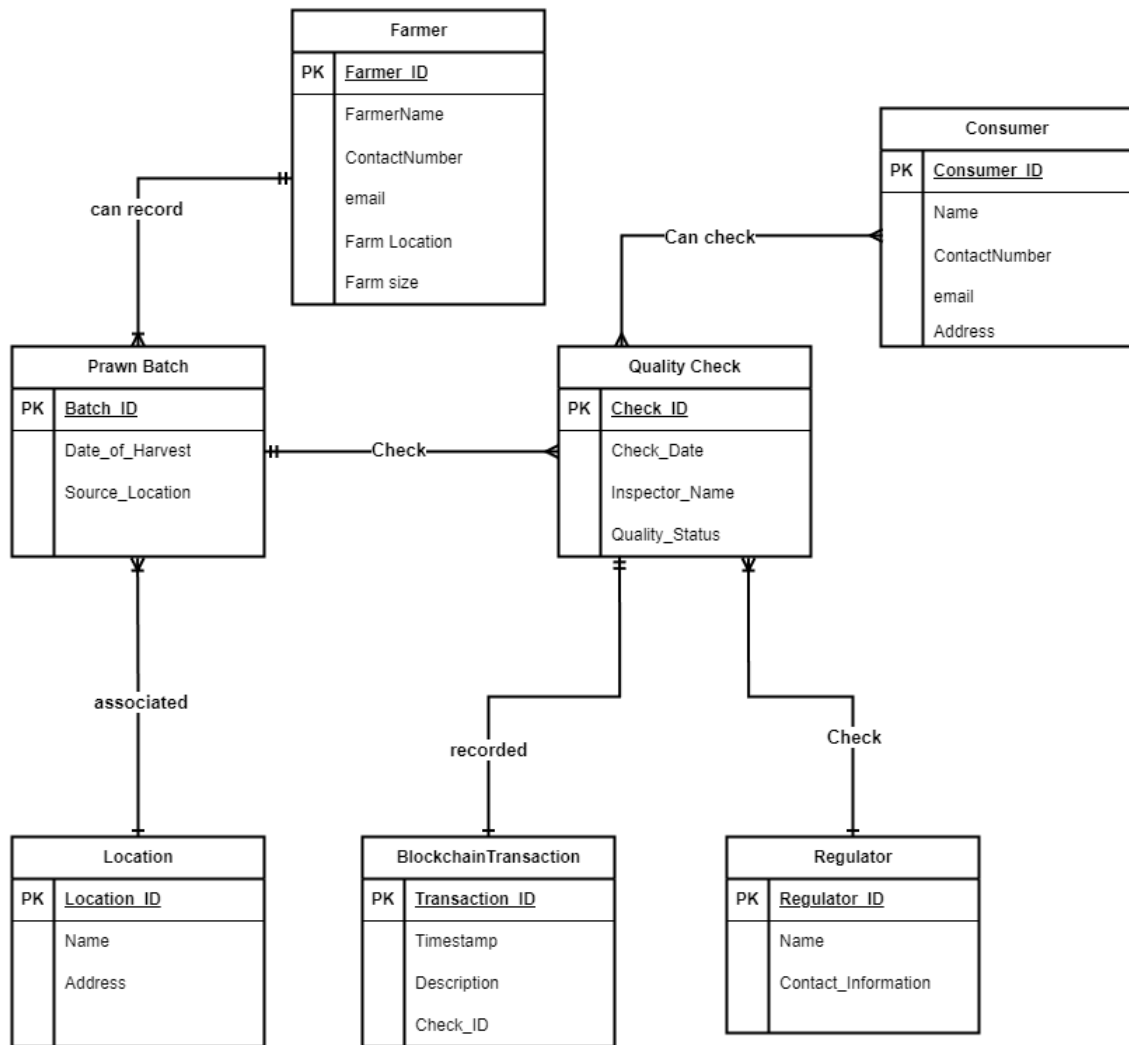


Figure 1.1: Entity Relationship Diagram for Blockchain-Enabled Prawn Quality Tracking System

