

Sales XP- Smart Sales Commission & Performance Tracking

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Abstract:

SalesXP is an advanced sales commission and performance tracking solution designed to streamline sales operations and maximize productivity. It provides real-time insights into sales performance, automates commission calculations, and ensures transparency in incentive distribution. By leveraging data analytics and AI-driven reporting, SalesXP enhances decision-making for sales managers and motivates sales teams through goal-based tracking. The platform integrates with CRM and ERP systems, ensuring seamless data synchronization. SalesXP ultimately helps organizations boost sales efficiency, improve commission accuracy, and drive overall business growth.

Existing System:

Most stores still rely on outdated manual logs or spreadsheets to track sales commissions, making the process inefficient and prone to errors. Additionally, the equal commission structure means all salespersons earn the same percentage regardless of effort, leading to low motivation. There are no incentives for clearing older inventory, resulting in stockpile issues that affect overall profitability. Furthermore, the lack of performance-based growth limits career progression, reducing long-term engagement and commitment among sales staff.

Disadvantages:

- Error-Prone Manual Tracking – Spreadsheets and logs are inefficient and prone to human error.
- Demotivating Commission Structure – Equal commission regardless of effort reduces motivation.
- No Incentives for Old Stock Sales – Leads to stockpiling issues and financial losses.
- Lack of Career Growth – No structured progression results in low long-term engagement.
- No Performance Visibility – Salespersons cannot track their rankings or progress.

Proposed System:

A unique ID and barcode-based sales tracking system ensures that each salesperson is assigned a unique identifier, allowing automatic logging of individual sales in their personal dashboard. A level-based commission model provides structured growth, while special rewards for influenced sales offer higher commission boosts for clearing old stock and ensuring fair reward distribution. A real-time leaderboard and analytics system enable salespersons to track their rank, earnings, and progression, while stores can monitor top performers and identify training needs. Additionally, fraud prevention measures, such as barcode scanning, ensure only genuine sales are recorded, preventing fake transactions and ensuring fair commission distribution.

Advantages:

1. Automated Sales Tracking – Eliminates manual errors by using barcode-based tracking
2. Performance-Based Commission – Salespersons are rewarded based on their effort and sales contribution.
3. Incentives for Clearing Old Stock – Encourages sales of older inventory through special rewards.
4. Career Progression & Motivation – Level-based commission model drives long-term engagement.
5. Real-Time Insights – Leaderboards and analytics provide instant performance feedback.

System requirements:

SOFTWARE REQUIREMENTS:

- **Front End:** HTML, CSS, JavaScript.
- **Back End:** Python, Flask.
- **Security:** Fernet and Werkzeug encryption and decryption .
- **Database:** SQL .

HARDWARE REQUIREMENTS:

- **System :** Minimum i3 And Above.
- **Hard Disk :** 40 GB(min).
- **RAM :** 4 GB (min).

ANALYSIS:

SalesXP is a comprehensive sales management platform built with a Java full-stack architecture and a React frontend. It is designed to streamline stock management, sales tracking, billing, and salesperson performance monitoring while ensuring an optimized and efficient workflow.

Role-Based Access Control:

The system implements a role-based access model with three primary roles:

Admin: Manages stock levels, salesperson details, and system settings.

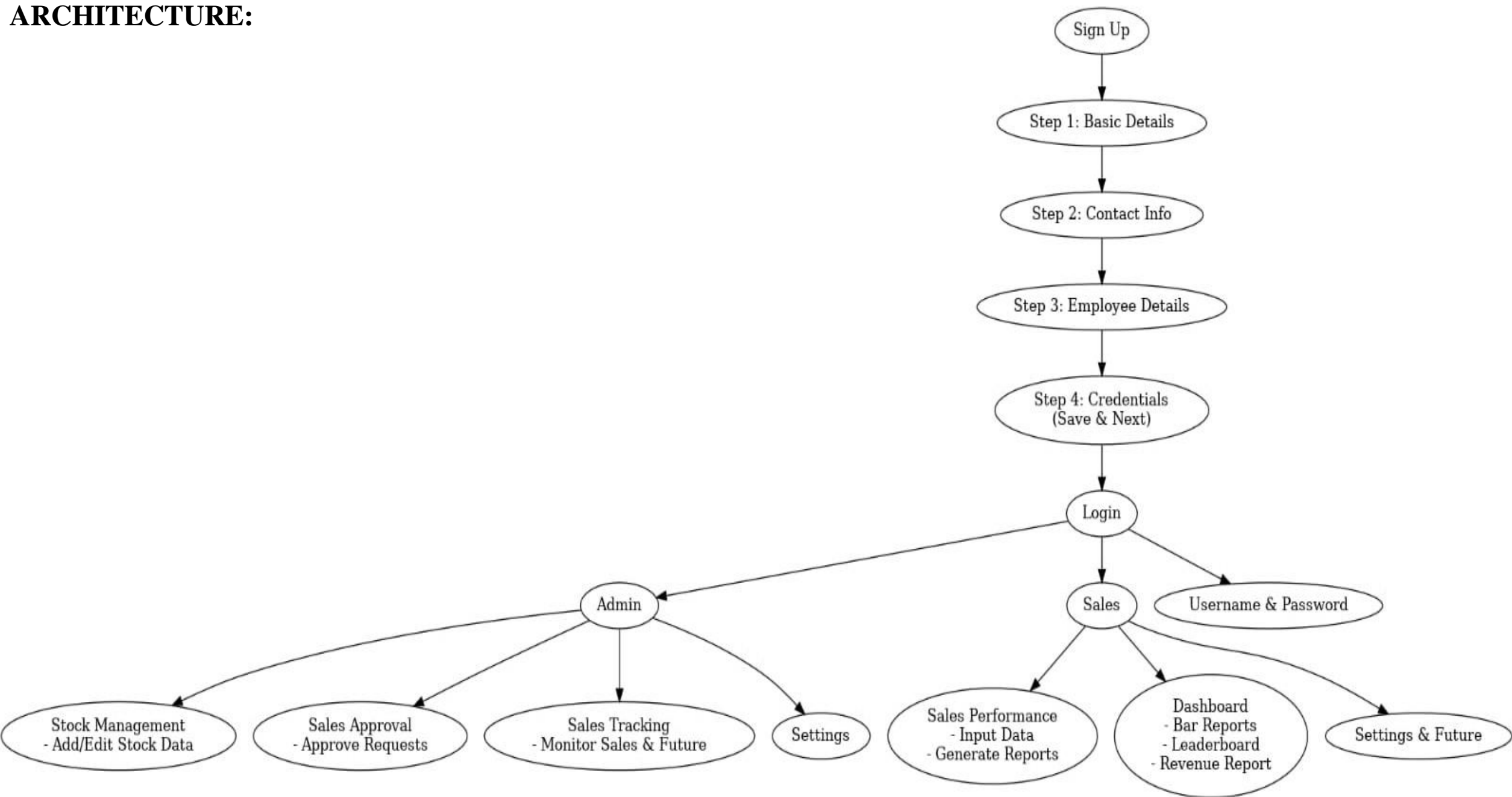
Salesperson: Accesses real-time leaderboard rankings, performance tracking, and commission calculations.

Billing Desk: Handles invoice generation with a privacy-focused approach, displaying only the customer's phone number.

