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# COURIEREXPRESS – AUTOMATE COURIER OPERATIONS WEBSITE

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# 1. Project Introduction - CourierXpress

## 1.1. Context & CourierXpress Problem

In the era of globalization and the rapid expansion of e-commerce, logistics has become a critical backbone of modern trade. Courier services, in particular, play a vital role in ensuring the smooth flow of goods between businesses and customers. However, despite the increasing demand for speed, accuracy, and transparency, many courier companies continue to rely on fragmented manual processes to manage consignments, maintain customer records, and provide delivery updates.

This reliance on manual operations introduces several persistent challenges:

- **Data Inaccuracy:** Manual entry of shipment information often results in errors, inconsistencies, and miscommunication.
- **Operational Delays:** Non-integrated workflows slow down order processing and extend delivery times.
- **Lack of Transparency:** Customers are unable to track their shipments in real time, leading to dissatisfaction and reduced trust.
- **Inefficiency:** Human-dependent processes consume significant time and resources, limiting scalability and competitiveness.

Beyond these general industry challenges, **CourierXpress** itself encounters several critical issues in its daily operations. The company struggles with fragmented data management, where shipment records and customer information are stored across multiple disconnected systems, making it difficult to maintain consistency and accuracy. Communication between agents and customers is often delayed due to the absence of a centralized platform, resulting in missed updates and reduced customer satisfaction. Moreover, the lack of automated billing and reporting tools forces staff to rely heavily on manual calculations and paperwork, which not only increases the risk of financial

discrepancies but also consumes valuable time. These limitations hinder CourierXpress from scaling its services effectively, reducing its competitiveness in an increasingly digital logistics market.

## **1.2. Background of CourierXpress**

### **1.2.1. Services Provided by CourierXpress**

CourierXpress offers two domestic courier services:

- **Standard Delivery**

- Applicable for goods under 20kg and over 20kg.
- Delivery coverage: nationwide.
- Maximum parcel dimensions: 600cm × 220cm × 220cm (5-ton truck capacity).

- **Express Delivery**

- Applicable for goods under 20kg.
- Delivery coverage: within Ho Chi Minh City and Hanoi.
- Parcel size categories:
  - Size S: up to 25 × 32 × 12cm
  - Size M: up to 50 × 40 × 50cm
  - Size L: up to 60 × 50 × 60cm
  - Size XL: up to 90 × 70 × 90cm

### **1.2.2. Customer Groups Served by CourierXpress**

- Individual Customers (the primary target group of CourierXpress).
- Corporate Customers.

### **1.2.3. Types of Goods Accepted by CourierXpress**

- **High-end fashion items:** Clothing, footwear, handbags, cosmetics, fashion accessories.
- **Food and beverages:** Raw materials, fresh produce, processed foods, bottled/canned drinks for restaurants, hotels, cafés, and convenience stores. Especially items requiring fast delivery to maintain freshness.
- **Stationery and small office equipment:** Office supplies, filing cabinets, computers, electronics for office buildings and IT companies.
- **Electronic and technology devices:** Laptops, mobile phones, computer components, machinery, audio equipment.
- **Home and decorative furniture:** Sofas, tables, chairs, beds, wardrobes, decorative items, lamps, paintings.
- **Construction materials:** Cement, bricks, steel, tempered glass, construction equipment.
- **Vehicles:** Motorbikes, scooters, bicycles, electric bikes.
- **Food products:** Cooking ingredients, frozen goods, seafood, fresh vegetables.
- **Personal belongings and small-scale relocation:** Personal items, luggage for moving between apartments, small household furniture, and office documents for small-scale office relocations.

#### 1.2.4. Types of Transportation Vehicles Used by CourierXpress

Vehicle Type	Maximum Load Capacity	Maximum Parcel Dimensions (L × W × H)	Suitable Goods	Applicable Conditions
<b>Motorbike</b>	30kg	40cm × 40cm × 40cm	<p><b>Lightweight &amp; compact items:</b> clothing, cosmetics, footwear, accessories, stationery, mobile phones, laptops, documents.</p> <p><b>Food &amp; beverages:</b> raw materials, fresh produce, processed foods, bottled drinks for restaurants/cafés.</p>	Inter-city /province
<b>2.5-ton Truck</b>	2,200kg	420cm × 170cm × 180cm	<p><b>Vehicles:</b> motorbikes, scooters, bicycles, e-bikes.</p>	Inter-region (within the region). <b>North ↔ North</b> <b>Central ↔ Central</b> <b>South ↔ South</b>

			<p><b>Food &amp; beverages (bulk deliveries for chain stores):</b> raw materials, fresh produce, processed foods, bottled drinks.</p> <p><b>Office equipment &amp; electronics:</b> computers, tech machinery, audio devices, small filing cabinets.</p> <p><b>Furniture &amp; personal belongings:</b> sofas, tables, chairs, wardrobes, decorative items, household/office relocation.</p>	
<b>3.5-ton Truck</b>	3,200kg	420cm × 180cm × 180cm	<b>Construction materials:</b> cement, bricks, steel, tempered glass.	Intra-nearby-region <b>North ↔ Central</b> <b>Central ↔ South</b>