2. Logical Data Flow Diagrams

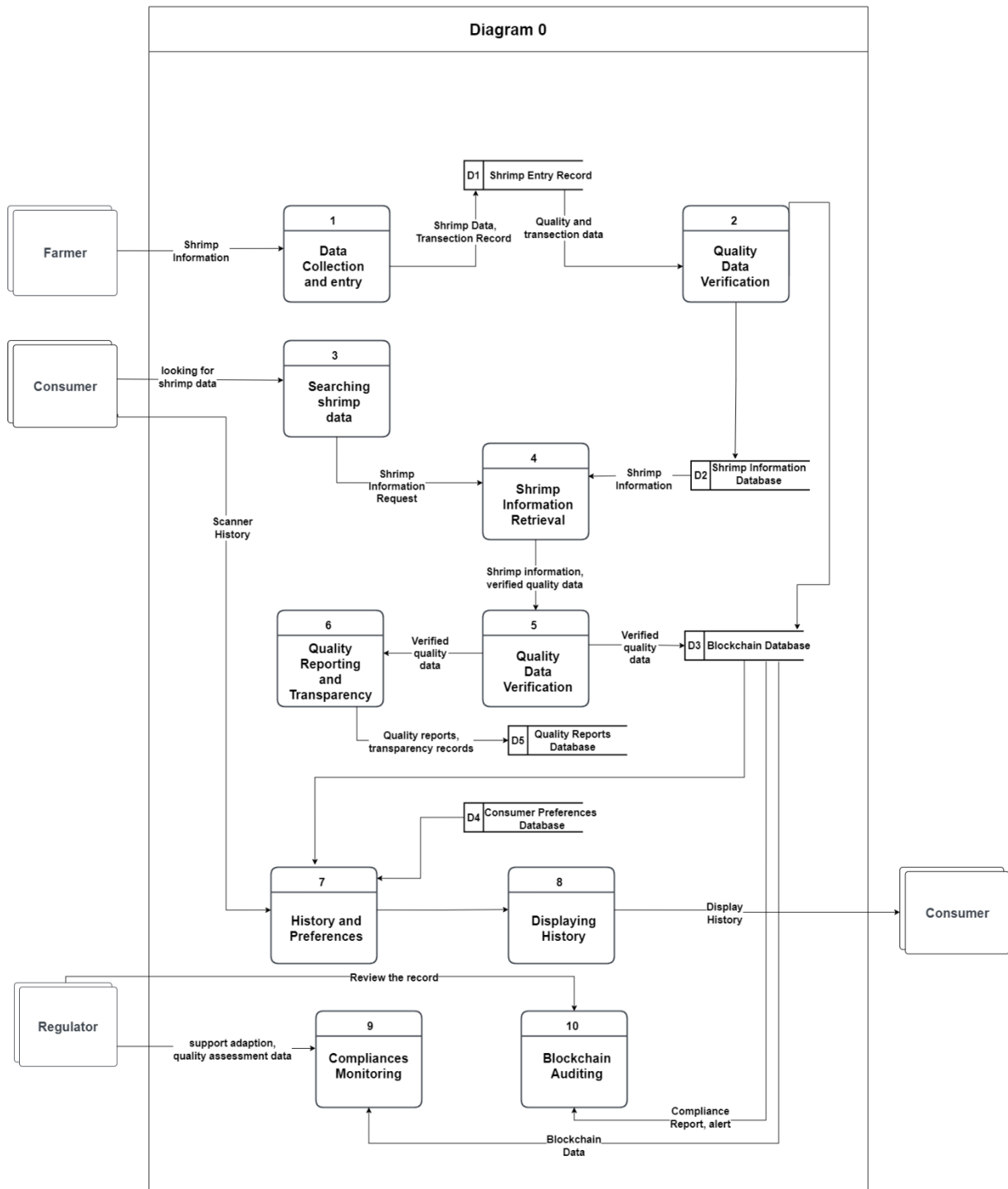


Figure 2.1: Logical Data Flow diagram 0

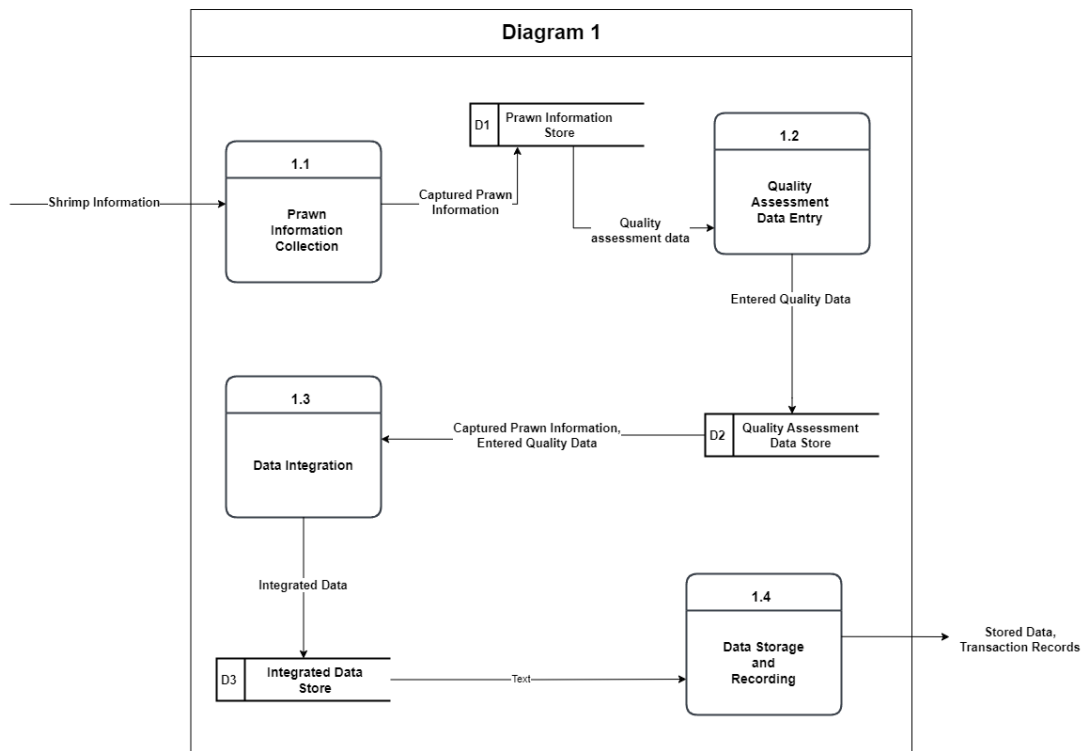


Figure 2.2: Logical Data Flow diagram 1

