TEAM : TECH SQUAD

Welcomes Everyone

Virtual Room No : 18

LUMEN

QUEST 2025

Lumen India's Hackathon Program

LUMEN Quest – 2025 – Student Case Study

Telecom Inventory Management System

Use Case Description :

Design and develop a Telecom Inventory Management System (TIMS) that enables seamless management of telecom products and services inventory with features to manage users, products, suppliers, stock levels, and notifications.

LUMEN

QUEST 2025

Lumen India's Hackathon Program

System Overview:

•Architecture Diagram:
- A high-level overview of the system components (Admin, Manager, Staff, API Backend, Database).

•Modules:
- **Admin Panel:** System configuration, user management.
- **Inventory Management:** Adding, updating, and tracking products.
- **Transactions:** Managing stock in/out, order history.
- **Role-Based Access Control:** Differentiated access for Admin, Manager, and Staff.

LUMEN

QUEST 2025

Lumen India's Hackathon Program

Technologies Used:

•**Backend:**
  • JavaScript/Python, Django for RESTful APIs

•**Database:**
  • Mongo DB/SQL (e.g., MySQL, PostgreSQL)

•**Frontend (if applicable):**
  • HTML, CSS, for UI.

•**Version Control:**
  • Git for source code management.

•**Other Tools/Frameworks:**
  • Django REST Framework for API creation.
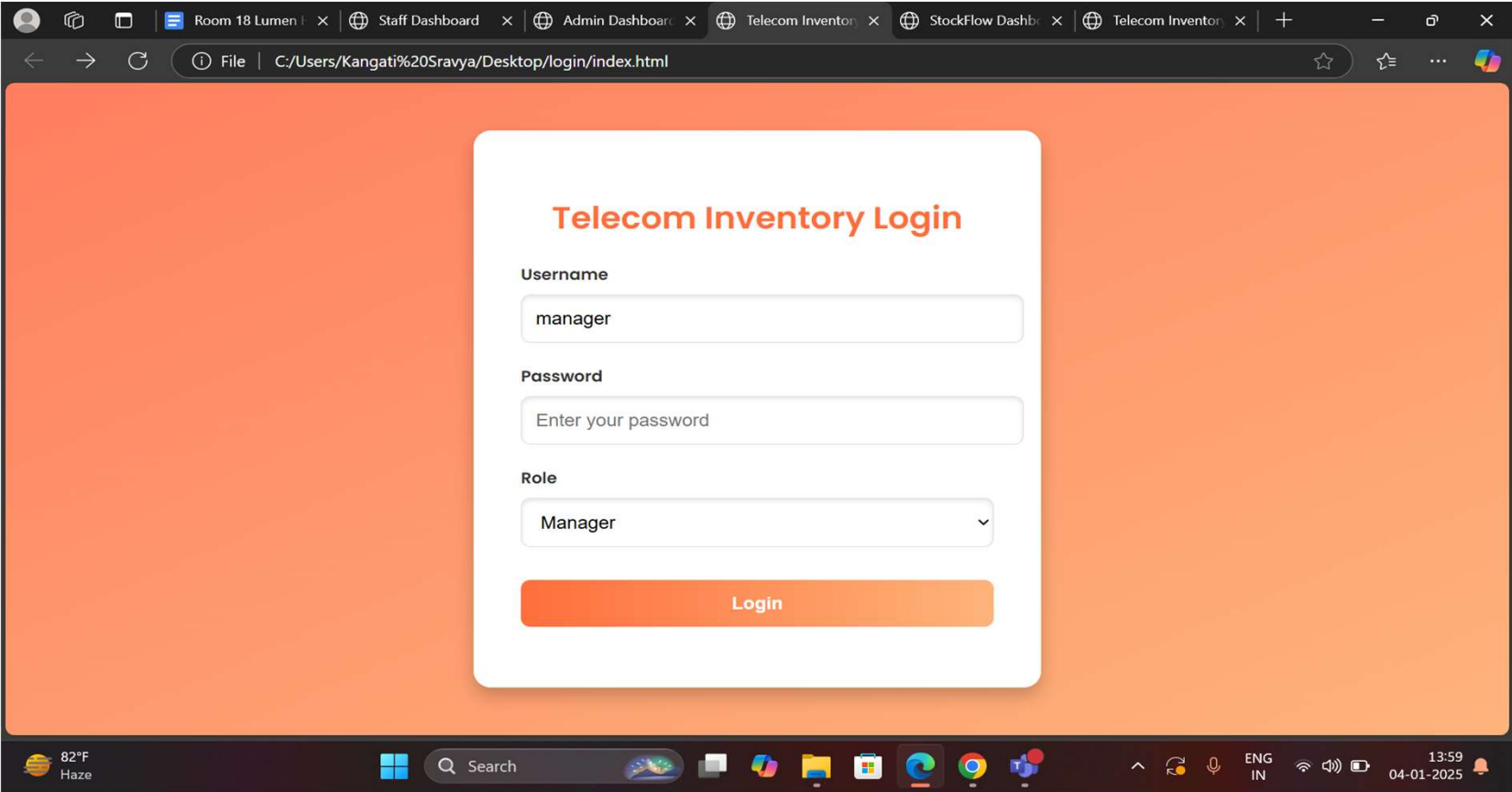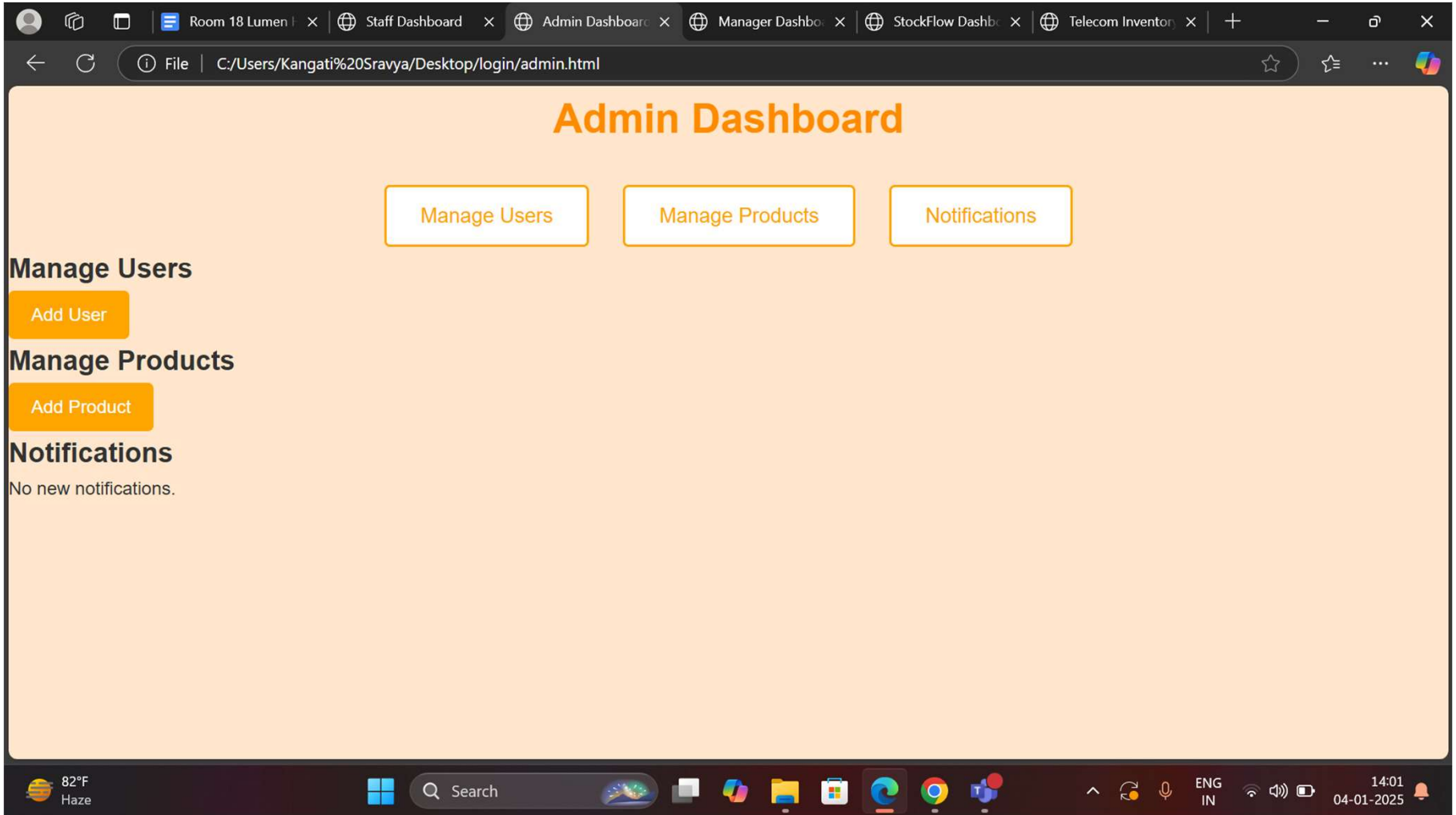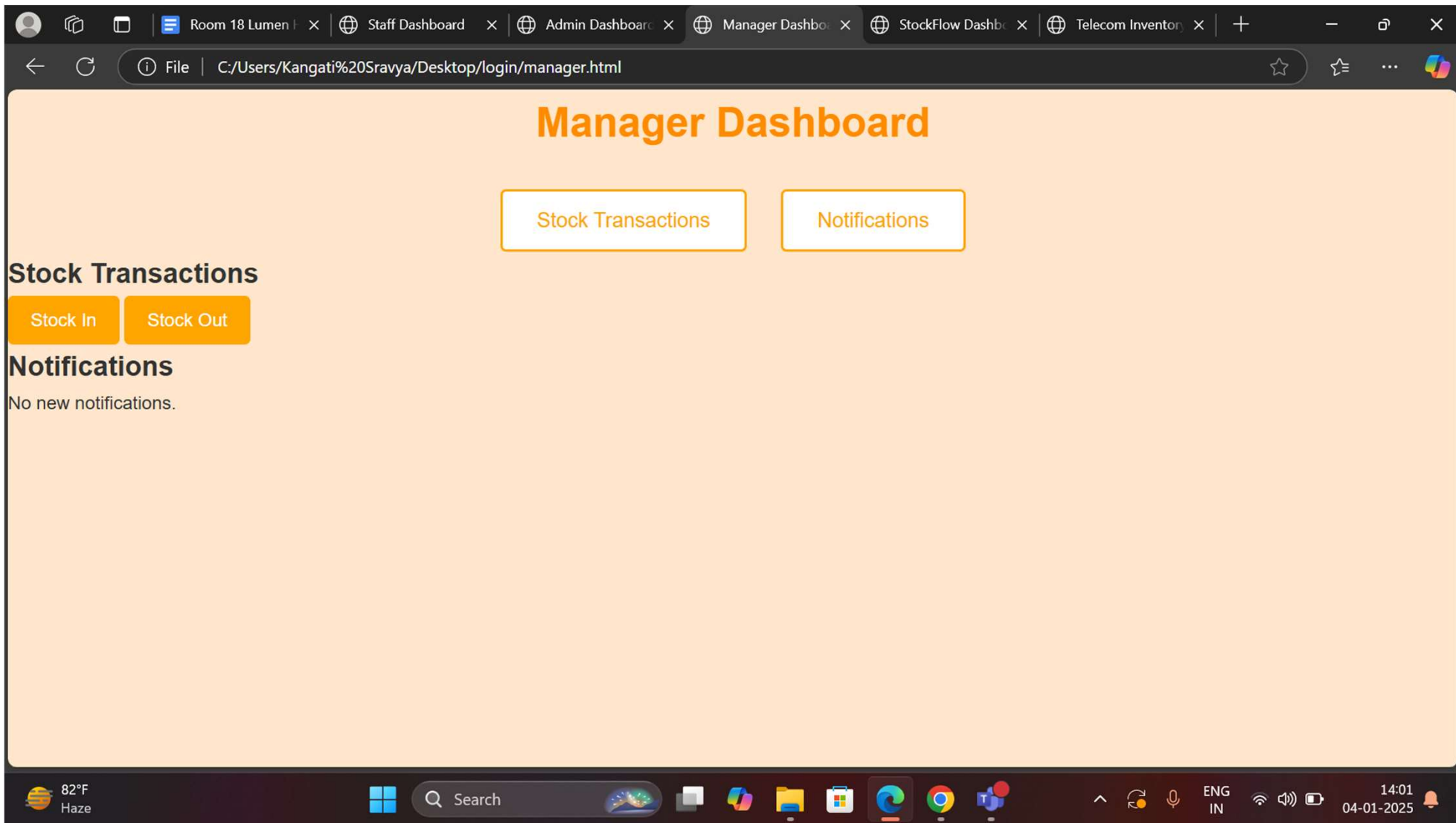 • Any third-party libraries (e.g., JWT for authentication).