Security, Automation, and Scalability:

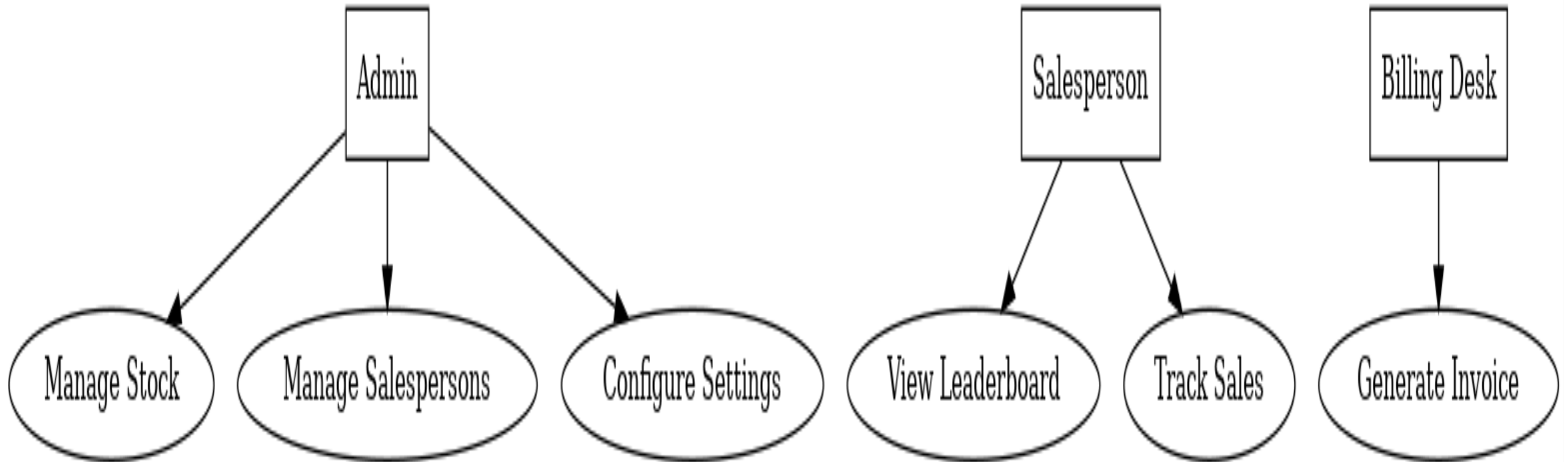
SalesXP integrates AES (Advanced Encryption Standard) encryption to secure data storage and transmission, preventing unauthorized access to sensitive information. MySQL efficiently manages stock, sales, and user data while ensuring data integrity. The system leverages workflow automation algorithms to dynamically update the leaderboard, improving sales tracking accuracy and minimizing manual effort. Additionally, the role-based access model ensures system security by restricting unauthorized modifications. With its scalable architecture, SalesXP provides businesses with a secure, automated, and performance-driven sales management solution.

ARCHITECTURE:

