

Presentation

CyberSentinels

MSYADD1

MI-232



Professor:

Jose Eugenio Quesada

Serial Subscription Tracking System

Advisor: Gonzalo Gumogda



Meet The Team



Fracie Princes Puyot



Jerwin James Bueno



Mamadou Bah



Mohasien Alingan



Ren Henry Delgado

Problem & Purpose

- Inconsistent delivery monitoring
- Ineffective supplier communication
- Time-consuming manual reports
- Lack of financial visibility



Ren Henry Delgado

Key Features:

-  Role-Based Dashboards (TPU, Supplier, etc.)
 -  Real-Time Delivery Tracking
 -  Automated Notifications & Alerts
 -  Integrated Chat Module
-  Automated Financial & Performance Reports

Stakeholders

Stakeholders

- Primary Users: TPU, Suppliers
- Key Users/Support: GSPS,
Inspection Team, Admin/IT
- Sponsor: DOST-STII
Management

Project Milestone

Design Finalized (Week 6)

Core Development (Weeks 7-9)

User Testing & Feedback (Weeks 11-12)

Final Presentation (Week 14)

Project Objectives

The objective of this project is to automate the tracking and reporting of serial publications to improve the operational efficiency.

Mamadou Bah

Categorized Objectives		
Objective	Category	Measure
Reduce delays in identifying and tracking undelivered serials	Operational Efficiency	50% reduction in delivery delay response time
Improve communication with suppliers and stakeholders	Communication	87.5% reduction in average supplier response time
Automate reporting processes to reduce manual workload	Reporting	50% reduction in report generation time
Increase financial visibility of undelivered and delayed serial issues	Financial Management	75% improvement in financial transparency and reporting
Improve stakeholder accountability and compliance through system alerts	Compliance and Monitoring	Real-time alerts sent for 100% of delivery issues
Ensure system compatibility with library's IT infrastructure	Technical	Fully functional across all web browsers and devices used
Complete the system within allocated budget and timeframe	Budget & Timeline	100% delivery within budget and set timeline
Create a centralized system for tracking all serial publications procured by DOST-STII.	Scope	Track all serial publications
Ensure the system is accessible only to authorized personnel and registered suppliers.	Security/Limitation	Restrict access to authorized users only
Provide tailored dashboards and notifications for key stakeholders (TPU, GSPS, Inspection Team, Suppliers).	Functional	Ensure all stakeholders have role-based access

SCOPE

1

- Implementation of a role-based dashboard for Technical Processing Unit, GSPS, Inspection Team, and Suppliers.

2

- Automated notifications and reminders for upcoming, delayed, and undelivered serial issue deliveries.

3

- Real-time delivery status tracking and automated cost deduction upon confirmed delivery.

4

- Reports on delivery performance, undelivered items, supplier performance summaries, and cost breakdowns.

5

- User management functions including account creation, approval workflows, and role assignments for DOST-STII staff and registered suppliers



Mohasien Alingan

Stake Holder Analysis

Stakeholders' Analysis: Serial Subscription Monitoring

This table below shows who does what, what they expect, and how much power they hold in the Serial Subscription Monitoring workflow.

Stakeholder	Role / Responsibility	Interest / Expectation	Influence / Impact
Technical Processing Unit (TPU)	Consolidates recommended serial titles for subscription. - Submits signed Purchase Request to GSPS. - Encodes bibliographic data of received serial issues into the Cataloging Module of the library system	Accurate consolidation of titles; timely approval of requests; seamless processing of received issues for library users.	High – initiates the procurement process and finalizes serial integration into the library system.
Director	Approves the Purchase Request endorsed by TPU and GSPS.	Subscriptions aligned with institutional priorities, budget limits, and policies.	High – decision-maker; without approval, process halts.
General Services and Procurement Section (GSPS)	- Posts approved serial titles on PhilGEPS. - Manages supplier bidding and consolidates quotations. - Issues Notice of Award after compliance check. - Coordinates delivery and receipt of issues.	Transparent and compliant procurement; timely supplier engagement; accurate delivery and documentation.	Very High – central coordinator ensuring compliance with government procurement rules.
PhilGEPS (Government Procurement Platform)	Provides online platform for posting bid opportunities to suppliers.	Ensures competitive, transparent, and compliant bidding process.	Medium – enabler of fair procurement; wider supplier participation.
Technical Working Group (TWG) for Procurement of Library Reference Materials	Evaluates consolidated bids/abstracts; recommends suppliers based on compliance with technical specifications and track record.	Fair and objective evaluation process; assurance that recommended suppliers are reliable and compliant.	High – recommendations directly affect supplier selection and procurement success.



Jerwin James Bueno

Stake Holder Analysis

Suppliers	<ul style="list-style-type: none">- Participate in bidding.- Submit legal documents and invoices.- Deliver subscribed serial issues according to agreed frequency.	Transparent bidding process; fair selection; timely payment; clear delivery schedules.	High – directly responsible for quality, timeliness, and completeness of subscriptions.
Library Unit (DOST-STII Library)	<ul style="list-style-type: none">- Receives and logs delivered issues.- Scans and uploads delivery forms to the Serial Monitoring System.- Forwards issues to Inspection Committee.	Smooth and accurate delivery process; timely availability of issues for end-users.	High – ensures library collection is complete and accessible to users.
Inspection Committee	<ul style="list-style-type: none">-Inspects delivered issues for compliance with technical specs and physical quality.- Signs and uploads inspection forms.- Forwards approved issues to TPU.	Quality assurance; protection from defective or incomplete deliveries.	High – their approval validates supplier compliance and enables payment.
IT Unit	Manages the Serial Monitoring System, including system security, bug fixes, and technical maintenance.	Stable, secure, and functional system; reliable tracking of deliveries and inspections.	High – ensures technological backbone of the monitoring process works without disruption.
Serial Monitoring System (<i>system as a tool</i>)	Repository for scanned delivery and inspection forms; tracks subscription deliveries and compliance.	Accurate, updated, and reliable data storage; easy retrieval and monitoring.	Medium – tool that ensures transparency, accountability, and workflow efficiency.
Library End-Users (Researchers, Students, DO ST employees)	Beneficiaries of the subscribed serials for research, instruction, and knowledge access	Reliable and timely access to complete, high-quality serials.	Medium – not involved in procurement, but their satisfaction measures the process's success.

Understanding the Problem: The Empathize Stage



Ren Henry Delgado

Immersion & Interview



Purely Manual Process Creates Overwhelming Stress



Time-Consuming



Ineffective Follow-ups

✗ Prone to Error



Accountability Stress

Client's Dream Solution

- Automated Notifications to suppliers.
- A centralized log of all communication as proof.
- Real-time tracking of delivery status.
- Accurate, automated reporting for management.
- More time for value-added work (cataloging, helping users)

Actual Persona



JONATHAN

- 28 years old
- IT Personnel
- Male
- Parañaque City



Nelly

- 42 years old
- Technical Processing Unit
- Female
- Taguig City



Jerwin James Bueno

Theoretical Persona



Suppliers:
Need to
receive alerts
and update
status.



GSPS (Adeline):
Oversees procurement
and needs reports.



Inspection Team
(Derek): Verifies
physical quality



TPU Staff (Cody):
The primary users
who track and
manage serials.