LUMEN®

QUEST 2025
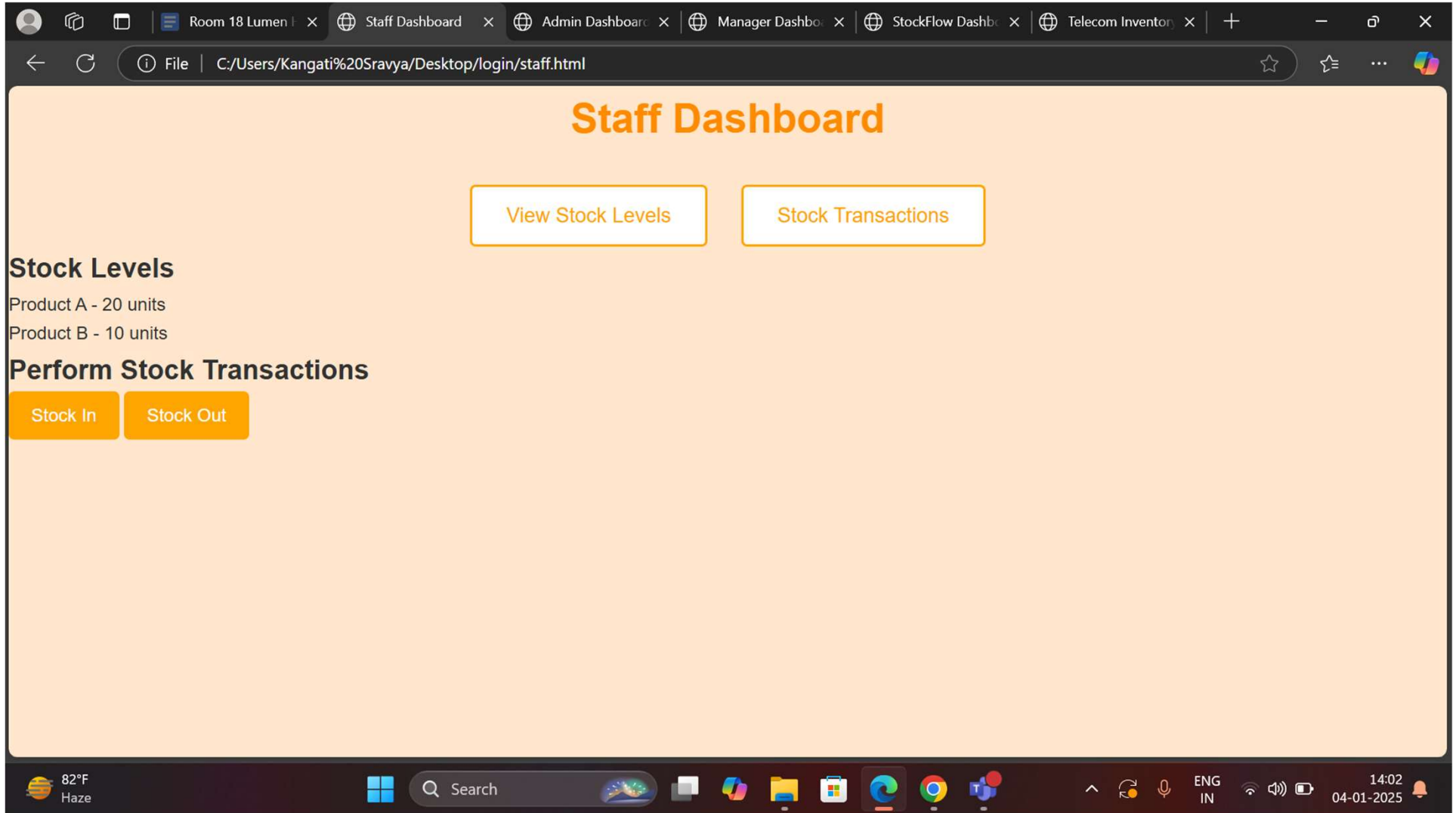
Lumen India's Hackathon Program

Obtained Outputs :

Front End

File | C:/Users/Kangati%20Sravya/Desktop/login/admin.html

Admin Dashboard

| Manage Users | Manage Products | Notifications |

Manage Users

Add User

Manage Products

Add Product

Notifications

No new notifications.