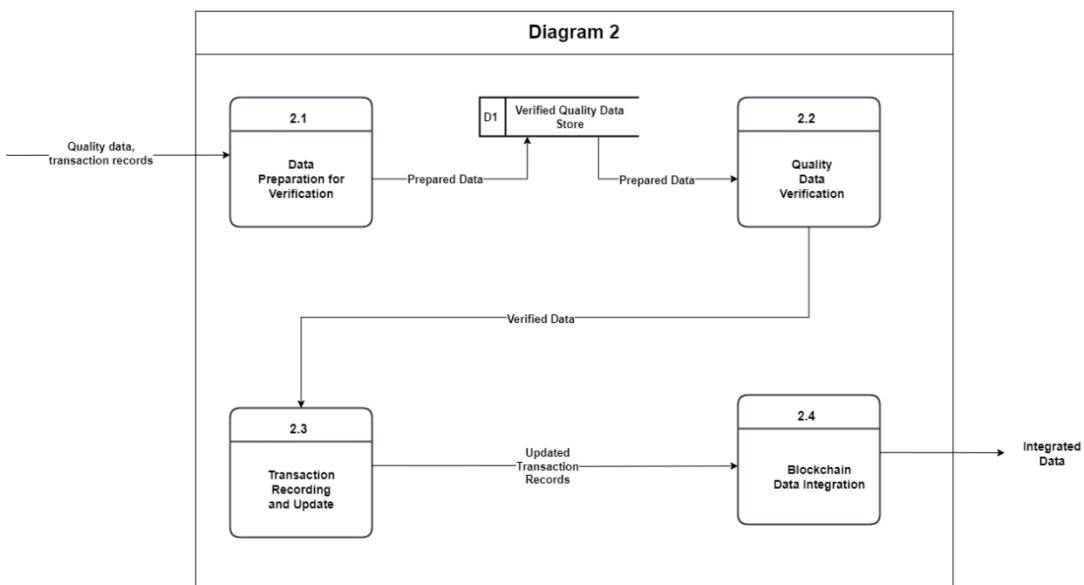


Figure 2.3: Logical Data Flow diagram 2

3. Physical Data Flow Diagrams

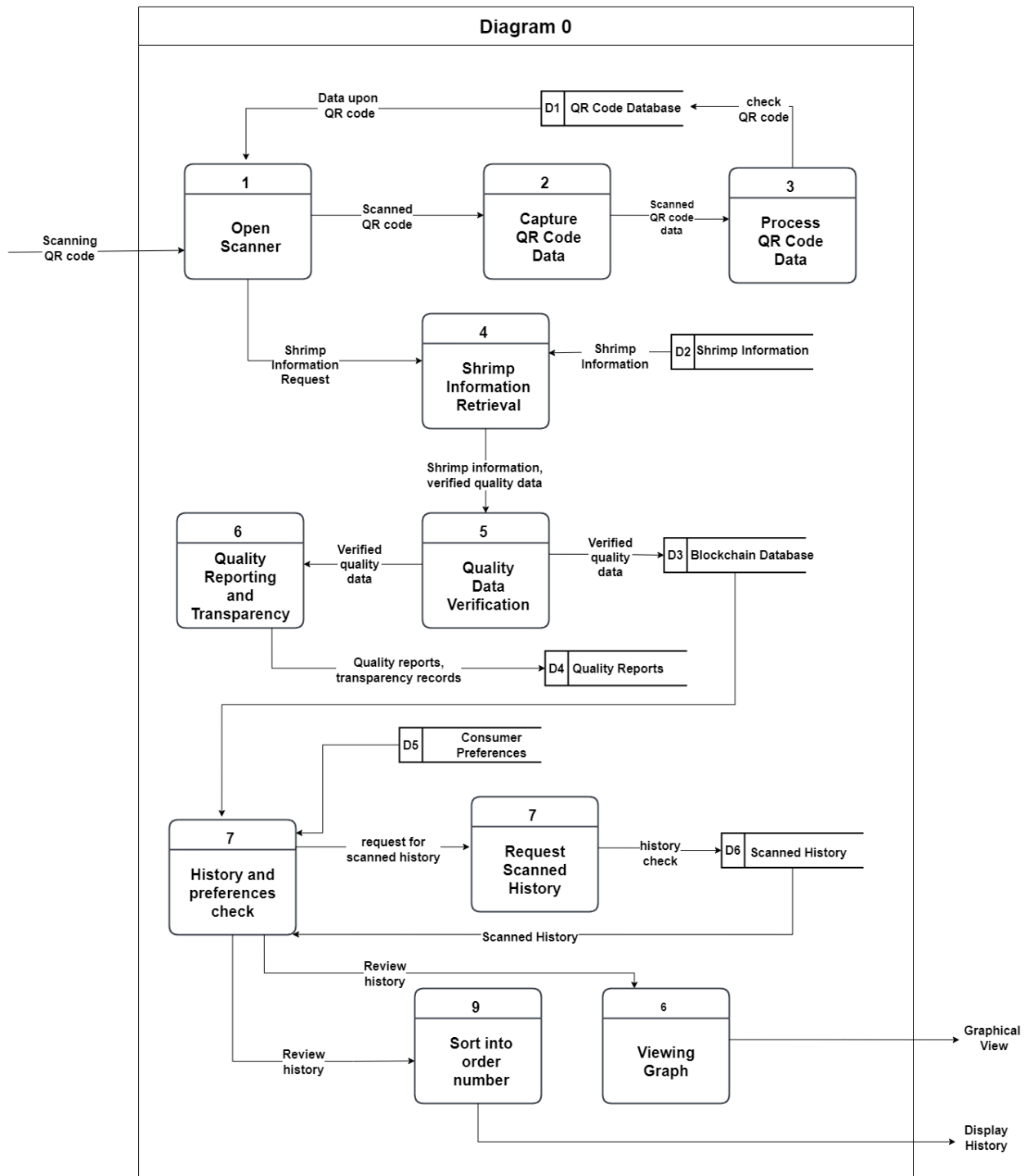


Figure 3.1: Physical Data Flow diagram 0