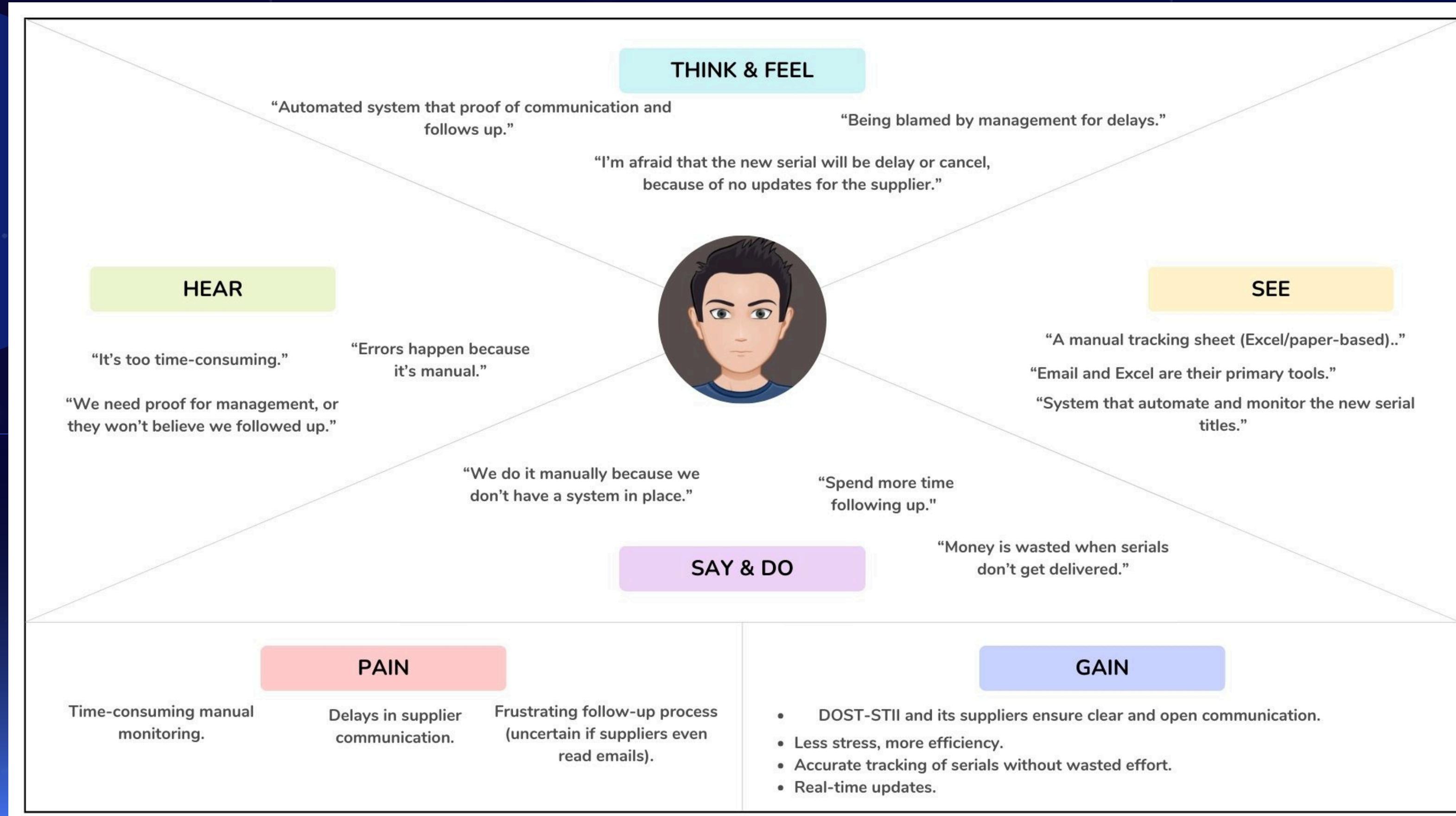


Admin/IT (Jamie):
Maintains the system.



Mohasien Alingan

Empathy Map



Defining the Core Problem: Define Stage



Ren Henry Delgado

CLUSTERED PROBLEMS

Manual & Time-Consuming Process

**Communication
Gaps**

Lack of Integrated System

Errors & Inefficiencies

Problem Statement

The Technical Processing Unit (TPU) needs a way to automate the tracking of serial subscriptions and communication with suppliers because the current manual process is time-consuming, error-prone, and leads to accountability issues despite their best efforts

Stage 3: Ideate

BRAINSTORMING SESSION

The screenshot shows a Microsoft Teams meeting interface. On the left, a text editor window displays an agenda and a list of tasks. The agenda includes: Open Project Activities (Budget, RoadMap and Work Pages), Design Thinking (Step 2 - 5), DataFlow Diagrams (Lvl 0- 2 diagrams), Open Project Activities - Fracie, Stage 2 - Ren, Stage 3 - Mamadou, Stage 4 - Sien, Stage 5 - Jerwin, DataFlow Diagram lvl 0 - Jerwin, DataFlow Diagram Lvl One - Sien, DataFlow Diagram Lvl 2 - Ren, and Mntsdev output (Product Backlog, Use case diagram, Fully Dressed Use cases) - Consult Sir Gon for the updated use case. The text editor also shows a PSEI index chart with a value of -1.56%. The right side of the screen shows five video feeds of participants: Jerwin James Bueno, Mamadou Bah, Ren Henry Delgado, Fracie Princes Puyot, and Mohasien Alingan.

Agenda:

- Open Project Activities (Budget, RoadMap and Work Pages)
- Design Thinking (Step 2 - 5)
- DataFlow Diagrams (Lvl 0- 2 diagrams)