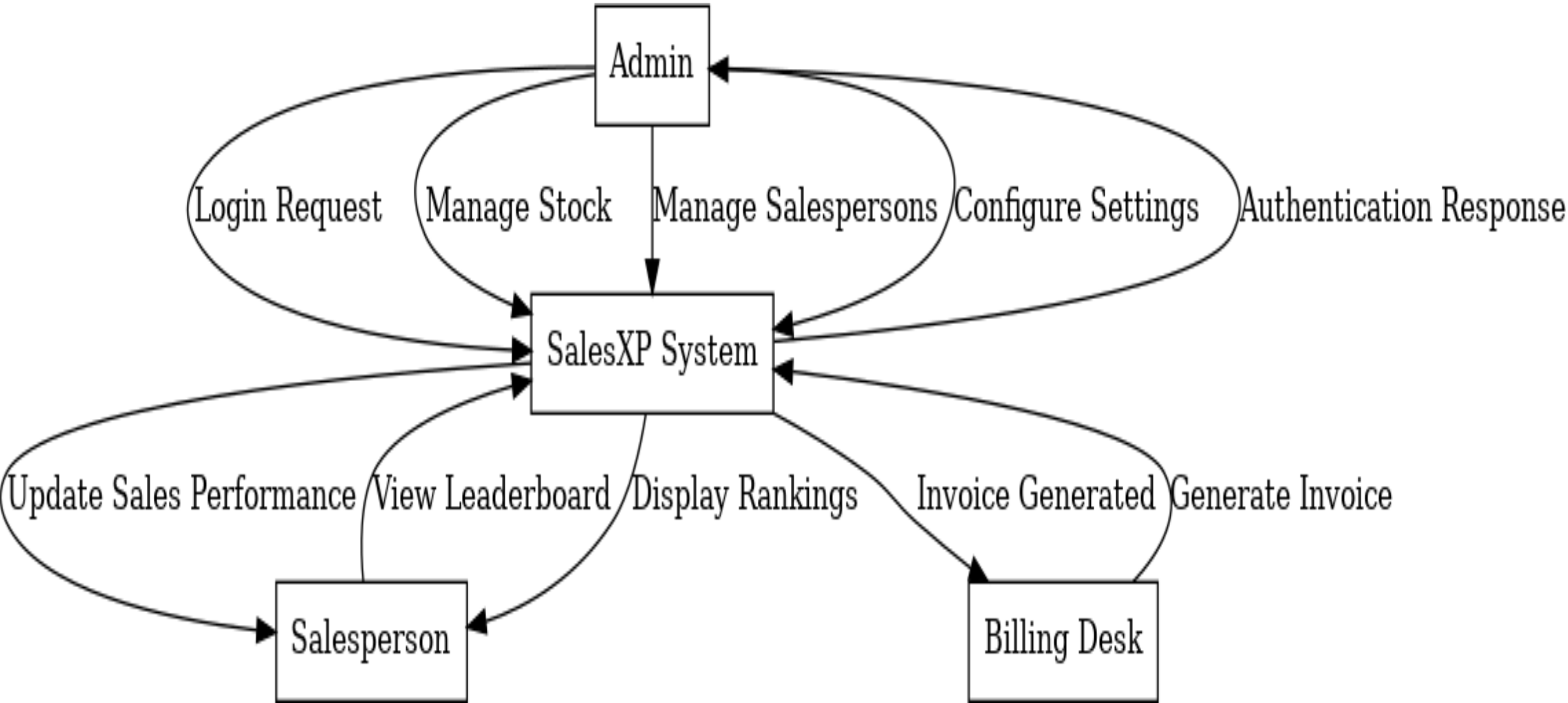


DESIGN

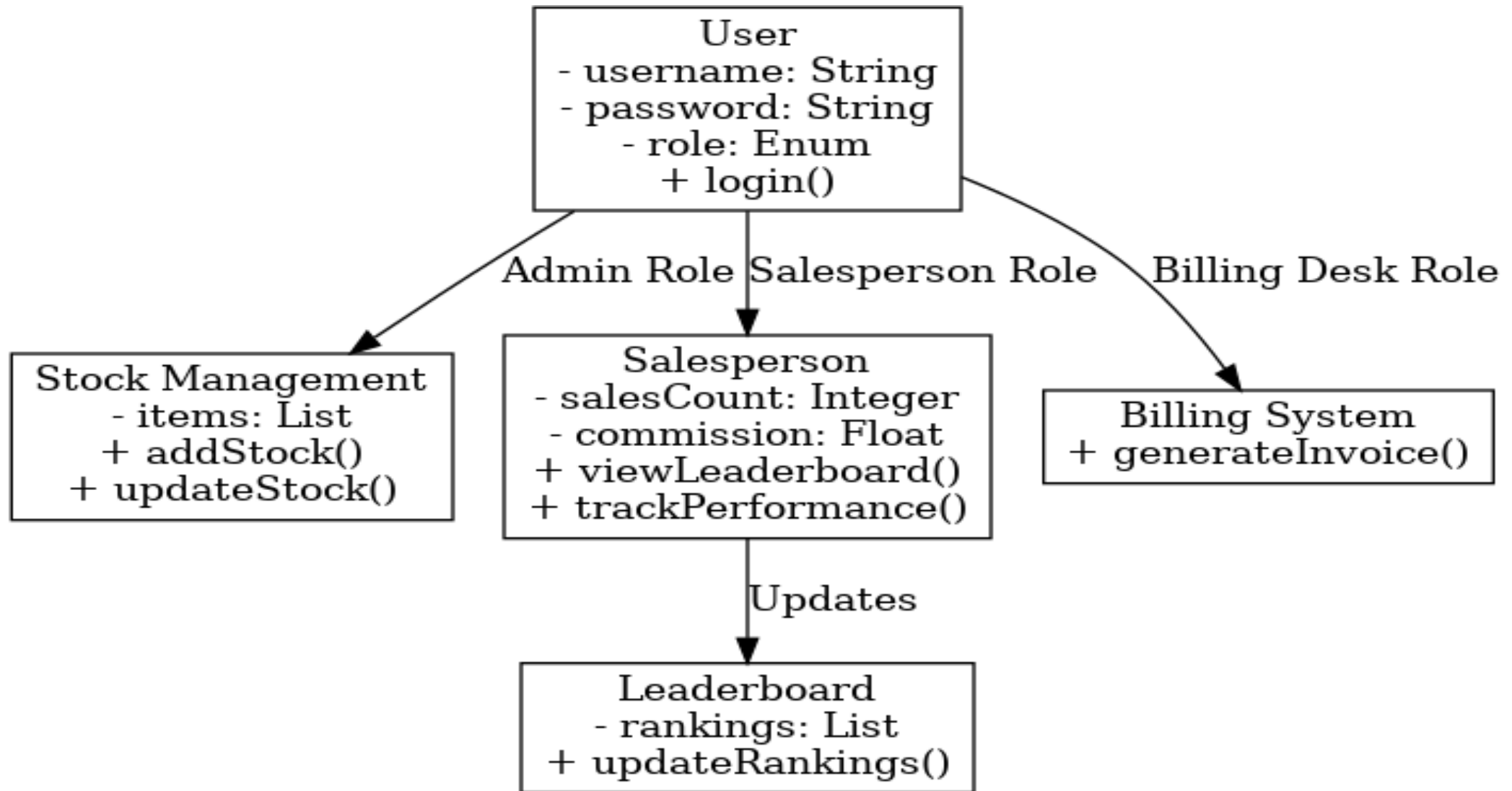
USECASE DIAGRAM:



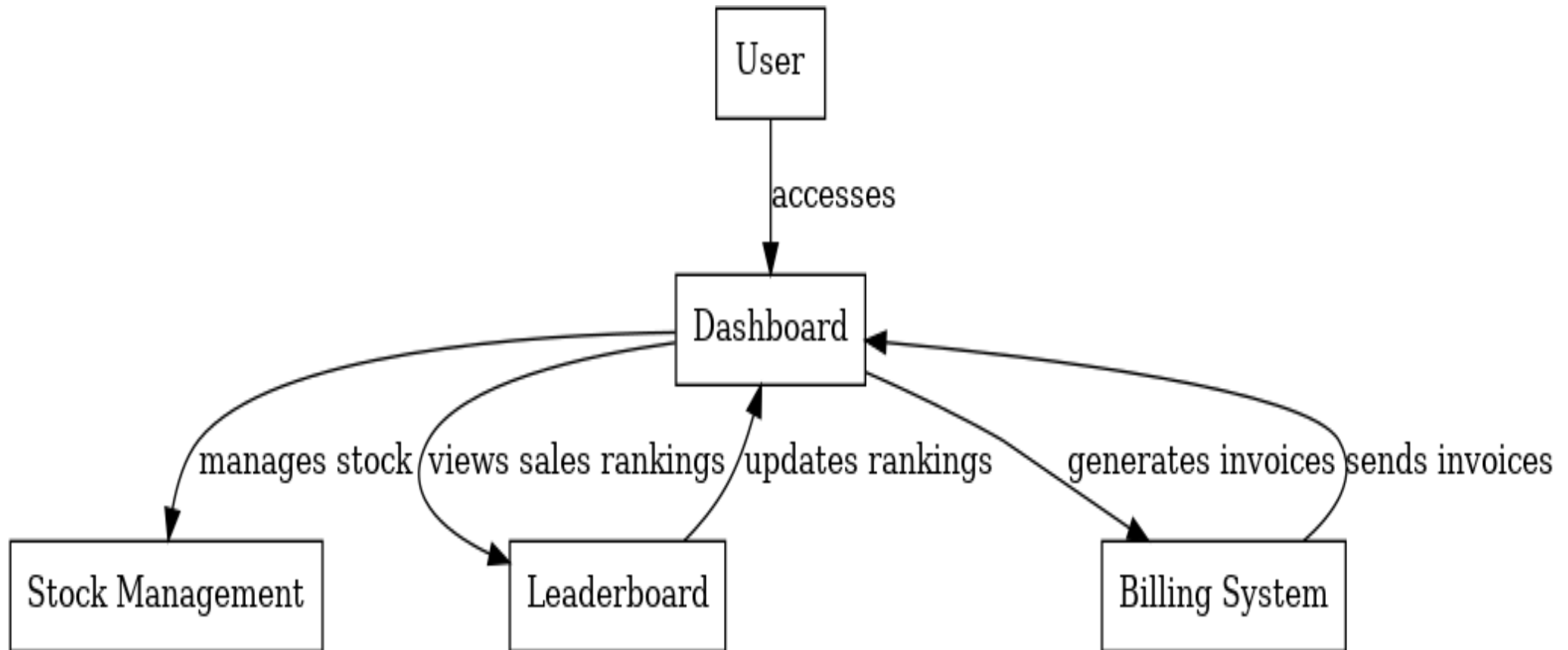
SEQUENCE DIAGRAM:



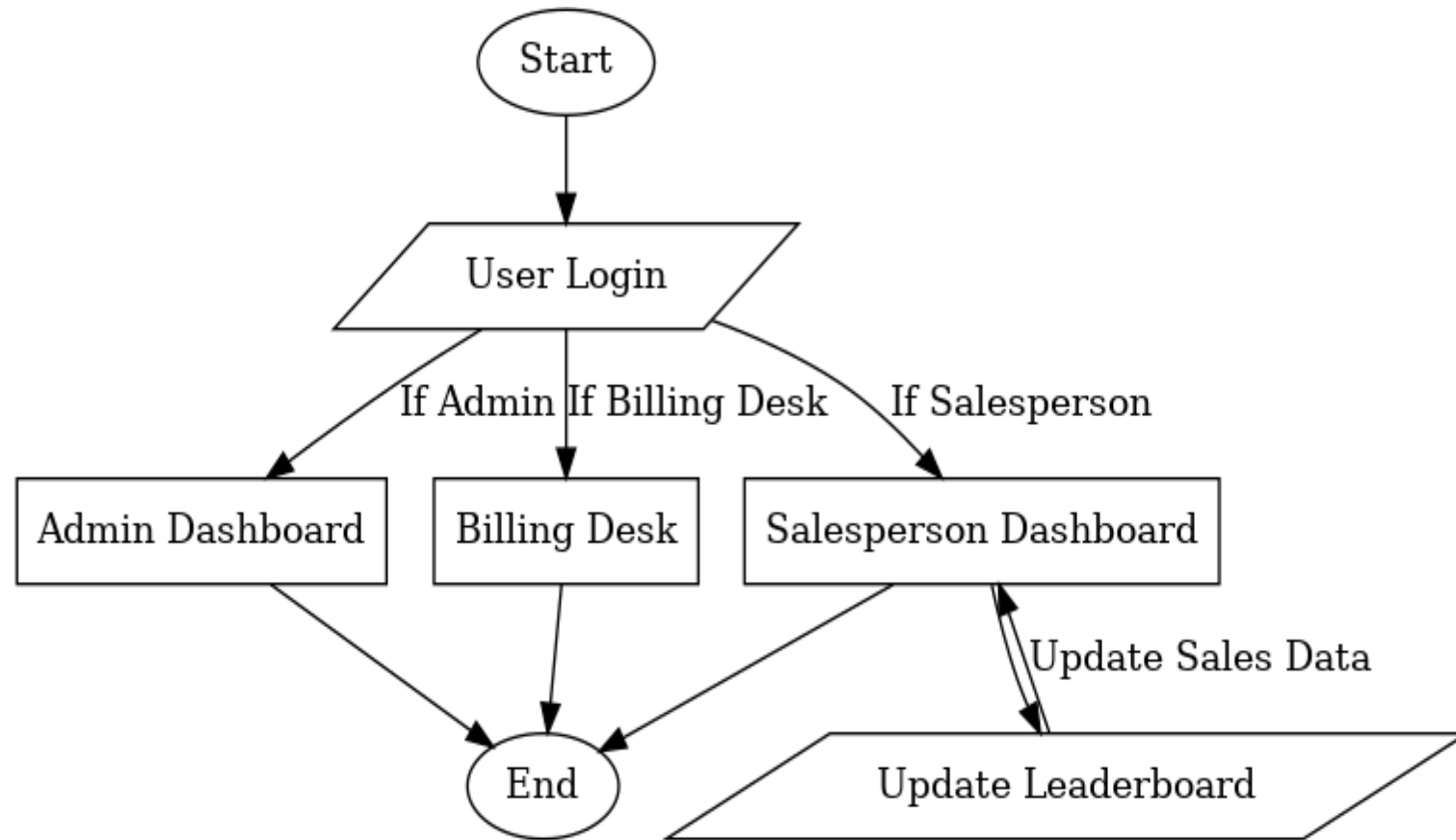
CLASS DIAGRAM:



COLLABORATIVE DIAGRAM:

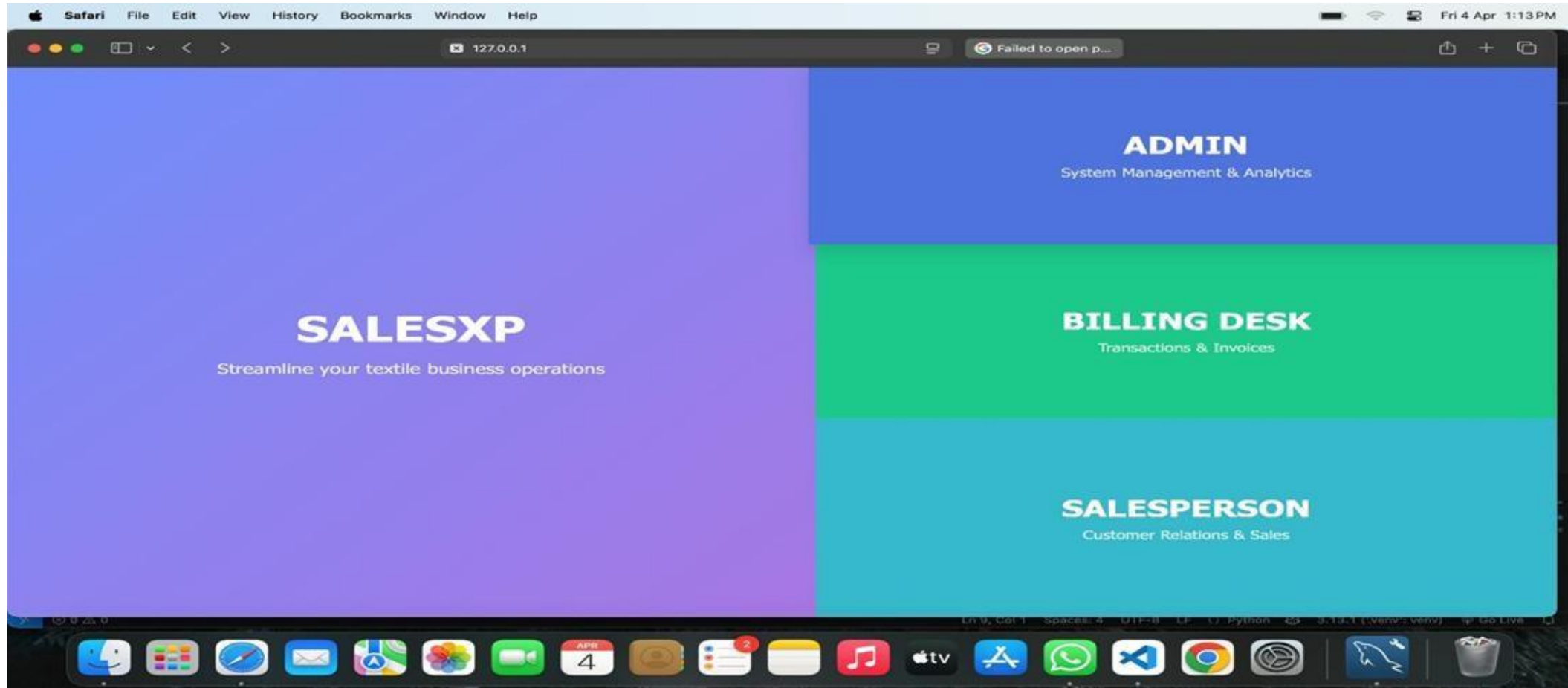


BEHAVIOURAL DIAGRAM:



OUTPUT:

Input Design & Output Design FRONTEND INTERFACE :



STOCK MANAGEMENT:

SafariFileEditViewHistoryBookmarksWindowHelp127.0.0.1Failed to open p...Fri 4 Apr 1:13 PM

STOCK MANAGEMENT

Search inventory...