4. Activity Diagrams

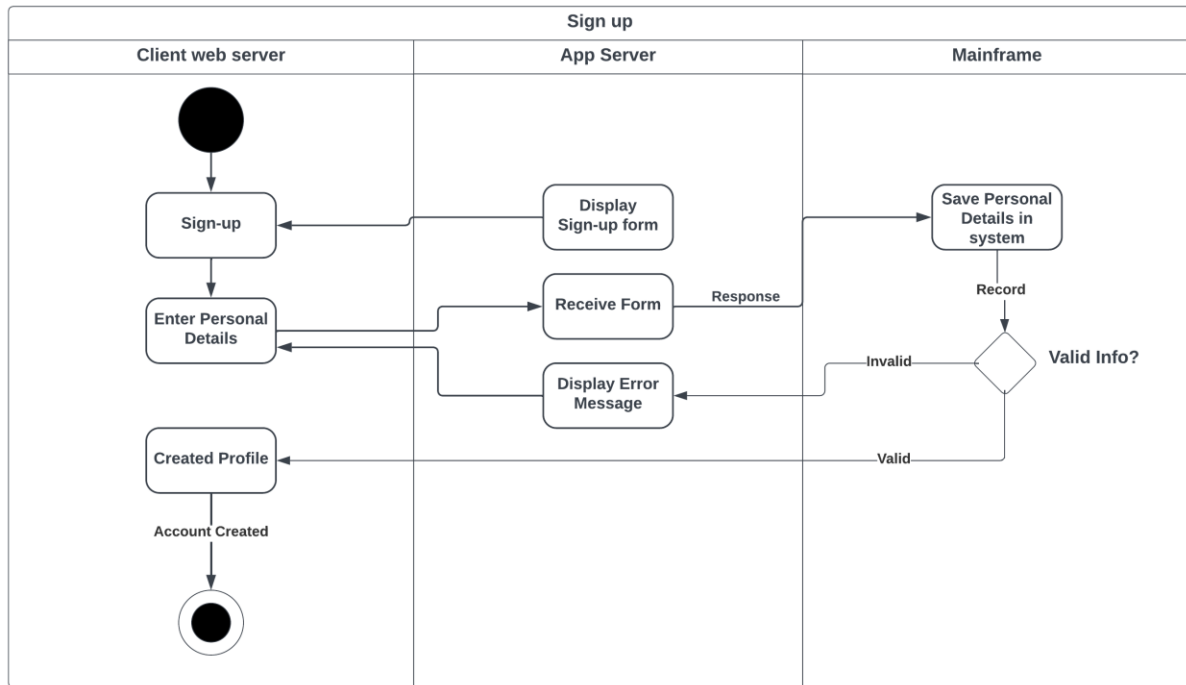


Figure 4.1: Activity diagram (Sign-Up)

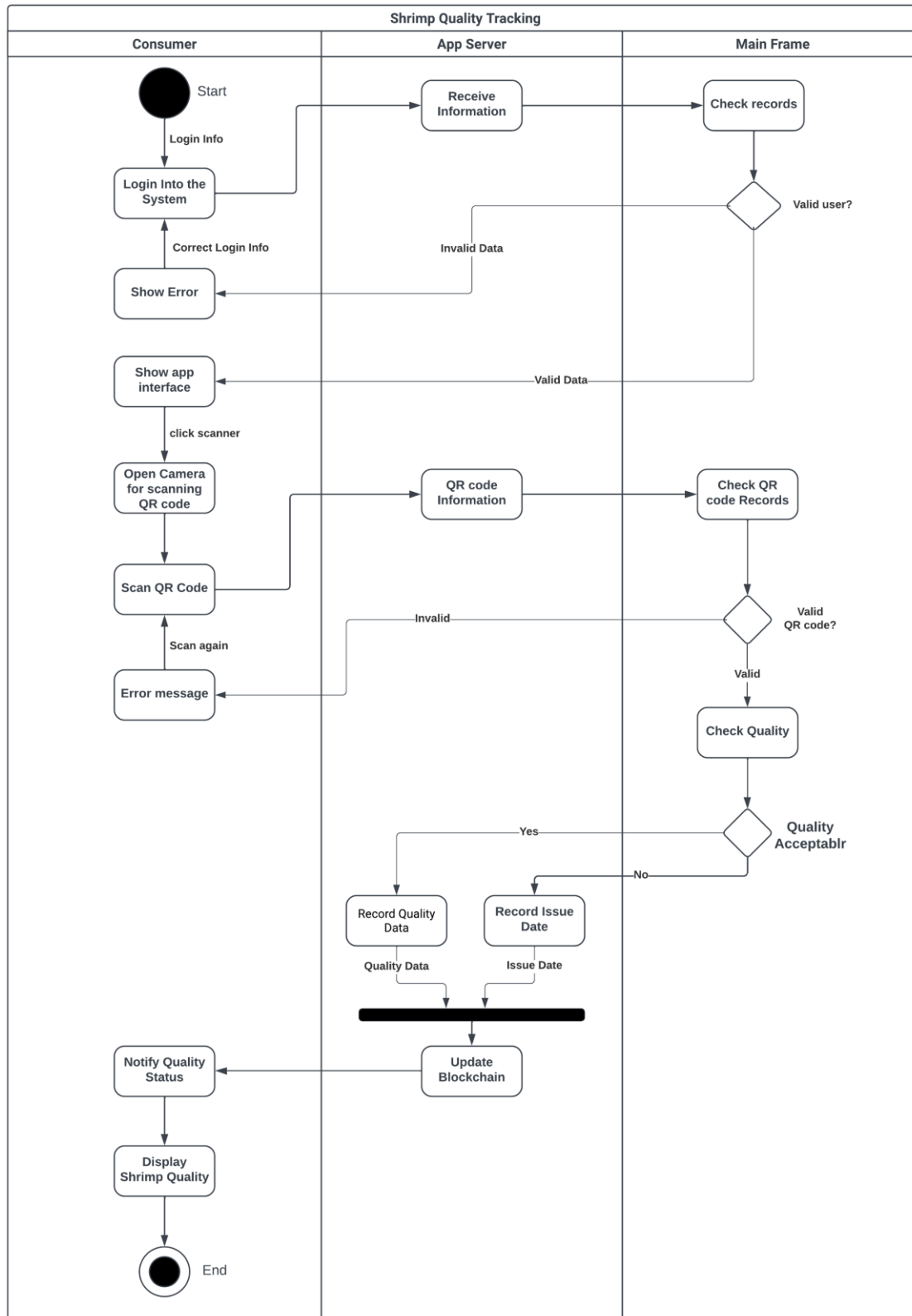


Figure 4.2: Activity diagram (Shrimp Quality Tracking)