Open Project Activities - Fracie

Stage 2 - Ren

Stage 3 - Mamadou

Stage 4 - Sien

Stage 5 - Jerwin

DataFlow Diagram lvl 0 - Jerwin

DataFlow Diagram Lvl One - Sien

DataFlow Diagram Lvl 2 - Ren |

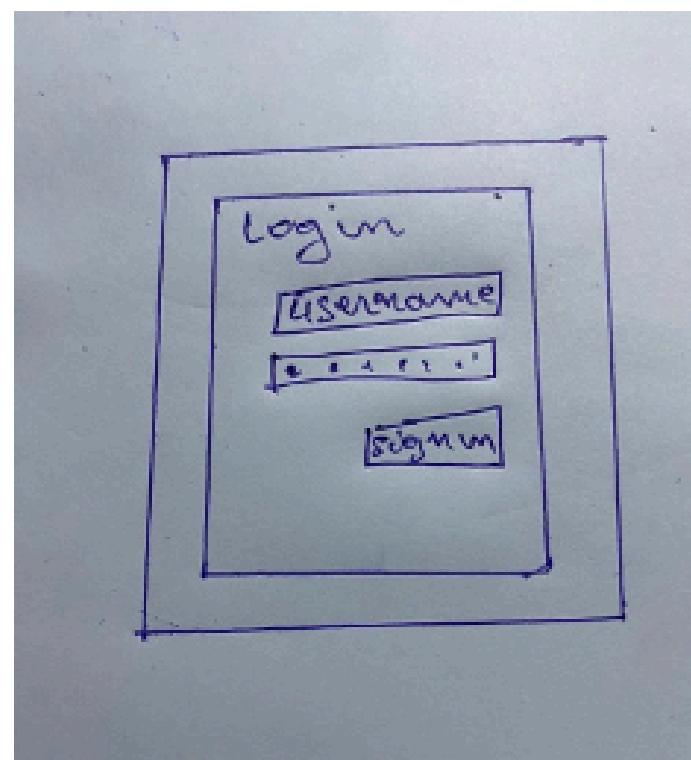
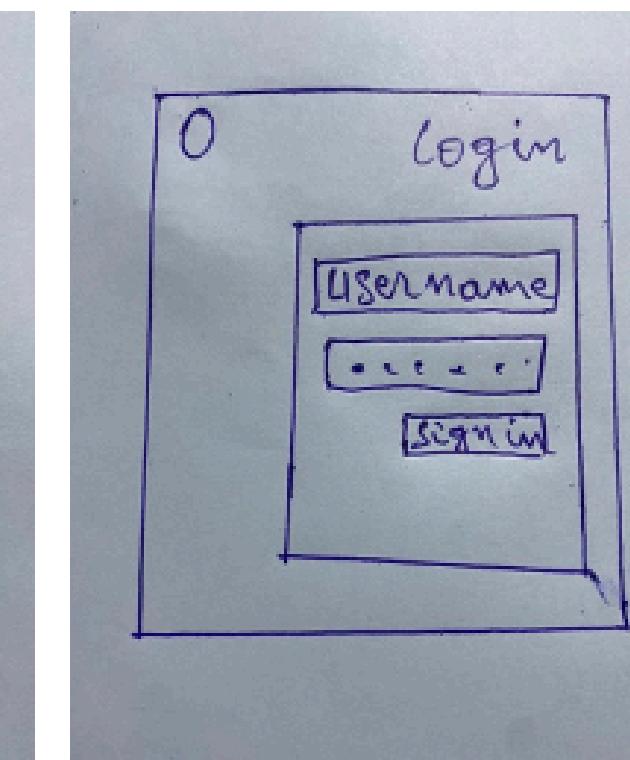
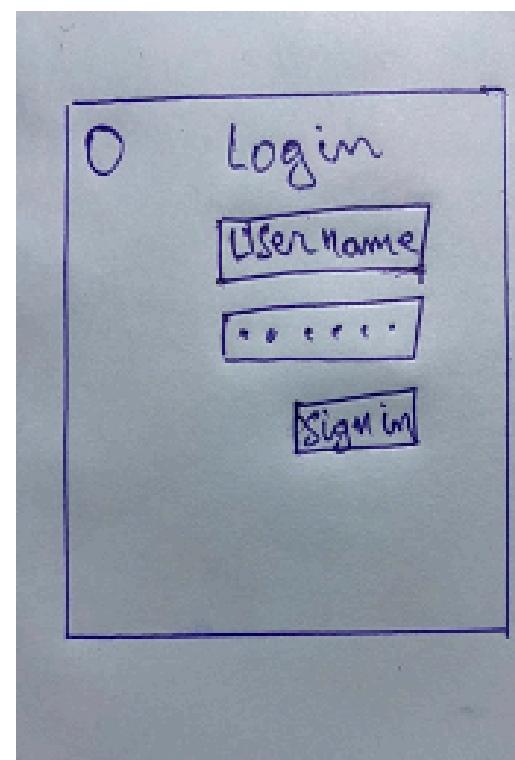
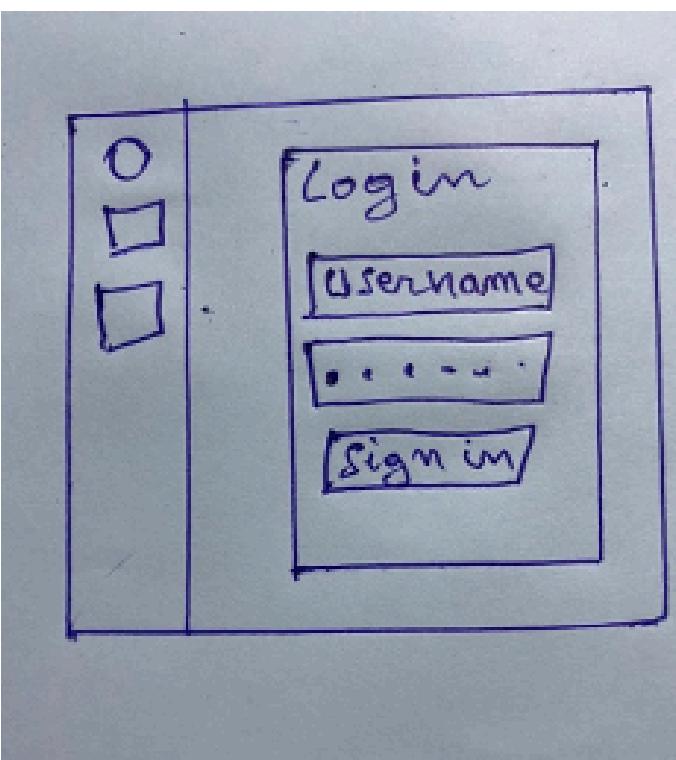
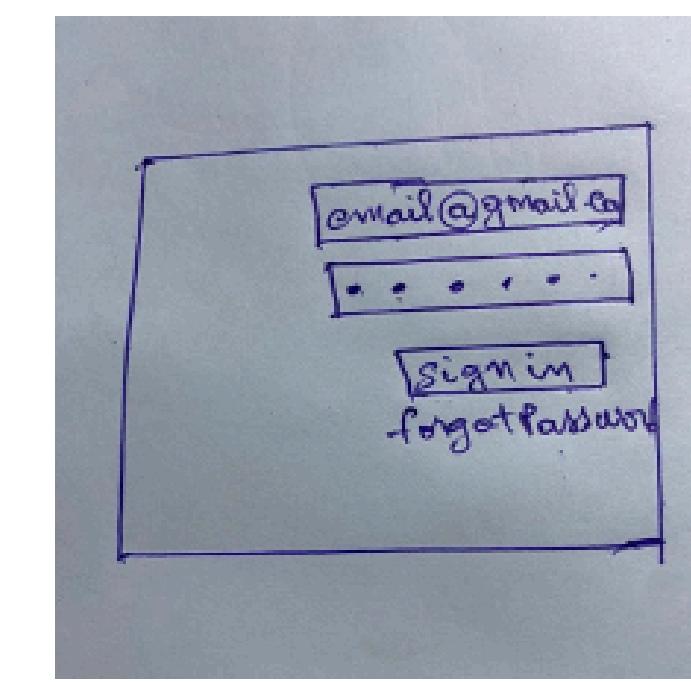
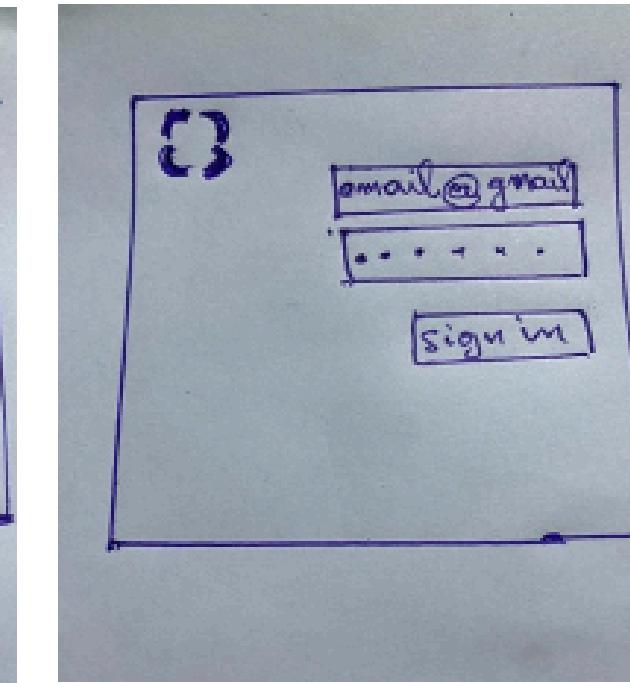
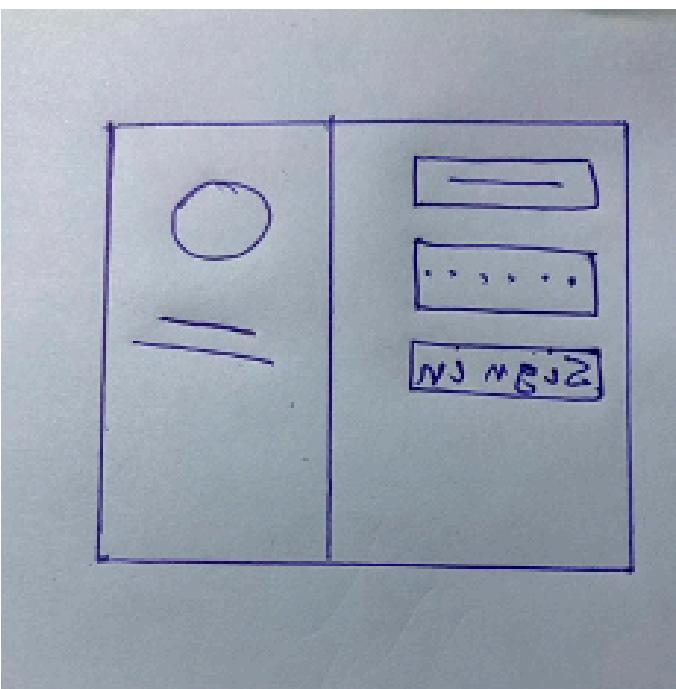
Mntsdev output (Product Backlog, Use case diagram, Fully Dressed Use cases) - Consult Sir Gon for the updated use case