Add New Saree

Add Selected to Billing

Refresh

Logout

	ID	Name	Fabric	Color	Price	Stock	Barcode	Actions
<input type="checkbox"/>	106	Banarasi Silk Saree	Silk	Maroon	₹2500.00	400	SAR8GJXKZPQR	<div>EditDeleteStock</div>
<input type="checkbox"/>	107	Kanchipuram Silk Saree	Silk	Gold	₹3200.00	7	SAR5YLHNRZVX	<div>EditDeleteStock</div>
<input type="checkbox"/>	108	Chiffon Saree	Chiffon	Pink	₹1800.00	14	SAR3TQPWNKYM	<div>EditDeleteStock</div>
<input type="checkbox"/>	109	Georgette Saree	Georgette	Blue	₹1900.00	13	SAR9KXJPLMQZ	<div>EditDeleteStock</div>
<input type="checkbox"/>	110	Cotton Saree	Cotton	Green	₹1200.00	14	SAR7YXRMQJNT	<div>EditDeleteStock</div>
<input type="checkbox"/>	111	Tussar Silk Saree	Silk	Beige	₹2800.00	5	SAR4PQKJZTXM	<div>EditDeleteStock</div>
<input type="checkbox"/>	112	Art Silk Saree	Silk	Orange	₹1500.00	27	SAR2XMRJQKNT	<div>EditDeleteStock</div>
<input type="checkbox"/>	113	Paithani Saree	Silk	Purple	₹3500.00	8	SAR6WPLTJKQX	<div>EditDeleteStock</div>
<input type="checkbox"/>	114	Linen Saree	Linen	Yellow	₹1400.00	20	SAR8LJKPQXRM	<div>EditDeleteStock</div>
<input type="checkbox"/>	115	Organza Saree	Organza	Silver	₹2900.00	9	SAR5XZMTJQLN	<div>EditDeleteStock</div>

Ln 9, Col 1Spaces: 4UTF-8LF17 Python3.13.1 (.venv: .venv)Go Live

Calendar (4)Messages (2)Notes (1)App StoreWhatsAppTelegramGoogle DriveTerminalPython IDE (3.13.1)Go Live

BILLING DESK :

Advanced Billing Desk

Customer Name: GANESH Customer Number: 9133747571 Salesperson ID: SP002

Product Name	Quantity	Price (₹)	Discount (%)	Amount (₹)
Cotton Saree	1	1200	2	1176.00
Tussar Silk Saree	1	2800	1	2772.00
Art Silk Saree	1	1500	1	1485.00

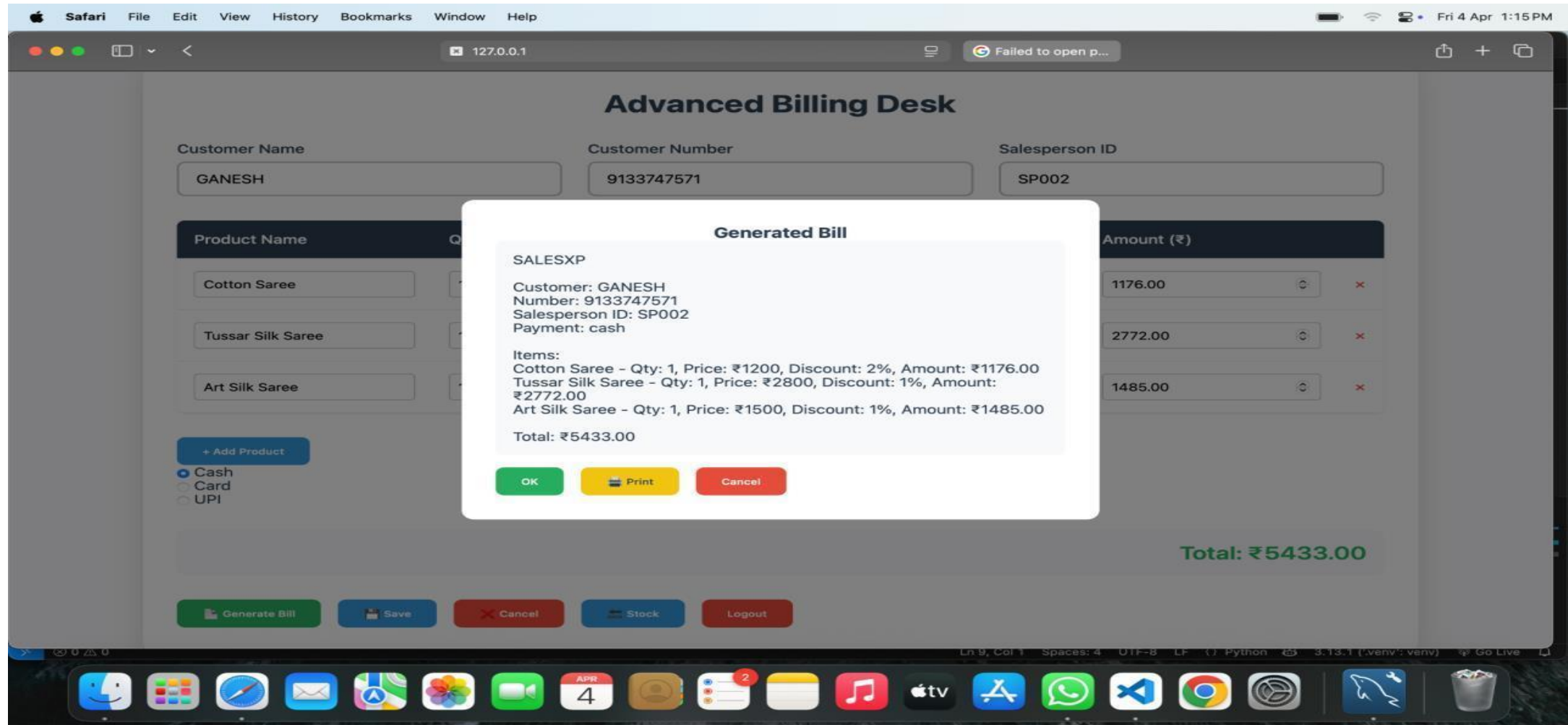
+ Add Product

☒ Cash ☐ Card ☐ UPI

Total: ₹5433.00

Generate Bill Save Cancel Stock Logout

GENERATE BILL :



SALESPERSON SIGN UP:

The screenshot shows a web browser window with the Safari menu bar at the top. The address bar displays '127.0.0.1' and a message 'Failed to open p...'. The main content area is divided into three sections. On the left is a large purple box labeled 'SALESXP' with the subtitle 'Streamline your textile business operations'. On the right is a white box containing a sign-up form for salespersons. The form includes fields for 'Employee ID', 'Full Name', 'Email', and 'Password', followed by a blue 'Sign Up' button. Below the button is a link that says 'Already have an account? Sign In'. In the background, behind the white sign-up box, there are three colored boxes: a blue one labeled 'ADMIN' (System Management & Analytics), a green one labeled 'BILLING DESK' (Transactions & Invoices), and a teal one labeled 'SALESPERSON' (Customer Relations & Sales).