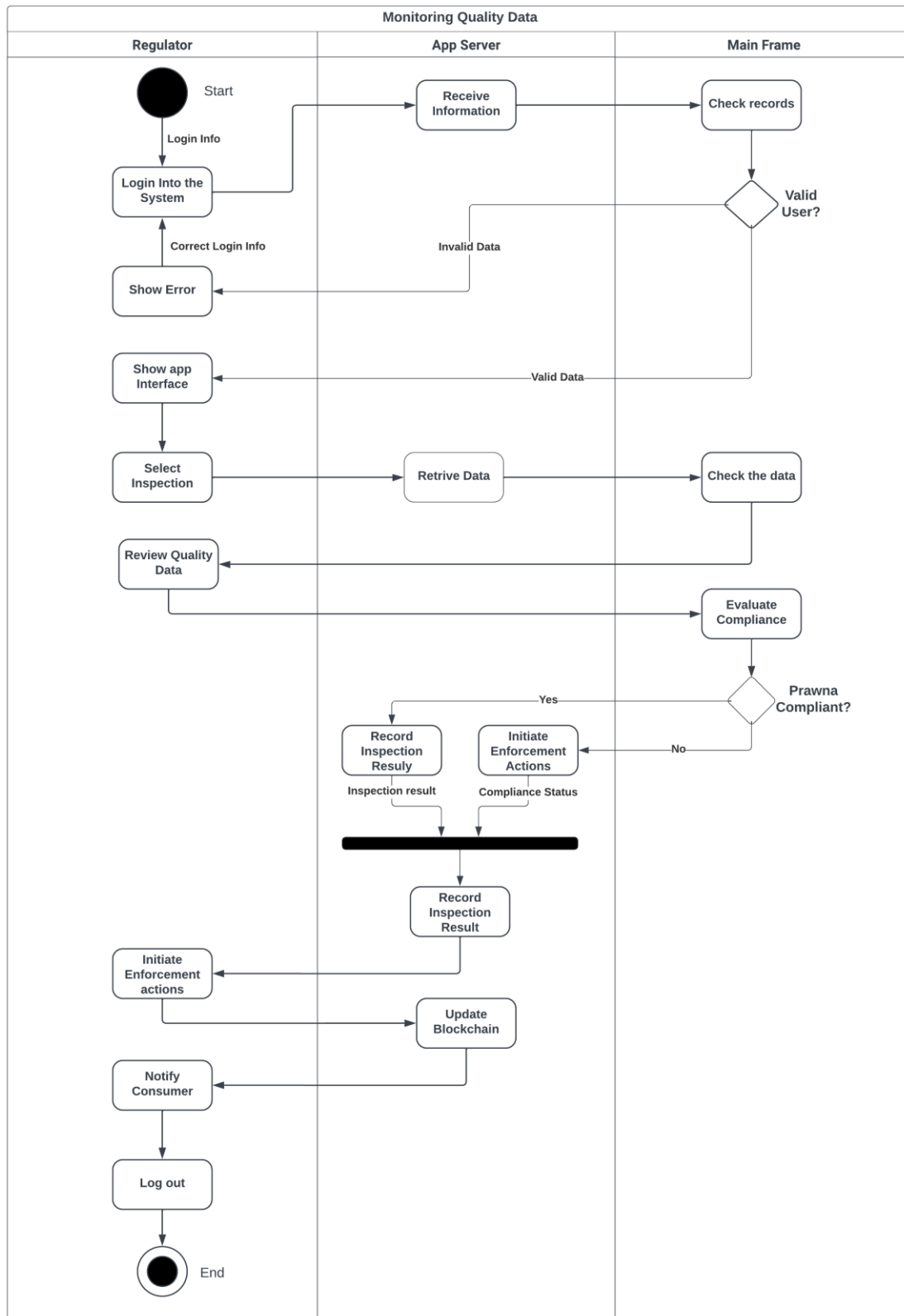


Figure 4.3: Activity diagram (Monitoring Quality Data)

5. Sequence and Communication Diagrams From Use Case Scenarios

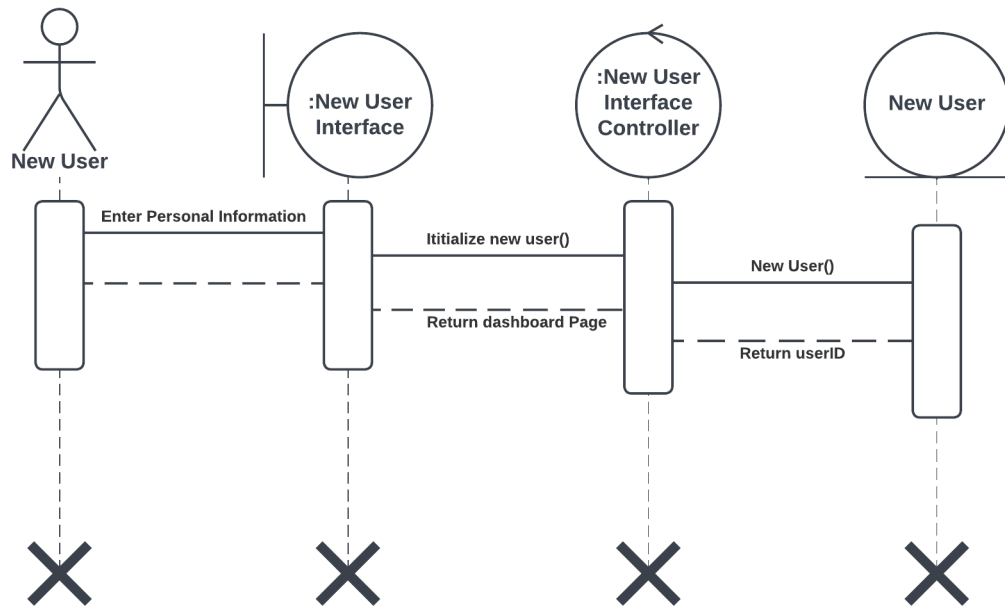


Figure 5.1: Sequence diagram (Sign-up)