Manager Dashboard

Stock Transactions

Notifications

Stock Transactions

Stock In   Stock Out

Notifications

No new notifications.

Staff Dashboard

View Stock Levels

Stock Transactions

Stock Levels

Product A - 20 units

Product B - 10 units

Perform Stock Transactions

Stock In   Stock Out

Lumen

Search products, suppliers...

Admin User

Total Stock Items	Low Stock Items	Incoming Orders	Pending Orders
2,451	15	126	8

Recent Activity

Stock received: 250 units of Product A
2 hours ago

Stock out: 50 units of Product B
4 hours ago

Low stock alert: Product C (5 units remaining)
6 hours ago

Lumen

Dashboard

Products

Suppliers

Users

Settings

Transactions

Products

Add Product

PRODUCT	CATEGORY	STOCK LEVEL	SUPPLIER	STATUS
Cisco ISR 1101 ISR1101-K9	Router	15 Reorder at: 10	Cisco Systems Inc.	In Stock
HP 5406zl Switch 5406zl-48G	Switch	8 Reorder at: 5	HP Enterprise	In Stock
Palo Alto PA-220 PA-220	Firewall	12 Reorder at: 8	Palo Alto Networks	In Stock

Lumen

-
- Products
- Suppliers
- Users
- Settings
- Transactions

Search products, suppliers...

Admin User

Suppliers

Add Supplier

SUPPLIER	CONTACT	ADDRESS	STATUS
Cisco Systems Inc.	sales@cisco.com +1 (408) 526-4000	San Jose, CA	Active
HP Enterprise	sales@hpe.com +1 (650) 857-1501	Palo Alto, CA	Active
Palo Alto Networks	sales@paloaltonetworks.com +1 (408) 753-4000	Santa Clara, CA	Active

Lumen

- Dashboard
- Products
- Suppliers
- **Users**
- Settings
- Transactions

Users

Add User

USER	ROLE	CONTACT	STATUS
John Doe USR001	Admin	john@example.com +1 (555) 123-4567	Active
Jane Smith USR002	Manager	jane@example.com +1 (555) 234-5678	Active
Bob Wilson USR003	Staff	bob@example.com +1 (555) 345-6789	Active