ADMIN
System Management & Analytics

SALESXP
Streamline your textile business operations

BILLING DESK
Transactions & Invoices

SALESPERSON
Customer Relations & Sales

Sign Up (Salesperson)

Employee ID

Full Name

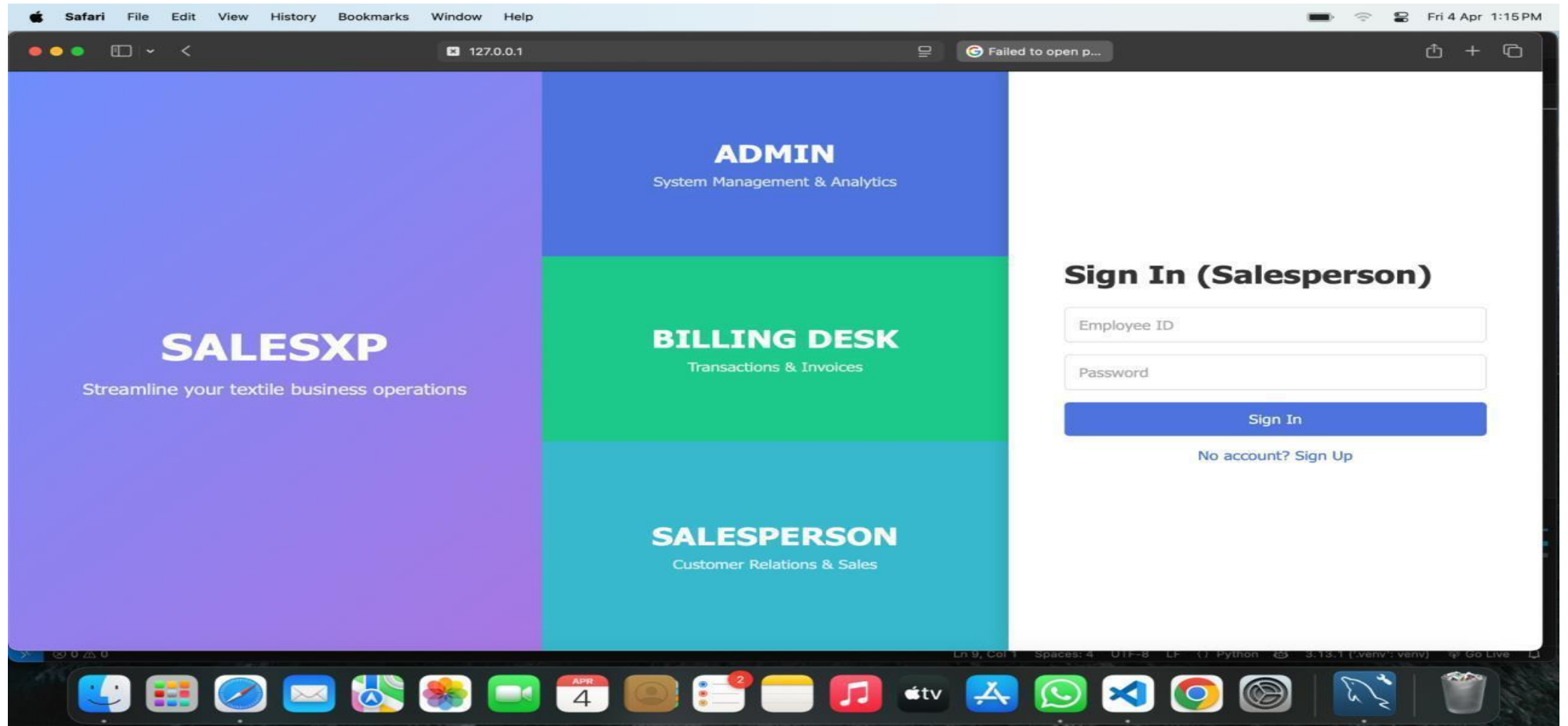
Email

Password

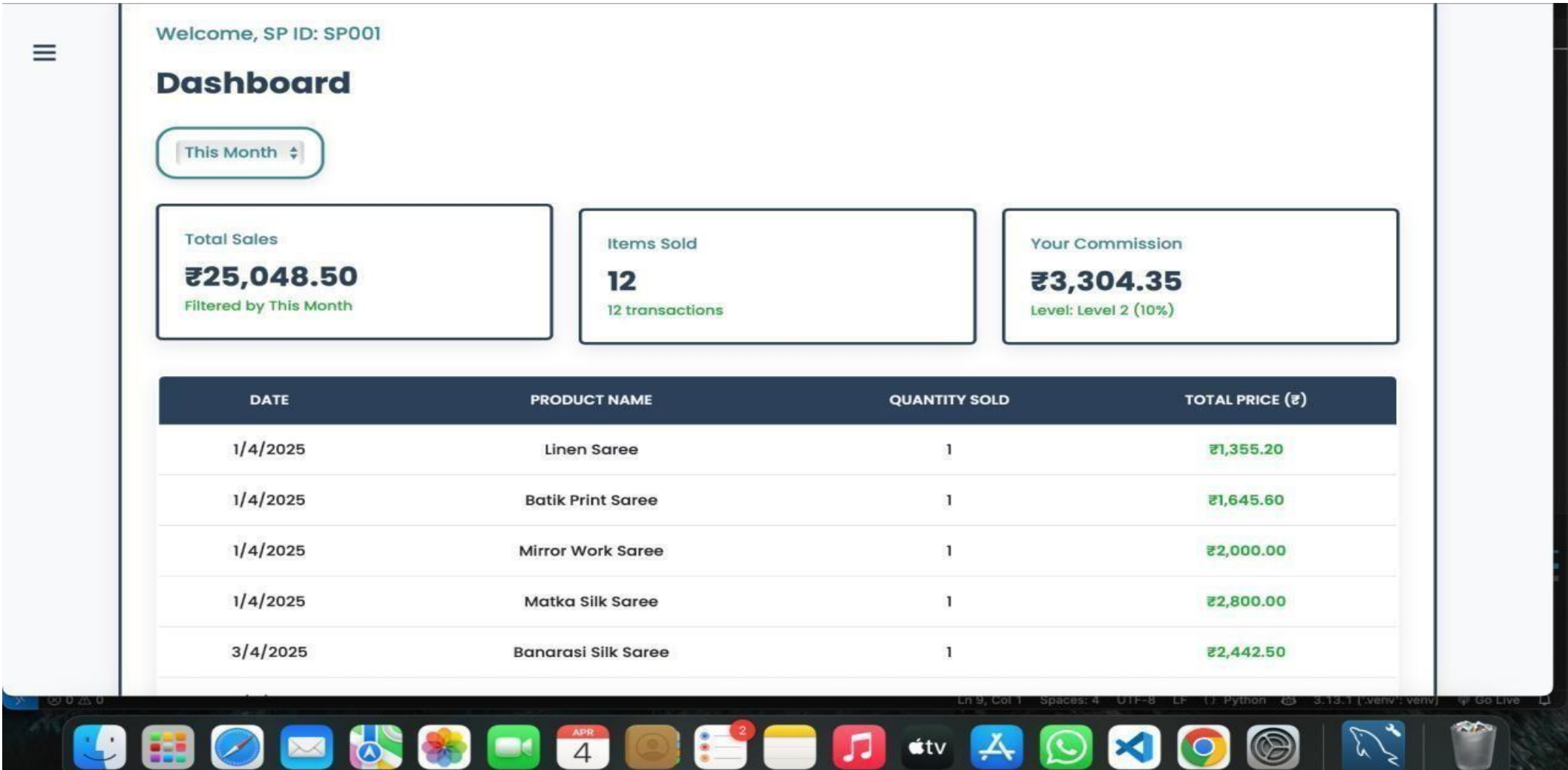
Sign Up

[Already have an account? Sign In](#)