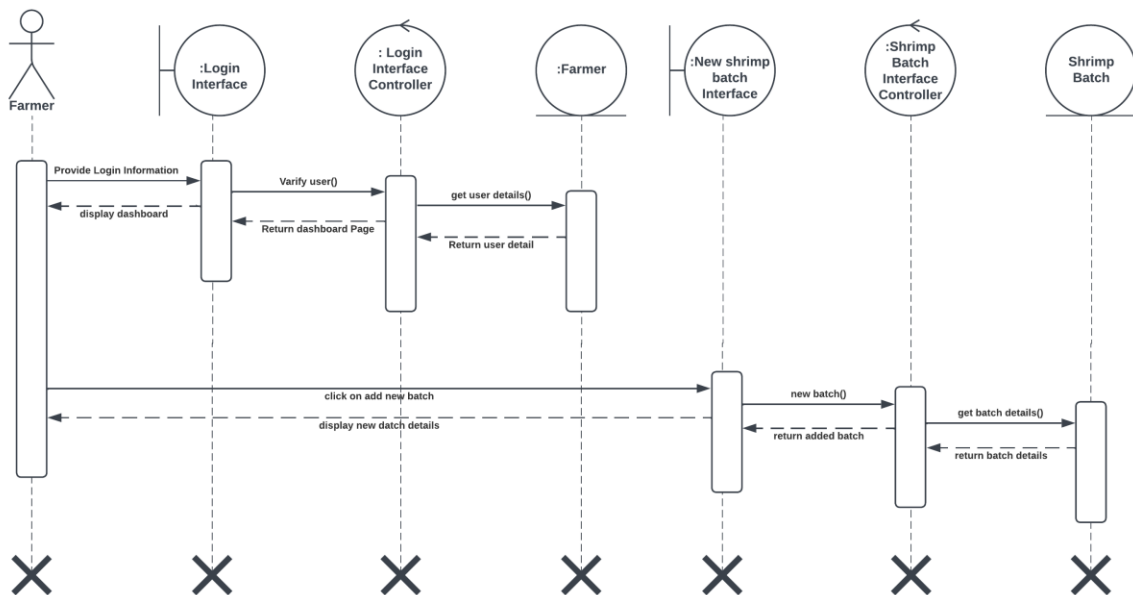


Figure 5.2: Sequence diagram (Add data for New Shrimp batch)

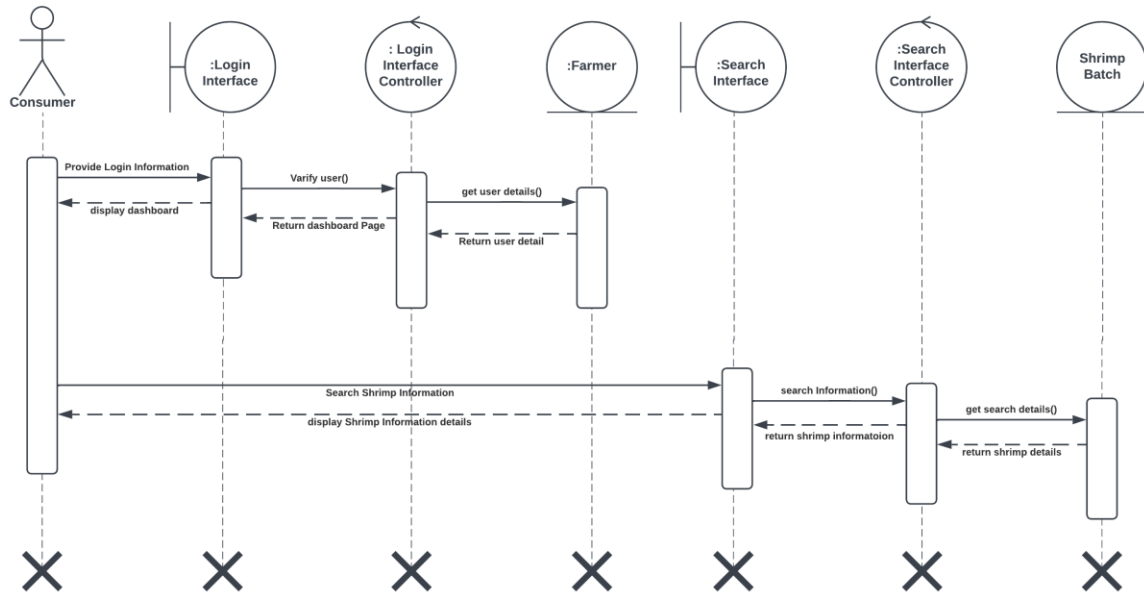


Figure 5.3: Sequence diagram (Search for Shrimp Information)