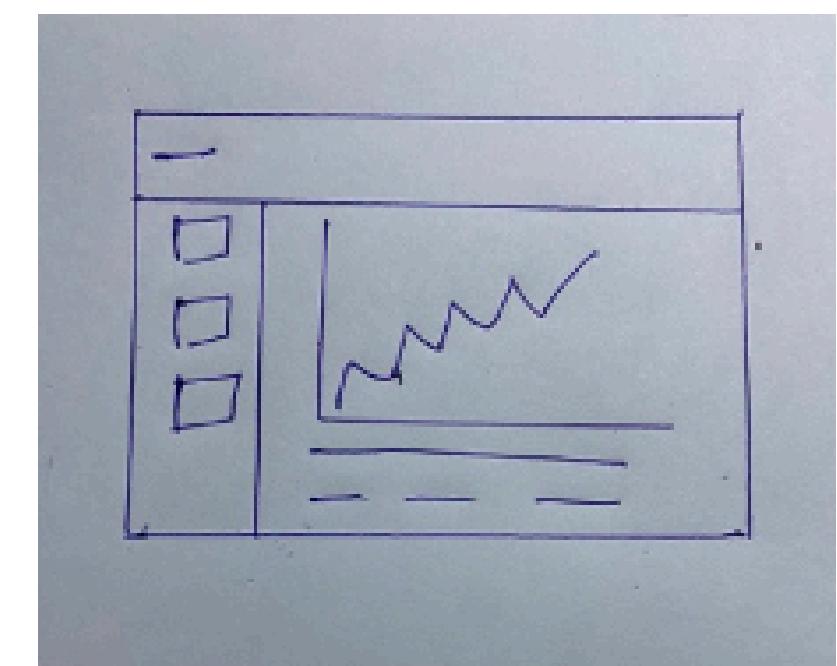
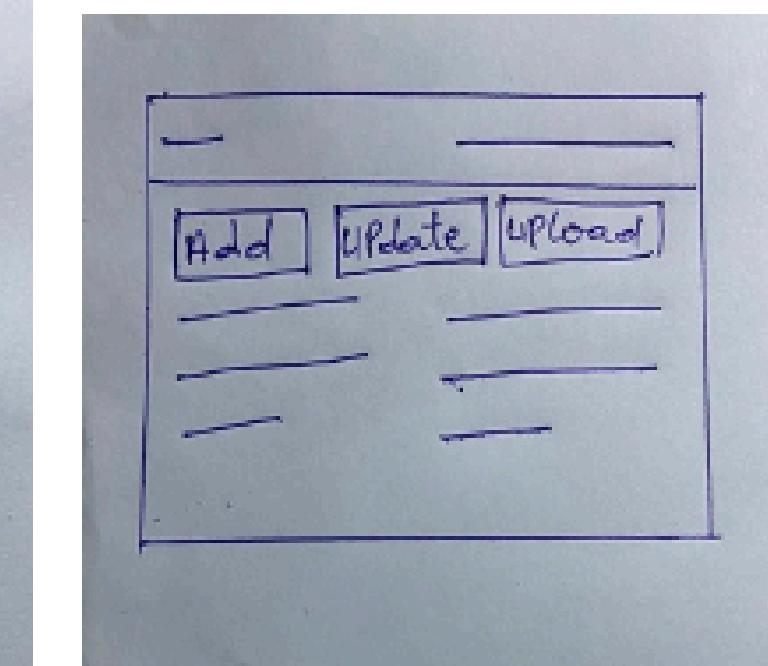
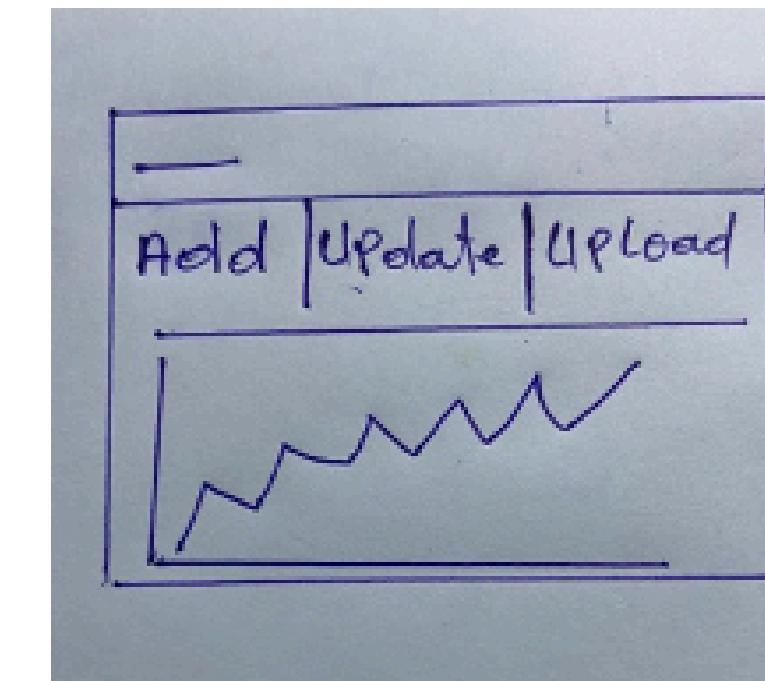
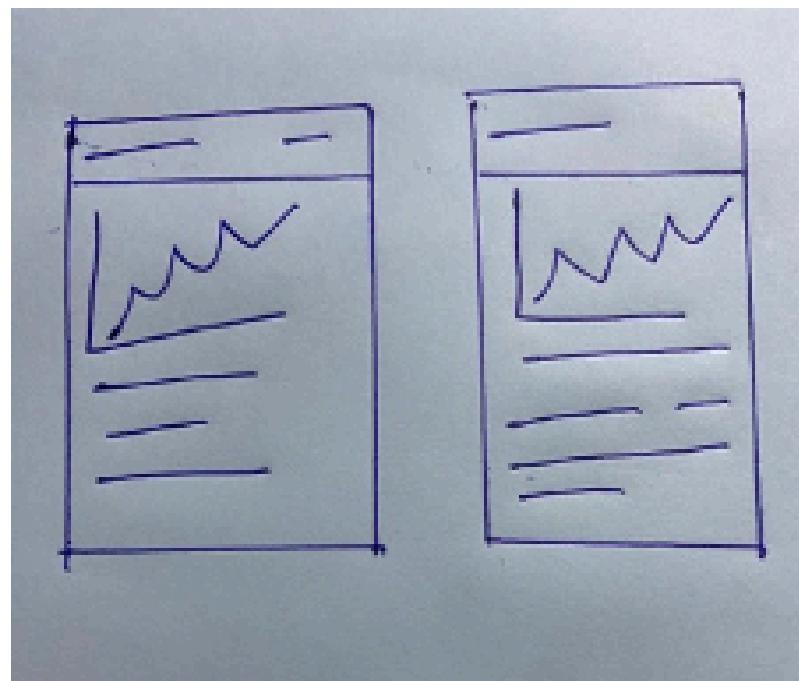
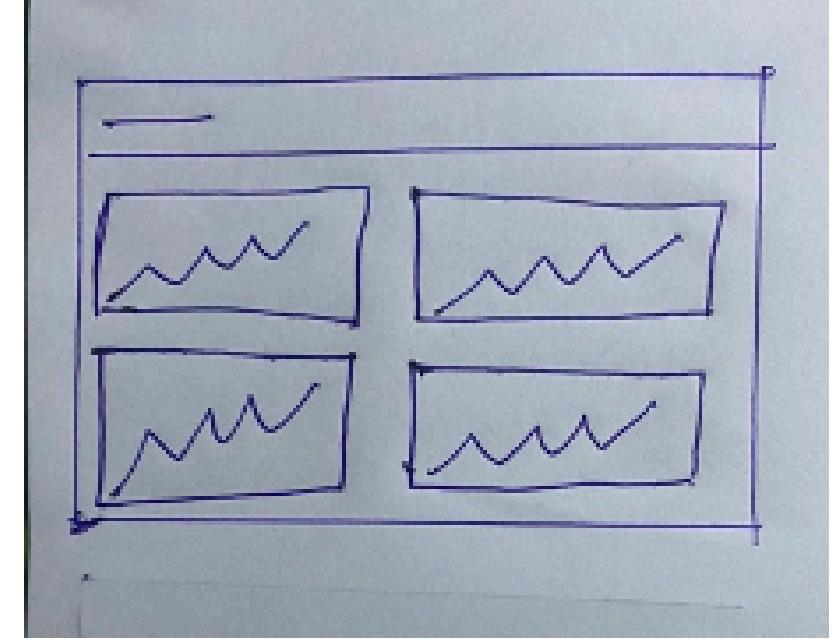
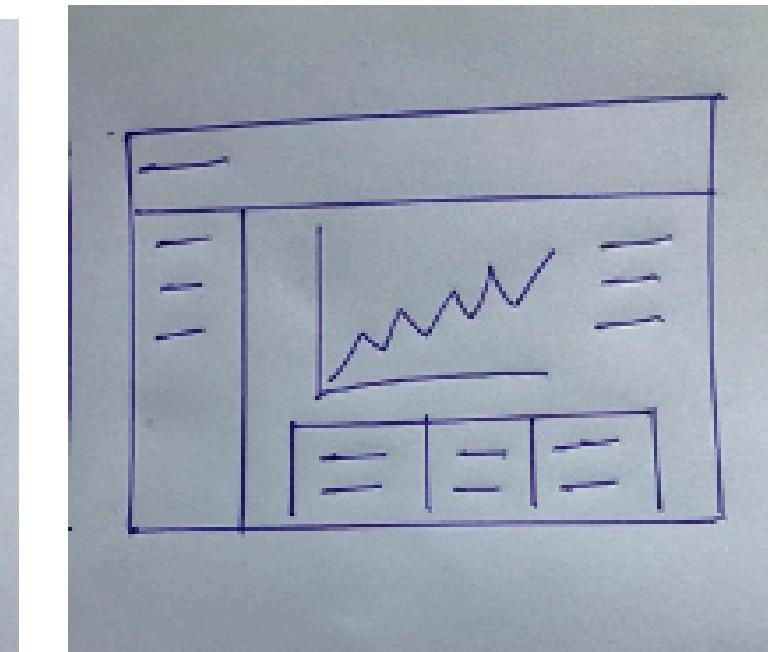
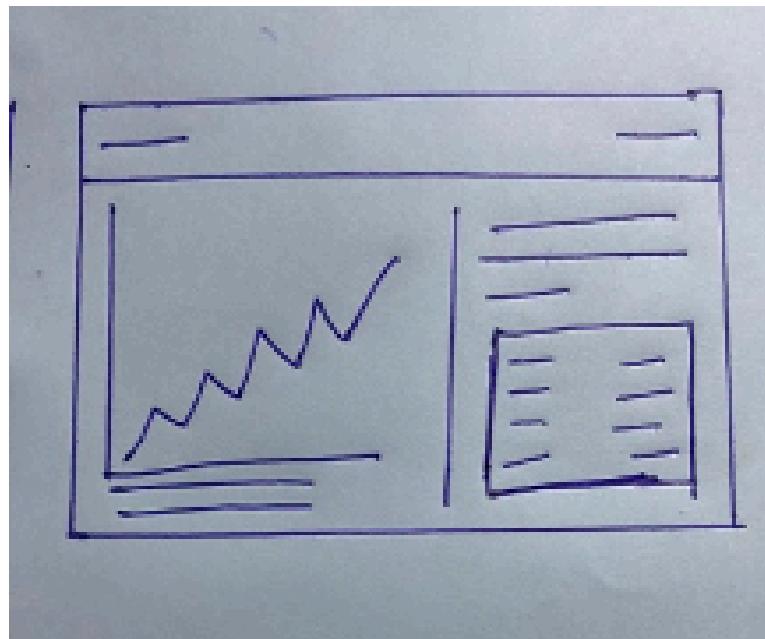
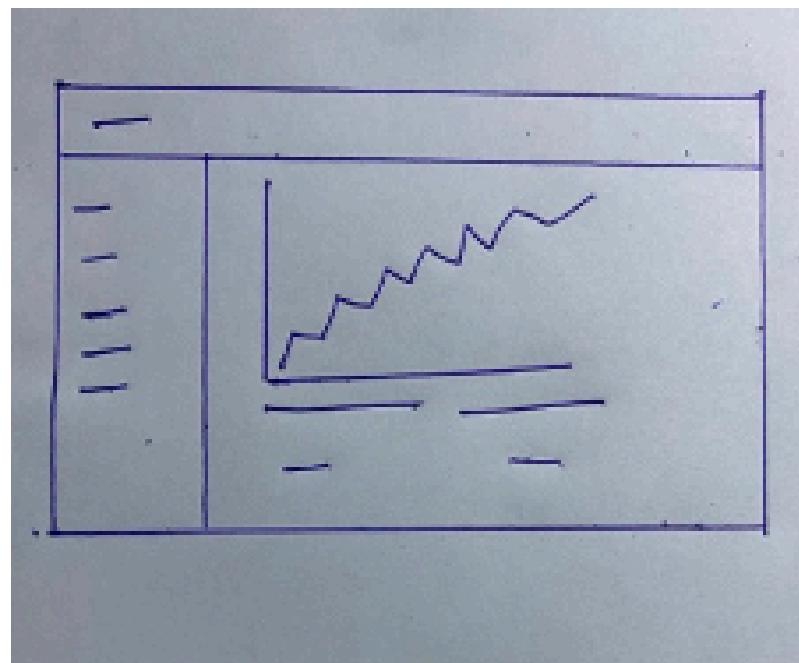
Ln 6, Col 25 452 characters Plain text teams.microsoft.com is sharing your screen. Stop sharing Hide 100% Windows (CRLF) UTF-8 1:58 pm 26/08/2025 9 PSEI index -1.56% Search Ren Henry Delgado