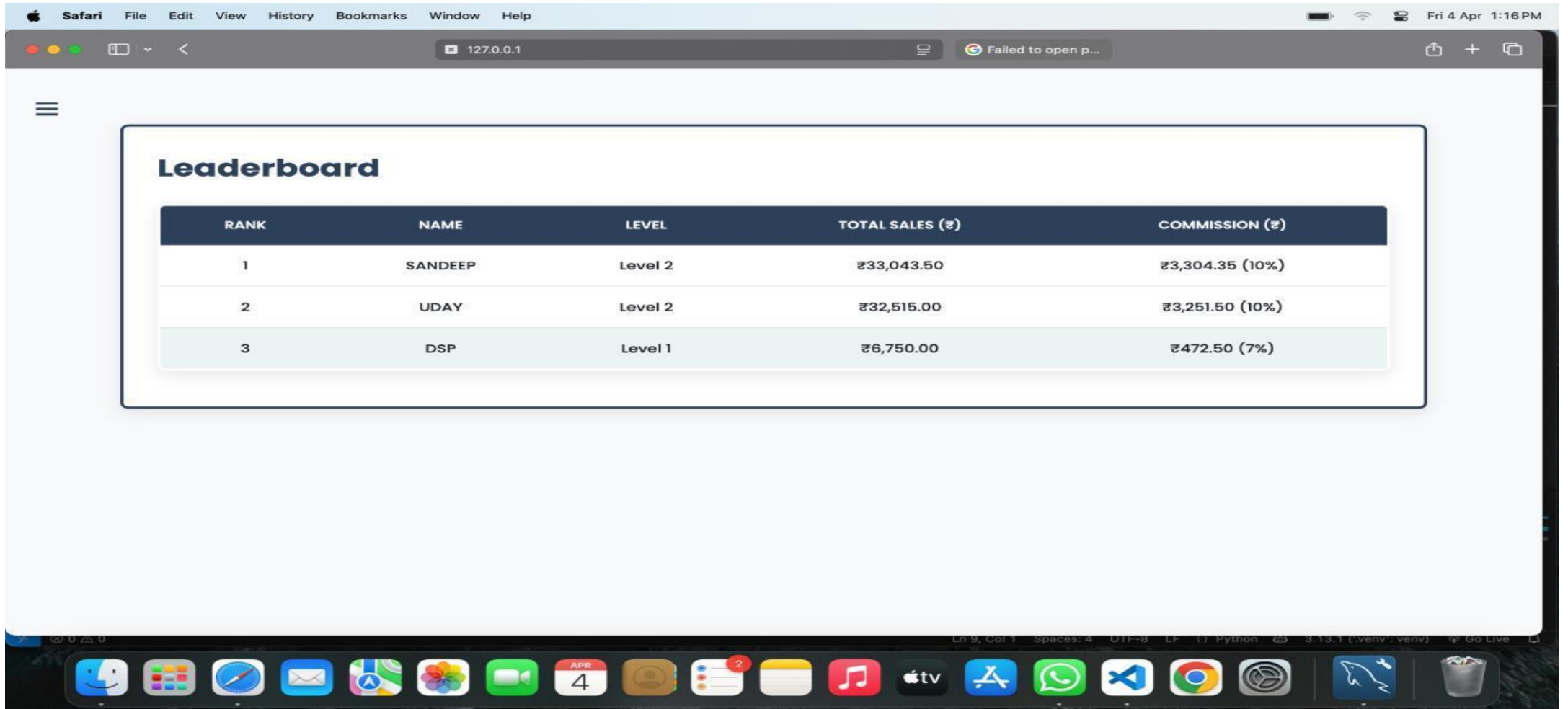
SALESPERSON SIGN IN:



SALESPERSON DASHBOARD:



SALESPERSON LEADERBOARD :



The screenshot shows a web browser window with a Safari menu bar at the top. The address bar displays '127.0.0.1' and a tab titled 'Failed to open p...'. The main content area features a 'Leaderboard' section with a table of salesperson performance data. The table has five columns: RANK, NAME, LEVEL, TOTAL SALES (₹), and COMMISSION (₹). It lists three salespersons: Sandeep (Rank 1, Level 2, ₹33,043.50 total sales, ₹3,304.35 commission at 10%), Uday (Rank 2, Level 2, ₹32,515.00 total sales, ₹3,251.50 commission at 10%), and DSP (Rank 3, Level 1, ₹6,750.00 total sales, ₹472.50 commission at 7%). The browser's dock at the bottom contains various application icons, and the system status bar at the very bottom shows the date as Friday, April 4, at 1:16 PM.

RANK	NAME	LEVEL	TOTAL SALES (₹)	COMMISSION (₹)
1	SANDEEP	Level 2	₹33,043.50	₹3,304.35 (10%)
2	UDAY	Level 2	₹32,515.00	₹3,251.50 (10%)
3	DSP	Level 1	₹6,750.00	₹472.50 (7%)

Output Database With Encryption:

USERS TABLE :

The screenshot displays a database management interface with a dark theme. On the left, a 'SCHEMAS' sidebar shows a tree view with 'saree_management' expanded, containing 'Tables', 'Views', 'Stored Procedures', and 'Functions'. The main query editor shows four SQL statements: 'select * from sarees;', 'select * from users;', 'select * from transactions_encrypted;', and 'select * from transaction_items_encrypted;'. The 'users' table is selected, and its data is shown in a 'Result Grid' below the query editor. The table has five columns: 'emp_id', 'name', 'email', 'role', and 'password'. It contains six rows of data, including an admin user and four salesperson users. The passwords are encrypted using a bcrypt-like format. At the bottom, an 'Action Output' pane shows the execution of the 'select * from users' query, indicating that 6 rows were returned in 0.00064 seconds.

emp_id	name	email	role	password
AD001	GANESH	sanagalechiru@gmail.com	admin	scrypt:32768:8:1\$3QgIuHBDBgCIPbq\$e6e39c...
BD001	RAMESH	ramesh@gmail.com	billing_desk	scrypt:32768:8:1\$K4RZaTk01kd0Q59e\$19782d...
SP001	SANDEEP	sandeep@gmail.com	salesperson	scrypt:32768:8:1\$dI10a5Bd5SvkB2b\$3e79119...
SP002	UDAY	uday@gmail.com	salesperson	scrypt:32768:8:1\$PPP192PILajTDXfa\$ic61d6Id...
SP003	DSP	dsp@gmail.com	salesperson	scrypt:32768:8:1\$mdgrUCnyz8txP8EP\$9cee64...
SP004	Rakesh	rakesh@gmail.com	salesperson	scrypt:32768:8:1\$TjBWWY0bxJdCEYn\$238645...
NULL	NULL	NULL	NULL	NULL

users 4

Action Output

	Time	Action	Response	Duration / Fetch Time
6	15:04:12	select * from users LIMIT 0, 1000	6 row(s) returned	0.00064 sec / 0.000...