Backend : Python(Django) and JavaScript
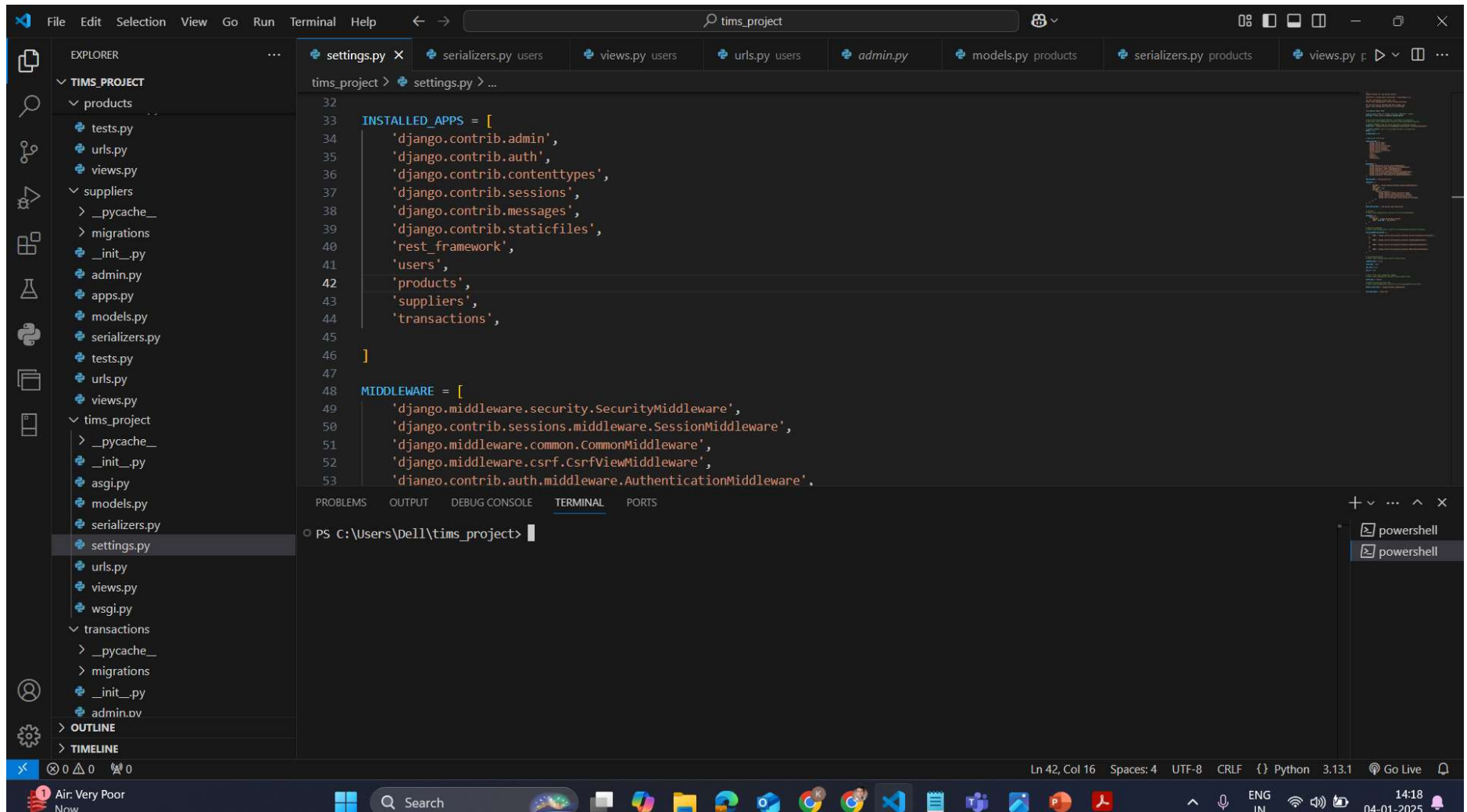
POST http://localh ●   POST http://localh ●   GET http://localh ●   GET http://localh ●   POST http://localh ●   GET http://localh ●   POST http://localh ●   GET http://localh ●   GET http://localh ●   +

No environment ∨

HTTP **http://localhost:3000/api/products**

Save ∨   Share

GET ∨   http://localhost:3000/api/products   **Send** ∨

Params   Authorization   **Headers (7)**   Body   Scripts   Settings   **Cookies**

☑	Host	ⓘ	<calculated when request is sent>
☑	User-Agent	ⓘ	PostmanRuntime/7.43.0
☑	Accept	ⓘ	*/*
☑	Accept-Encoding	ⓘ	gzip, deflate, br
☑	Connection	ⓘ	keep-alive
☑	Authorization		Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6IjY3Nz...

Body   Cookies   Headers (8)   Test Results   ⟲

200 OK   68 ms   473 B

Pretty   Raw   Preview   Visualize   JSON ∨

```json
1   [
2       {
3           "_id": "6778c1b481704814793ca3ff",
4           "name": "Laptop",
5           "category": "Electronics",
6           "stock": 15,
7           "price": 1000,
8           "reorderLevel": 10,
9           "createdAt": "2025-01-04T05:05:56.636Z",
10          "updatedAt": "2025-01-04T07:19:29.179Z",
11          "__v": 0
12      }
13  ]
```

Conclusion :

- **Summary of Accomplishments:**
- Successfully built a working Telecom Inventory Management System.
- **Importance of the Project:**
- Improved operational efficiency for telecom inventory management.
- **Key Takeaways:**
- Highlight any new learnings, skills, or insights gained during the project

LUMEN®

QUEST 2025

Lumen India's Hackathon Program

LUMEN®

QUEST 2025

Lumen India's Hackathon Program