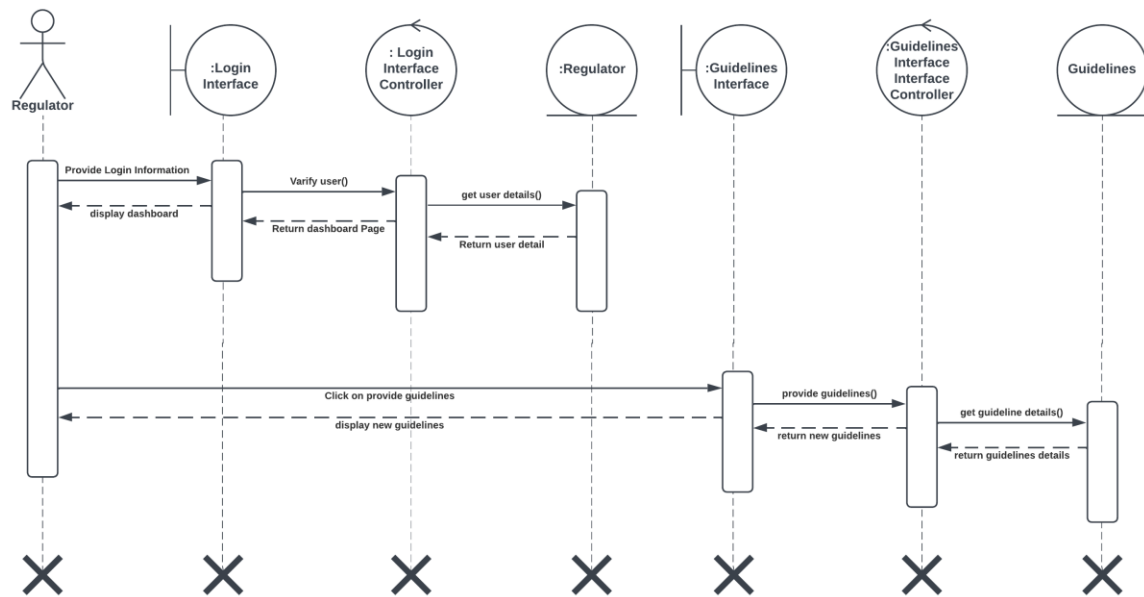


Figure 5.4: Sequence diagram (Provide Guidelines)



Figure 5.5: Communication diagram (Sign-up)



Figure 5.6: Communication diagram (Add data for New Shrimp batch)

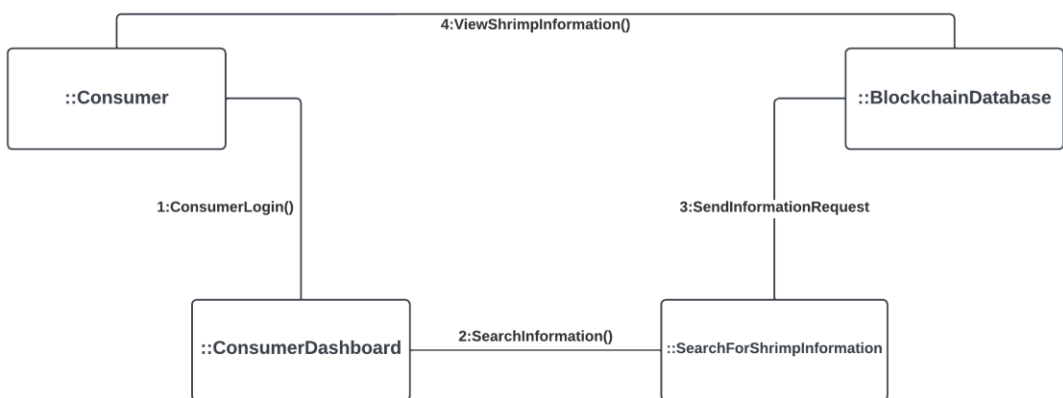


Figure 5.7: Communication diagram (Search for Shrimp Information)

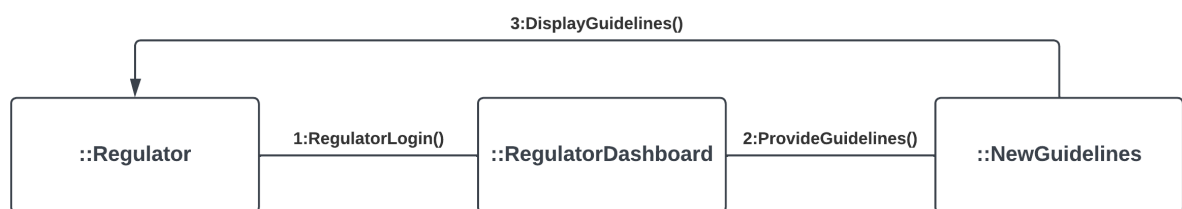


Figure 5.8: Communication diagram (Provide Guidelines)