Mamadou Bah

CRAZY 8'





Post it voting

Real-time tracking dashboard: A centralized dashboard that provides a real-time view of all subscribed serials, their delivery status, and expected delivery dates.	Automated notification system: The system will send reminders and alerts to the TPU about expected deliveries and notify suppliers of any undelivered issues with detailed information	Supplier communication portal: A feature that allows suppliers to report publishing or shipment issues and update new expected delivery dates directly within the system.
Reporting module: A module that can automatically generate reports on delivery performance, undelivered items, and cost summaries. This could include a quarterly report on titles, quantities of delivered/undelivered issues, and total costs.	Role-based access: Tailored interfaces and permissions for different stakeholders, such as the TPU, suppliers, the Inspection Team, and others.	Financial visibility tools: The system can track costs and provide automated cost deductions for confirmed deliveries to enhance financial visibility.
Search and filter functionality: The ability to search for specific serial titles, suppliers, or issues to quickly find information.		

DESIRABLE, VIABLE, FEASIBLE

Title	Real-time tracking dashboard: A centralized dashboard that provides a real-time view of all subscribed serials, their delivery status, and expected delivery dates..	Automated notification system: The system will send reminders and alerts to the TPU about expected deliveries and notify suppliers of any undelivered issues with detailed information	Supplier communication portal: A feature that allows suppliers to report publishing or shipment issues and update new expected delivery dates directly within the system.
Desirability	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Viability	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Feasibility	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓

<p>Reporting module: A module that can automatically generate reports on delivery performance, undelivered items, and cost summaries. This could include a quarterly report on titles, quantities of delivered/undelivered issues, and total costs.</p>	<p>Role-based access: Tailored interfaces and permissions for different stakeholders, such as the TPU, suppliers, the Inspection Team, and others</p>	<p>Financial visibility tools: The system can track costs and provide automated cost deductions for confirmed deliveries to enhance financial visibility.</p>	<p>Search and filter functionality: The ability to search for specific serial titles, suppliers, or issues to quickly find information visibility.</p>
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STAGE 4: PROTOTYPE



Log-In

Jack_daniels@gmail.com

••••••••

Sign-in

forgot password?

————— or ————

Need an account? [SIGN UP](#)



DEPARTMENT OF SCIENCE AND TECHNOLOGY
Science and Technology
Information Institute



Mohasien Alingan

Home

Dashboard

Supplier Info

Subscription

Monitor Delivery

Received

Received Items

Total Received: 5

Inspected: 4

Pending: 1

Inspection Rate: 80%

Serial Title	Supplier Name	Volume/Issue	Date Received	Received By	Inspection Status
Nature	ABC Books Supplier	Vol 2 Issue 24	June 1, 2025	M. Santos	Inspected
The Lancet	MedJournal Suppliers Inc.	Vol 1 Issue 12	June 15, 2025	L. Cruz	Inspected
Science	Global Periodicals Co.	Vol 3 Issue 8	June 19, 2025	L. Cruz	Pending
Asian Economic Review	EastAsia Books & Journals	Vol 1 Issue 4	April 20, 2025	J. Ramos	Inspected
Medical Digest	MedJournal Suppliers Inc.	Vol 2 Issue 15	June 18, 2025	K. Dela Rosa	Inspected

< 1 2 3 4 ... 10 >

Showing 5 of 50 results

TPU Dashboard

Supplier Dashboard

 Home

 Dashboard

 List of Serials

 Add Serial

 Purchase Order

 Late

 Undelivered

 Delivered

Welcome back!

Total Serials **568**

Best Performing Suppliers
Manila Bulletin

Most Delivered Titles
Harvard Business Review

Serial Report



Incoming Serial

 Sort  Filter

VOLUME NO.	ISSUE NO.	TITLE SERIAL	DATE
Vol 2	0027-8424	Proceedings of the National Academy of Sciences of the United States of America	20.09.2025

GSPS

Dashbor

d



Home



Dashboard



Supplier Info



Delivery Track



Inspection Status



Delivery Status

Serial Title	Supplier Name	Total Issues Expected	Total Issues Delivered	Total Issues Undelivered	Delivery Rate
Nature	ABC Books Supplier	12	10	2	83.33%
The Lancet	MedJournal Suppliers Inc.	24	24	0	100%
Science	Global Periodicals Co.	12	11	1	91.66%
Asian Economic Review	EastAsia Books & Journals	4	4	0	100%
Medical Digest	MedJournal Suppliers Inc.	24	22	2	2

< 1 2 3 4 ⋯ 10 >

Showing 5 of 50 results



 **Home**

 **Dashboard**

 **List of Serials**

 **View by Date**

List of Received Serial Issues

 Search by title, ISSN, or Recipient

NO.	ISSN	TITLE	RECIPIENT	ISSUES	RECEIVED DATE
1	0027-8424	Proceedings of the National Academy of Sciences of the United States of America	Sir Mark	Vol. 122, No. 21	May 30, 2025
2	0042-9686	Bulletin of the World Health Organization	Sir Mark	Vol. 103, No. 5	May 6, 2025
3	0273-0979	Bulletin of the American Mathematical Society	Sir Mark	Vol. 62, No. 1	Mar 5, 2025
4	0024-6107	Journal of the London Mathematical Society	Sir Mark	Vol. 66, No. 12	Mar 23, 2025
5	0006-8071	Harvard Business Review	Sir Mark	Vol. 5, No. 14	Mar 30, 2025

INSPECTION Dashbord

ADMIN/IT Dashbord



Home

 [Dashboard](#)

 [Account Approval](#)

 [Supplier Serial](#)