Query Completed

STOCK TABLE / SAREES TABLE:

Local instance 3306 - Warning - not supported

Administration Schemas Query 1 SQL File 3* SQL File 4*

SCHEMAS

Filter objects

- saree_management
 - Tables
 - Views
 - Stored Procedures
 - Functions
- sys
- user_auth

```
1 select * from sarees;  
2 select * from users;  
3 select * from transactions_encrypted;  
4 select * from transaction_items_encrypted;
```

100% 22:1

Result Grid Filter Rows: Search Edit: Export/Import:

saree_id	name	fabric	color	price	stock_quant...	barcode
106	Banarasi Silk Saree	Silk	Maroon	2500	399	SAR8GJXKZPQR
107	Kanchipuram Silk Saree	Silk	Gold	3200	6	SAR5YLHNRZVX
108	Chiffon Saree	Chiffon	Pink	1800	13	SAR3TQPWNKYM
109	Georgette Saree	Georgette	Blue	1900	13	SAR9KXJPLMQZ
110	Cotton Saree	Cotton	Green	1200	14	SAR7YXRMQJNT
111	Tussar Silk Saree	Silk	Beige	2800	5	SAR4PQKJZTXM
112	Art Silk Saree	Silk	Orange	1500	27	SAR2XMRJQKNT
113	Paithani Saree	Silk	Purple	3500	8	SAR6WPLTJKQX
114	Linen Saree	Linen	Yellow	1400	20	SAR8LJKPQXRM
115	Organza Saree	Organza	Silver	2900	9	SAR5XZMTJQLN
116	Satin Saree	Satin	Laven...	1700	14	SAR3NTXJKLPQ
117	Net Saree	Net	Black	2000	11	SAR7RQLKJXMT
118	Crepe Saree	Crepe	Teal	1600	16	SAR9TXMRJQLK
119	Silk Blend Saree	Silk Blend	Coral	1750	13	SAR4KXJLQMTN
120	Printed Cotton Saree	Cotton	Magenta	1300	21	SAR2RJXKMTQL
121	Kota Doria Saree	Cotton	Sky Bl...	1100	26	SAR6PQXJTKMN
122	Bhagalpuri Silk Saree	Silk	Ivory	2600	10	SAR8NQLJXTKM
123	Jute Silk Saree	Jute	Brown	2200	17	SAR5KJQLMTN
124	Uppada Silk Saree	Silk	Peach	2700	12	SAR3MTJQLXNR
125	Chanderi Silk Saree	Silk	Turqu...	2400	19	SAR7XJMTQLKN
126	Kalamkari Saree	Cotton	Mustard	1850	23	SAR9PLJQXMTN

sarees 3

Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
5	15:03:53	select * from sarees LIMIT 0, 1000	103 row(s) returned	0.031 sec / 0.00072 s...

Query Completed

TRANSACTIONS:

Local instance 3306 - Warning - not supported

Administration Schemas Query 1 SQL File 3* SQL File 4*

SCHEMAS

Filter objects

- saree_management
 - Tables
 - Views
 - Stored Procedures
 - Functions
- sys
- user_auth

```
1 select * from sarees;  
2 select * from users;  
3 select * from transactions_encrypted;  
4 select * from transaction_items_encrypted;
```

100% 38:3

Result Grid Filter Rows: Search Edit: Export/Import:

transaction...	customer_name	customer_numb...	salesperson_...	payment_meth...	total_encrypt...	transaction_date
1	RAKESH	7788099665	SP001	cash	BL08	2025-03-31 18:38:18
2	Afreen	7766044339	SP001	cash	BL08	2025-03-31 18:52:16
3	DSP	8888744436	SP001	cash	BL08	2025-04-03 15:18:32
4	ganesh	8888877777	SP003	cash	BL08	2025-04-03 15:22:54
5	Hemanth	8888933332	SP002	cash	BL08	2025-04-03 15:26:07
6	ganesh	8888977789	SP001	cash	BL08	2025-04-04 04:52:03
7	sivakanth	7777888888	SP001	cash	BL08	2025-04-04 07:40:12
8	ganesh	6666788889	SP003	cash	BL08	2025-04-08 07:05:54
NULL	NULL	NULL	NULL	NULL	NULL	NULL

transactions_encrypted 5 Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
7	15:04:29	select * from transactions_encrypted LIMIT 0, 1000	8 row(s) returned	0.00055 sec / 0.0000...

Query Completed

TRANSACTION ITEMS:

Local Instance 3306 - Warning - not supported

Administration Schemas Query 1 SQL File 3* SQL File 4*

SCHEMAS

Filter objects

- saree_management
 - Tables
 - Views
 - Stored Procedures
 - Functions
- sys
- user_auth

```
1 select * from sarees;  
2 select * from users;  
3 select * from transactions_encrypted;  
4 select * from transaction_items_encrypted;
```

100% 43-4

Result Grid Filter Rows: Search Edit: Export/Import:

	item_id	transaction...	saree_id	quantity	price	discount	amount_encrypt...
1	1	1	114	1	1400	3.2	BL08
2	1	1	222	1	1700	3.2	BL08
3	2	1	158	1	2000	0	BL08
4	2	1	209	1	2800	0	BL08
5	3	1	106	1	2500	2.3	BL08
6	3	1	107	1	3200	2.4	BL08
7	3	1	108	1	1800	1	BL08
8	4	1	239	1	3300	0	BL08
9	4	1	238	1	3450	0	BL08
10	5	1	141	1	3100	0	BL08
11	5	1	140	1	2800	0	BL08
12	5	1	139	1	2700	0	BL08
13	5	1	142	1	2350	0	BL08
14	6	1	110	1	1200	0	BL08
15	6	1	111	1	2800	0	BL08
16	7	1	109	1	1900	0	BL08
17	7	1	110	1	1200	0	BL08
18	7	1	111	1	2800	0	BL08
19	8	1	106	1	2500	7	BL08
20	8	1	107	1	3200	2	BL08
21	8	1	108	1	1800	2	BL08

transaction_items_encrypted 6

Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
8	15:04:40	select * from transaction_items_encrypted LIMIT 0, 1000	21 row(s) returned	0.0037 sec / 0.00001...

Query Completed

CONCLUSION:

SalesXP has successfully addressed the challenges of traditional sales commission tracking by providing an automated, transparent, and performance-driven solution. The system eliminates the drawbacks of manual tracking methods, such as errors, delays, and fraud, by leveraging barcodebased sales tracking and automated commission calculations. By implementing a structured, level-based reward system, SalesXP incentivizes salespersons to enhance their performance, ensuring continuous motivation. The system fosters a healthy competitive environment through real-time leaderboards, allowing employees to monitor their progress and strive for better rankings. Additionally, SalesXP optimizes stock management by offering higher commissions for selling older or slow-moving inventory, benefiting both employees and businesses.

The introduction of analytics and performance tracking features enables store managers to gain valuable insights into employee sales patterns, helping them design better training and incentive programs. The automated calculations and fraud prevention mechanisms significantly reduce administrative workload, allowing businesses to focus on strategic growth.

SalesXP's adaptability makes it suitable for various retail businesses, from small stores to large enterprises. By integrating with existing retail management solutions, the platform ensures seamless implementation without disrupting business operations.

In summary, SalesXP enhances employee engagement, improves sales efficiency, and streamlines commission distribution, leading to increased profitability for retail businesses. The system aligns with the ongoing digital transformation in retail, paving the way for future advancements in sales and performance tracking. With its user-friendly interface, real-time analytics, and structured commission model, SalesXP stands out as a powerful tool for modern retail management.

THANK YOU!