6. Class Diagram

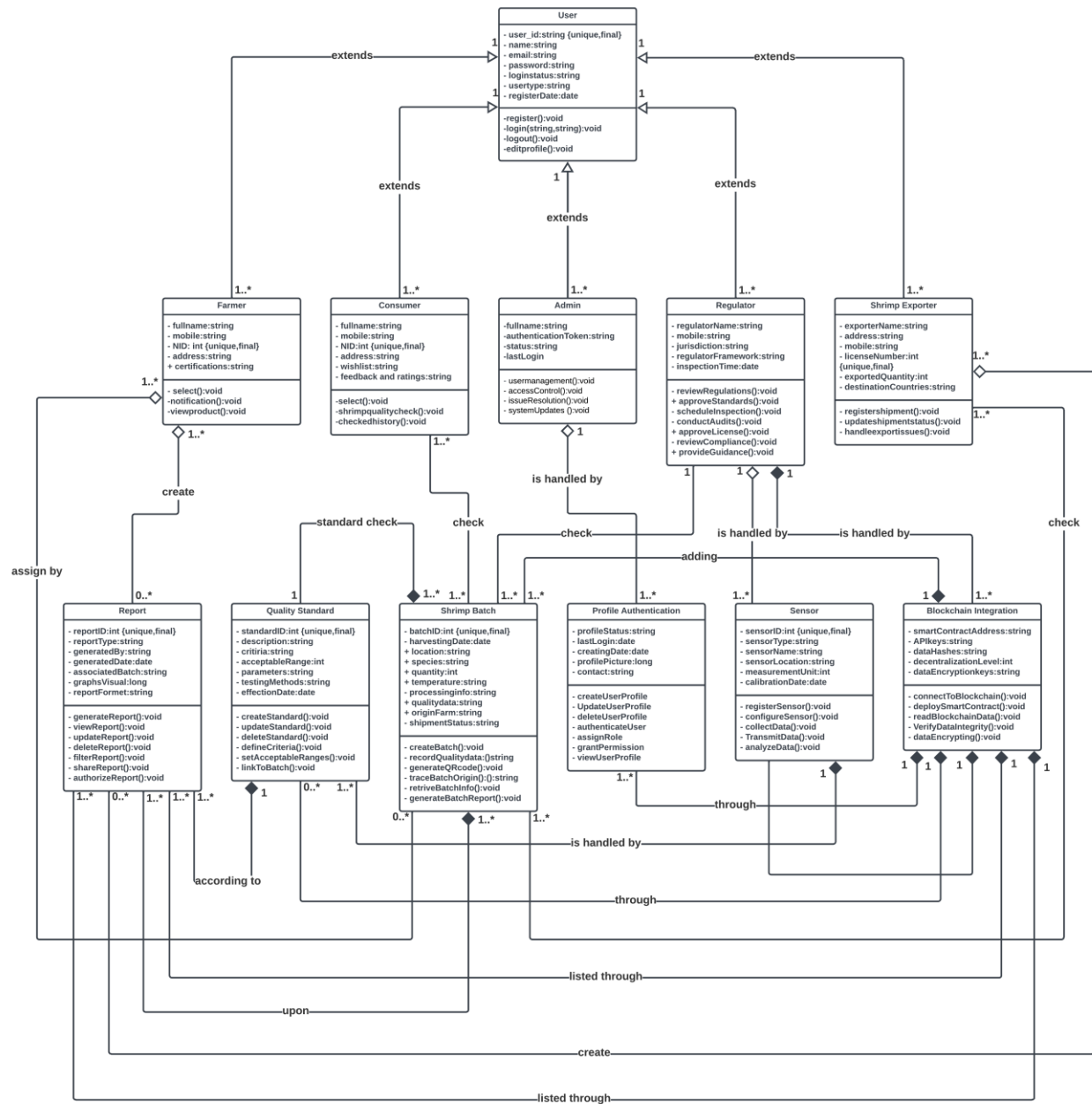


Figure 6.1: Class Diagram for Blockchain-Enabled Prawn Quality Tracking System

7. Statechart Diagrams

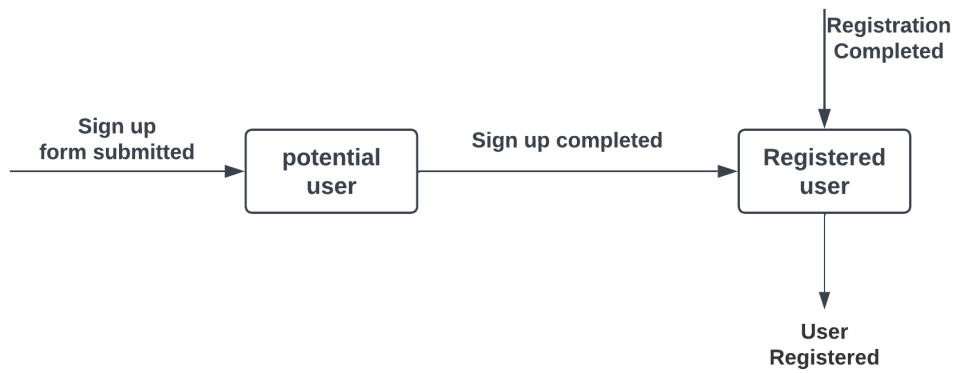


Figure 7.1: Statechart diagram (Potential user to Registered user)

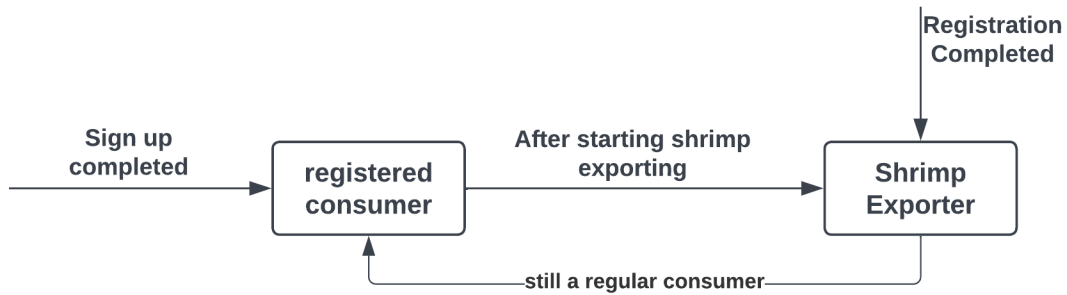


Figure 7.2: Statechart diagram (Registered Consumer to Shrimp Exporter)

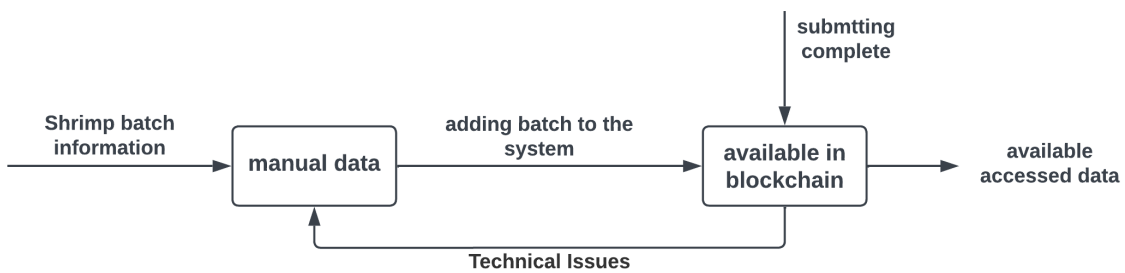


Figure 7.3: Statechart diagram (Manual Data to Automated Data)

8. CRUD matrix

Activity	Customer	Farmer	Admin	Regulator	Shrimp Exporter	Technology Provider
Register	C	C			C	
Login	R	R	R	R	R	
Edit Profile	U	U	U	U	U	
Profile Varification			R			
Searching Shrimp Data	R	R	R	R	R	
Upload Shrimp Information		CRU				
Provide Guideline			C	C		
Supply Blockchain						CRUD
Maintain Insfractructure				R		RUD
Generate Report		C		C	C	
View Report	R	R	R	R	R	
Share Report		C	R	C		
Define Criteria				CRUD		
Register Sensor				R		CRUD
Varify Data Integraty				RUD		C
Deploy Smart Contract				CRUD		

Figure 8.1: CRUD Matrix