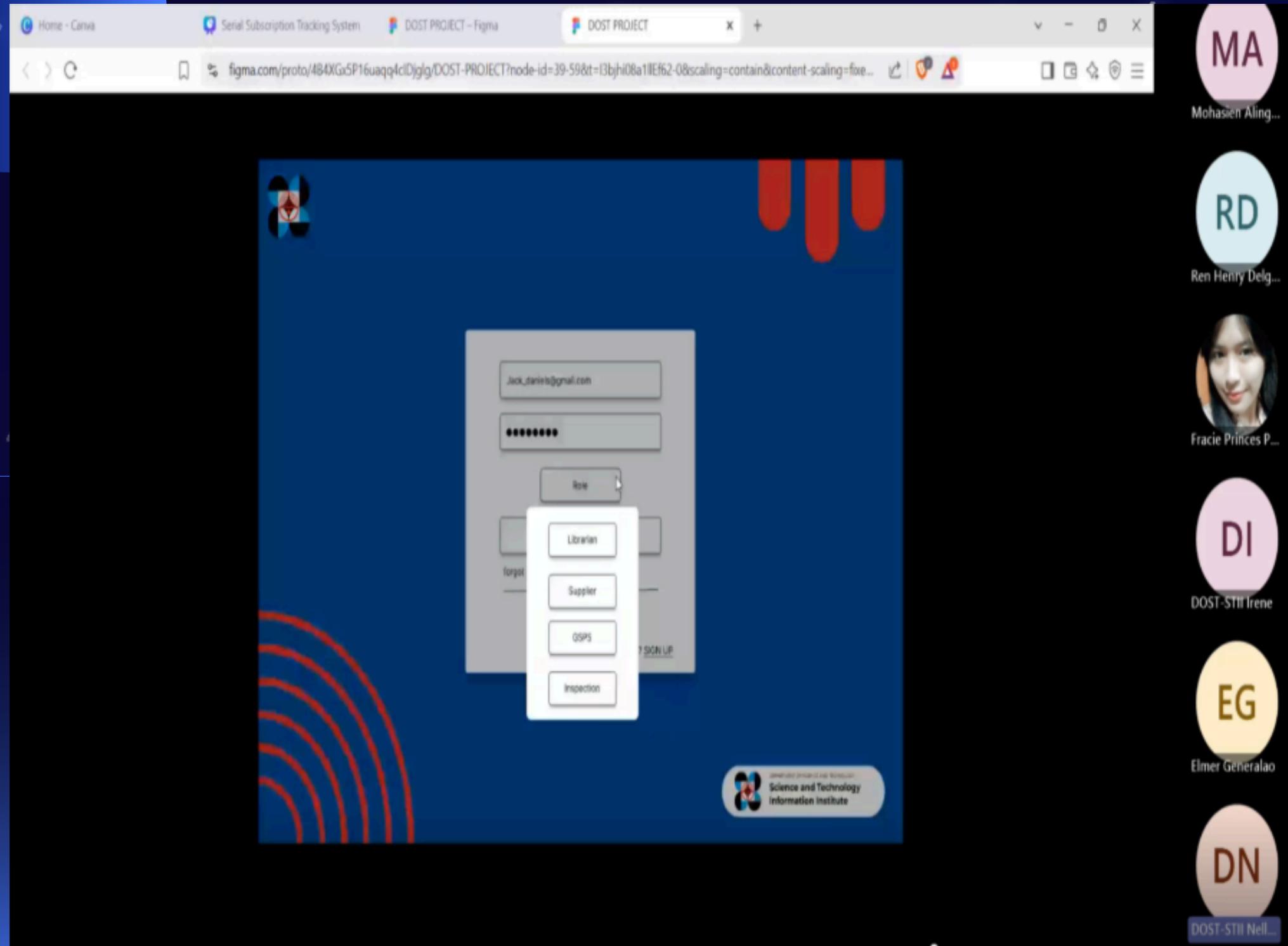
Account Approval

Review and manage pending account applications.

Account Approval

NAME	EMAIL	CONTACT NO.	DATE	ROLE	ACTION
VoguePh	subscription@vogue.ph.	091347038912	06.20.2025	Supplier	Reject Accept
Billboard PH	web@modernmediagroupinc.com	09038094335	06.13.2025	Supplier	Reject Accept
Infobyte Public	infobytepublications@gmail.com	(032) 260-7143	06.12.2025	Supplier	Reject Accept
FullStack Reads Co.	info@fullstackreads.com	(02) 8374-9215	06.12.2025	Supplier	Reject Accept
The Secured Page	editorial@thesecuredpage.com	+63 917 845 2301	06.11.2025	Supplier	Reject Accept
Isabella Cruz	isabellacruz@gmail.com	0917 8245632	06.11.2025	TPU	Reject Accept
Ava Thompson	avathompson@gmail.com	09264138970	06.11.2025	GSPS	Reject Accept
Maria Gabriela Santos	mariagabrielasantos@gmail.com	09456783201	06.11.2025	Inspection Team	Reject Accept
Liam Reyes	liamreyes@gmail.com	09271502498	06.10.2025	GSPS	Reject Accept
Kenji Tanaka	kenjitanaka@gmail.com	09193764820	06.10.2025	Inspection Team	Reject Accept
Miguel Herrera	miguelherrera@gmail.com	09365421173	06.10.2025	TPU	Reject Accept

Stage 5: Test Client Feedback



1. Remove public role-selection buttons.
Only Admin assigns roles.
2. Supplier registration process: Admin generates the account and provides a temporary password, which suppliers must change upon first login.

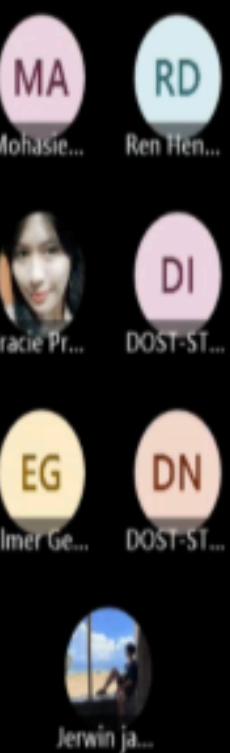


Jerwin James Bueno

Stage 5: Test Client Feedback

The screenshot shows a software interface with a dark blue header containing a logo, 'Home', and a search bar. On the left is a vertical sidebar with navigation links: 'Serials', 'Issue Management', 'Subscriptions', and 'Suppliers'. The main content area is titled 'View All Serials' and displays a table with the following data:

ISSN	Title	Language	Author	Abbreviation	Frequency
0027-8424	Proceedings of the National Academy of Sciences of the United States of America	English	National Academy of Sciences (US)	Proc Natl Acad Sci U S A	Weekly
0042-9686	Bulletin of the World Health Organization	English, French, Spanish	World Health Organization	Bull. World Health Organ	Monthly
0273-0979	Bulletin of the American Mathematical Society	English	American Mathematical Society	Bull. Am. Math. Soc.	Quarterly
0024-6107	Journal of the London Mathematical Society	English	London Mathematical Society	J. Lond. Math. Soc	Bimonthly
0006-8071	Harvard Business Review	English	Harvard University	Harv. Bus. Rev.	Bimonthly
0140-6736	The Lancet	English	Elsevier	Lancet	Weekly



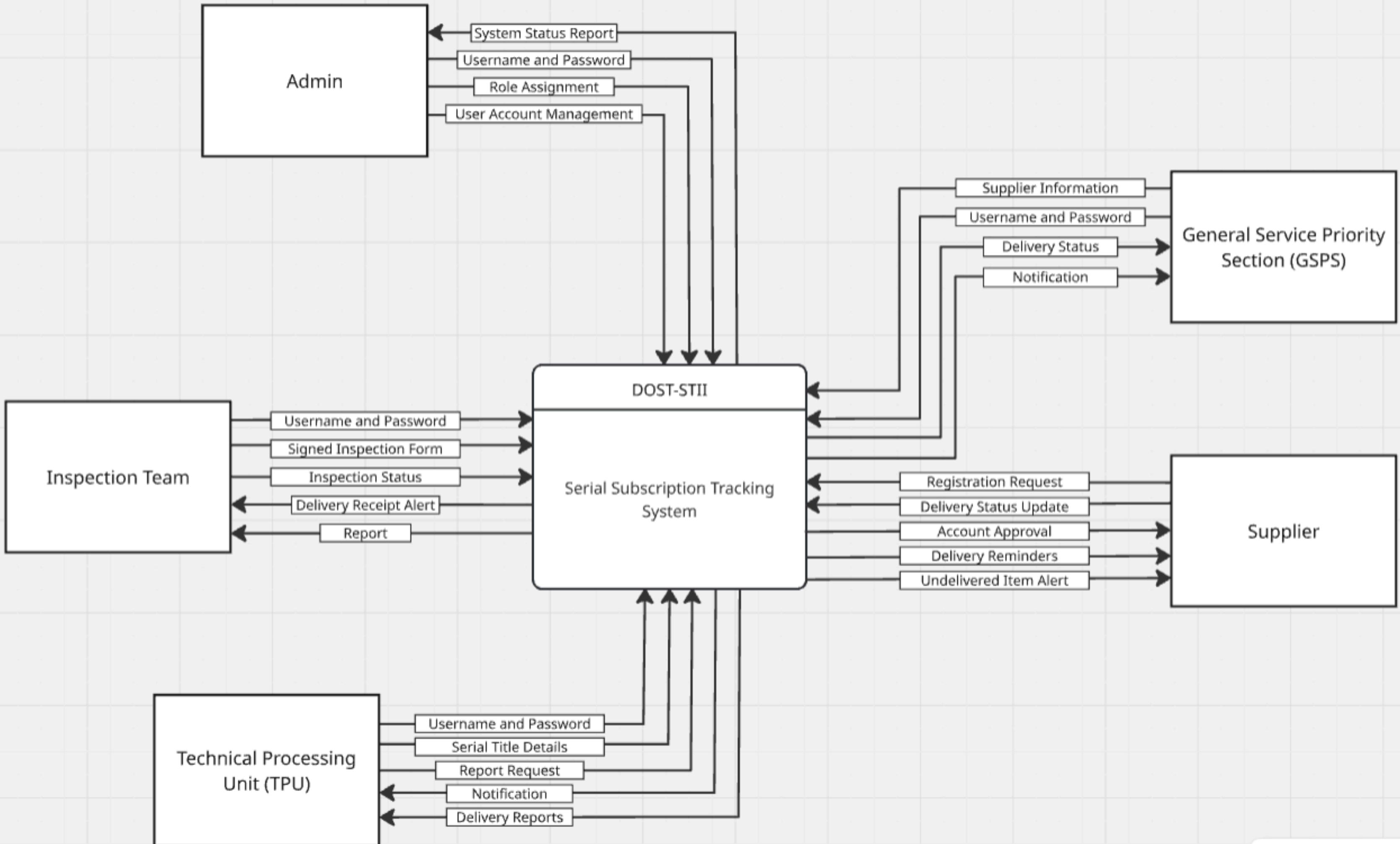
3. Current Left-Side Tabs (Navigation): Not standard; suggested to switch to AdminLTE-style navbar or sidebar.

4. Suggested UI improvement: Users are more familiar with standard dashboard layouts for better UX.

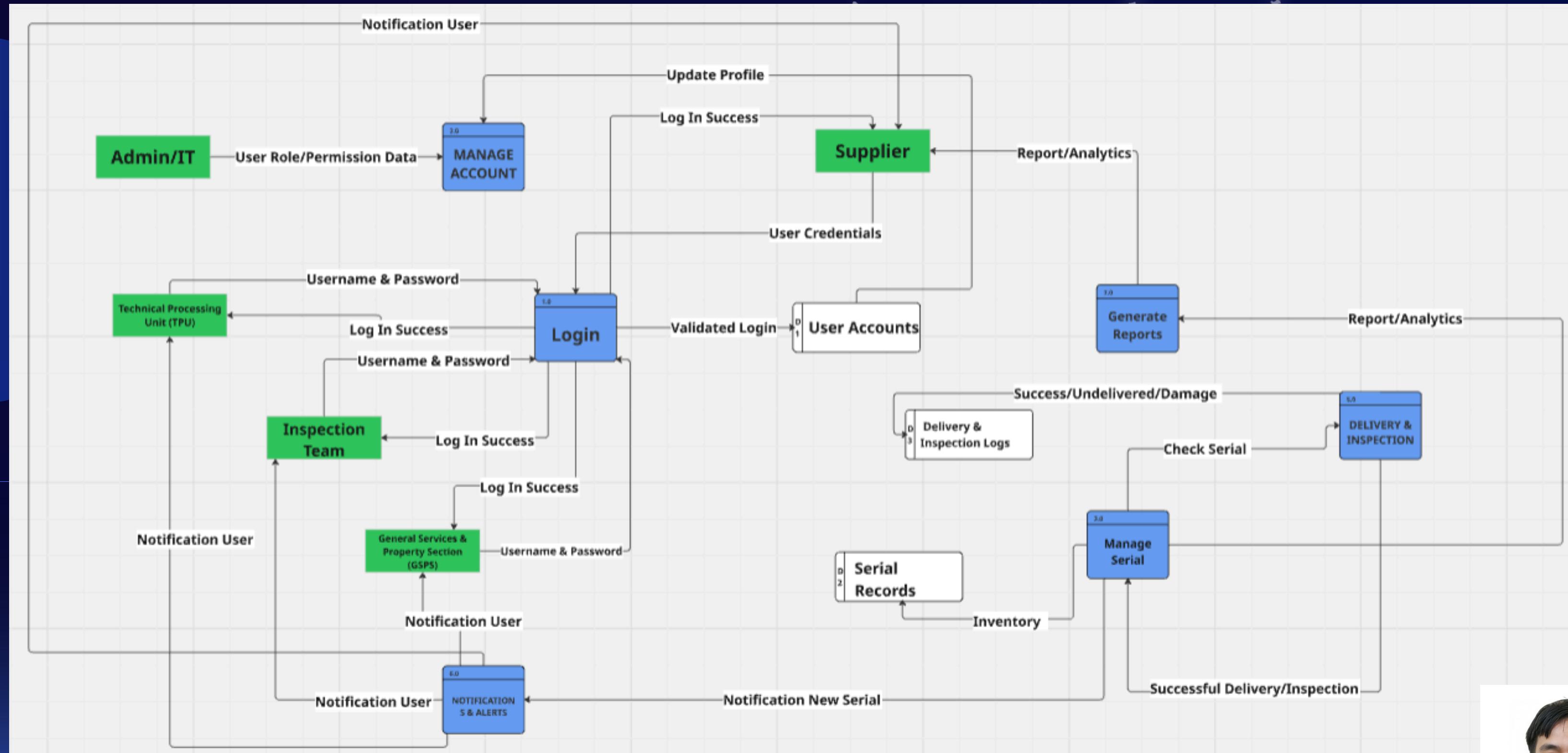
5. Dashboard should display:

- Total expected vs. delivered issues per title
- Total cost, used cost, and remaining cost
- Compliance status per supplier

Level 0: DFD



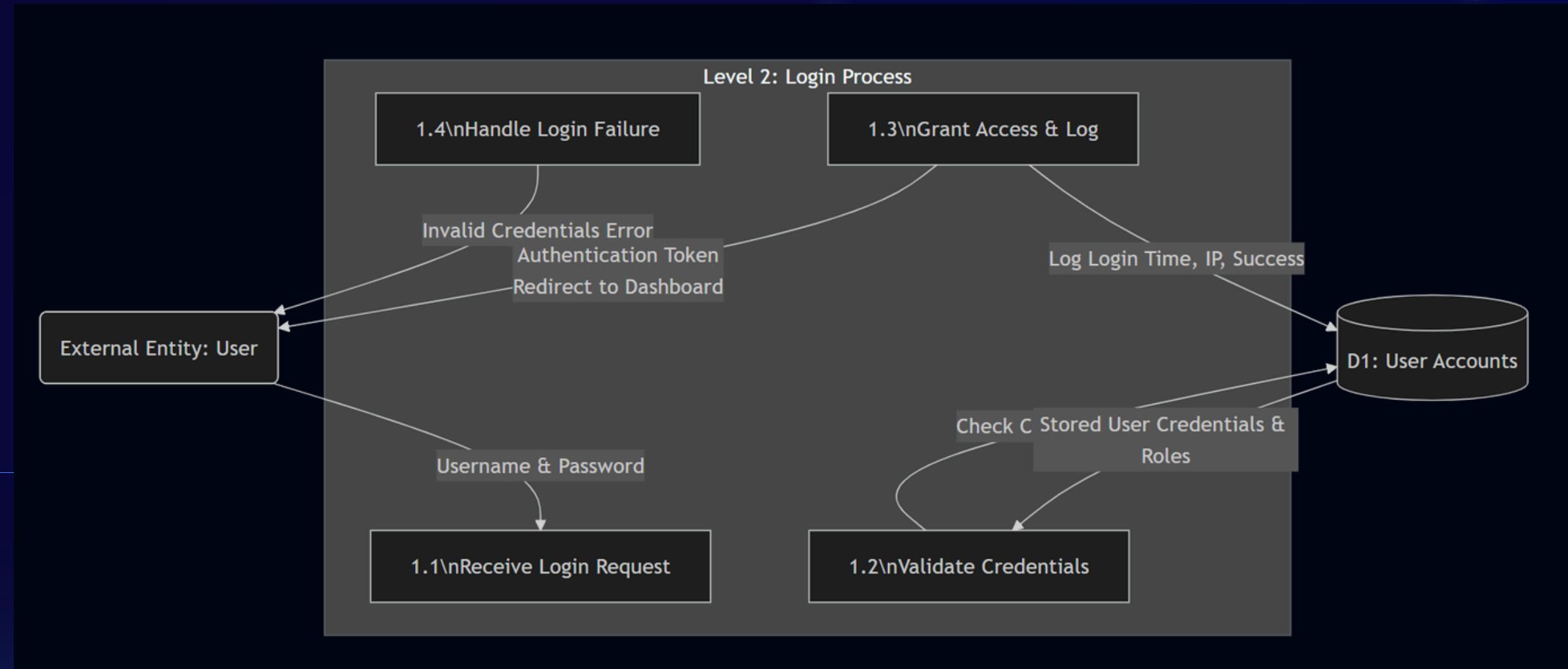
Level 1: DFD



Mohasien Alingan

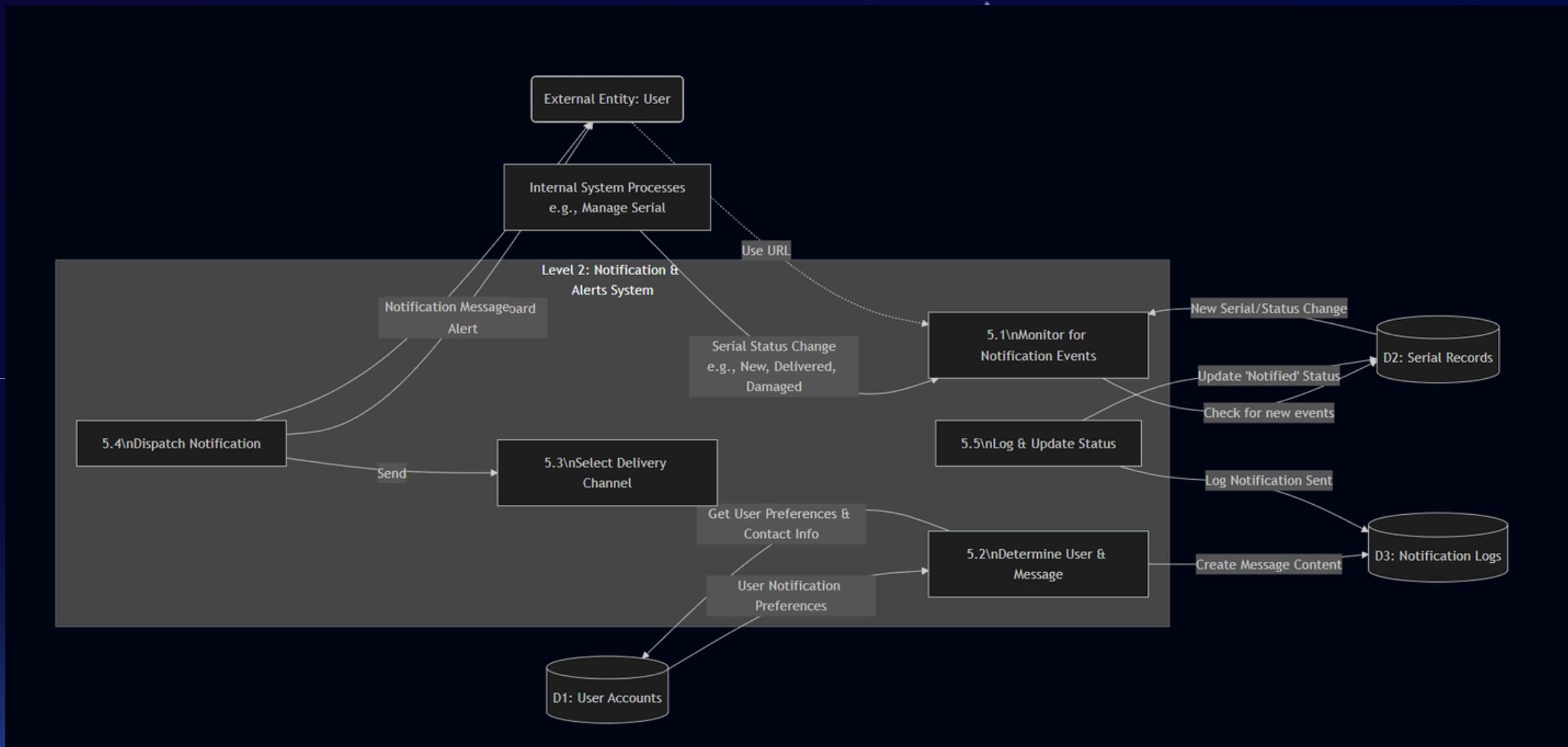
Level 2: DFD

Login Process



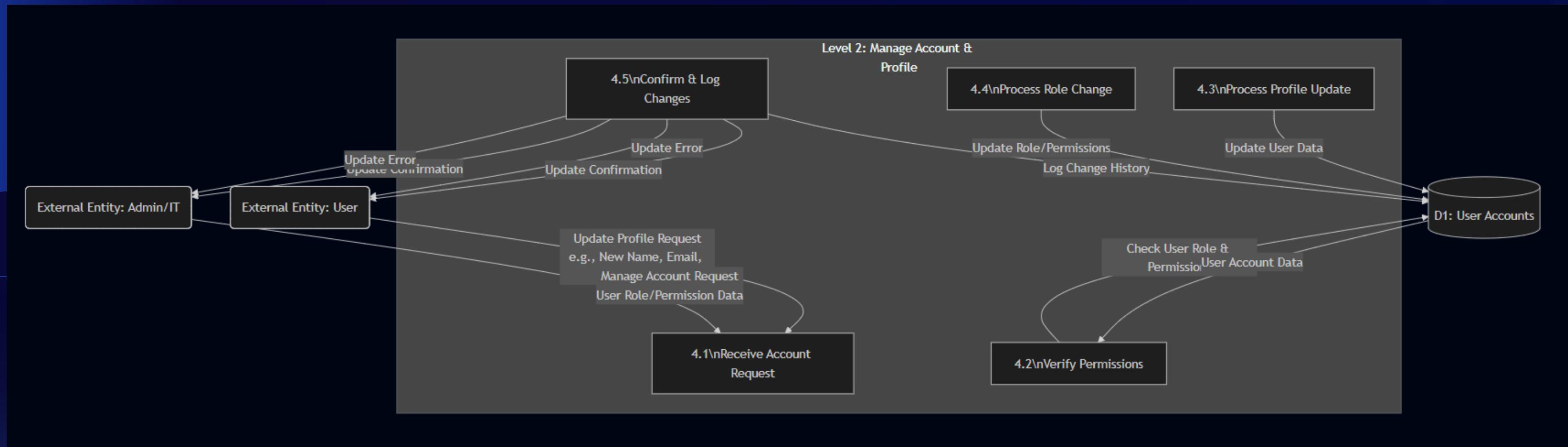
Ren Henry Delgado

Level 2: DFD Notification & Alerts



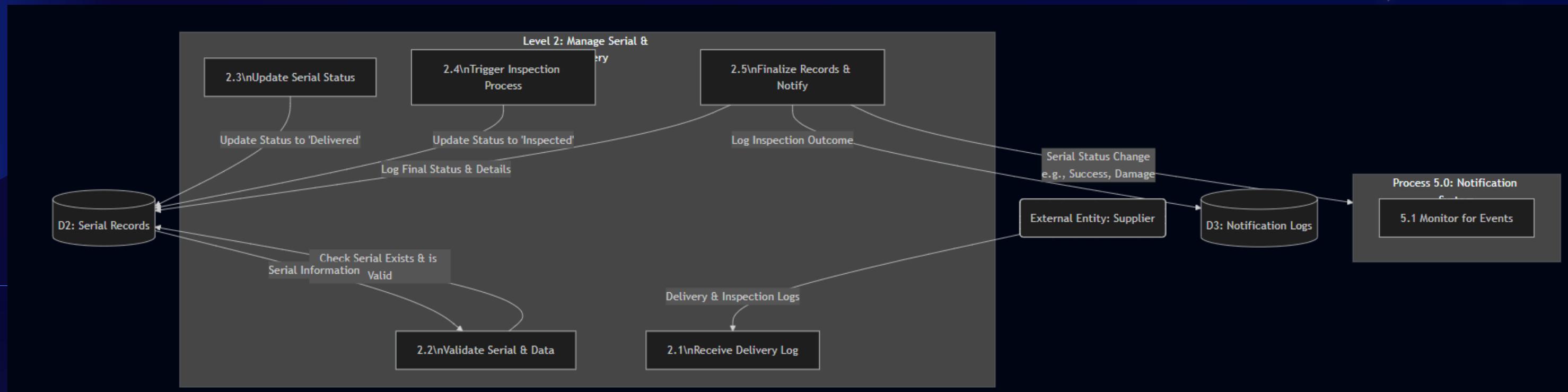
Level 2: DFD

Manage Account & Profile



Level 2: DFD

Manage Serial & Delivery



Level 2: DFD Generate Reports