			<p><b>Vehicles:</b> motorbikes, 4-seater cars.</p> <p><b>Office equipment &amp; electronics:</b> computers, tech machinery, audio devices, large filing cabinets.</p> <p><b>Furniture &amp; personal belongings:</b> sofas, tables, chairs, wardrobes, decorative items, household/office relocation.</p>	
<b>5-ton Truck</b>	4,500kg	600cm × 220cm × 220cm	<p><b>Construction materials:</b> cement, bricks, steel, tempered glass.</p> <p><b>Vehicles:</b> motorbikes, 4-seater cars, 7-seater cars.</p>	Intra-far-region <b>North ↔ South</b>

			<p><b>Office equipment &amp; electronics:</b> computers, tech machinery, audio devices, large filing cabinets.</p> <p><b>Furniture &amp; personal belongings:</b> sofas, tables, chairs, wardrobes, decorative items, household/office relocation.</p>	
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Table 1. Types of Transportation Vehicles

### 1.2.5. CourierXpress Branches

**Structure:** CE-[CITY CODE]-[DISTRICT]-[NAME]

- **CE:** CourierExpress
- **City Code:** HN (Hanoi), SG (Saigon/Ho Chi Minh City), DN (Da Nang), KH (Khanh Hoa)
- **District:** Abbreviated (e.g., CG = Cau Giay, TB = Tan Binh)

Below is the detailed branch list with IDs:

#### 1. Hanoi Area (Code: HN)

Branch ID	Branch Name	Address (Summary)
-----------	-------------	-------------------

CE-HN-CG-DUYTAN	CourierExpress Building	2 Alley 15, Duy Tan Street, Cau Giay
CE-HN-CG-TRUNGYEN	Trung Yen Post Office	33 Alley 22, Mac Thai To Street, Cau Giay
CE-HN-NTL-TAYMO	Tay Mo Post Office	11 Cau Coc Street, Nam Tu Liem
CE-HN-NTL-PHKHOANG	Phung Khoang Post Office	16 Alley 67, Phung Khoang Street, Nam Tu Liem

Table 2. Hanoi Area Branch list table

## 2. Ho Chi Minh City Area (Code: SG)

Branch ID	Branch Name	Address (Summary)
CE-SG-TB-LTKIET	CourierExpress Tan Binh	306 Ly Thuong Kiet, Tan Binh
CE-SG-TB-A4	CourierExpress Offices	114 A4 Street, Tan Binh
CE-SG-Q3-VCHUOI	CourierExpress District 3	107a Vuon Chuoi Street, District 3
CE-SG-BT-CVAN	CourierExpress Binh Thanh	213 Chu Van An, Binh Thanh
CE-SG-Q1-TANDINH	Fast Shipping – Tan Dinh	9/8 Ly Van Phuc, District 1
CE-SG-TB-TRSON	Truong Son Post Office	102 Hong Ha, Tan Binh
CE-SG-Q1-BENNGHE	Ben Nghe Post Office	Nguyen Binh Khiem, District 1

CE-SG-TB-APBAC	Ap Bac Post Office	18 Than Nhan Trung, Tan Binh
CE-SG-TP-LVVIET	CourierExpress Thu Duc	9A Street 494, Le Van Viet
CE-SG-Q11- LTKIET	District 3 Branch (Located in District 11)	1A Ly Thuong Kiet, District 11

Table 3. Ho Chi Minh Area Branch list table

### 3. Da Nang Area (Code: DN)

Branch ID	Branch Name	Address (Summary)
CE-DN-NHS- NGHANHSON	CourierExpress Ngu Hanh Son	85 Ngu Hanh Son, Da Nang
CE-DN-LC-PHUTHANH	CourierExpress Lien Chieu	51 Phu Thanh 7, Lien Chieu

Table 4. Da Nang Area Branch list table

### 4. Khanh Hoa Area (Code: KH)

Branch ID	Branch Name	Address (Summary)
CE-KH-NT- NGTATTHANH	CourierExpress Nha Trang	Km 22, Nguyen Tat Thanh Boulevard, Nha Trang

Table 5. Khanh Hoa Area Branch list table

## 1.2.6. Pricing

### 1.2.6.1. Standard Delivery Pricing

#### 1.2.6.1.1. Pricing for Shipments Under 20kg

The delivery fee table applies to shipments under 20kg (**VAT not included**).

Weight (max 20kg)	Inter-city /province	Inter-region	Intra-region	
		North ↔ North Central ↔ Central South ↔ South	Intra-nearby- region North ↔ Central Central ↔ South	Intra-far-region North ↔ South
< 3kg	30.000 VND	30.000 VND	32.000 VND	35.000 VND
Each additional 0.5kg	+2.500 VND / 0,5kg	+2.500 VND / 0,5kg	+5.000 VND / 0,5kg	+5.000 VND / 0,5kg

Table 6. Pricing table for Shipments Under 20kg

#### Notes for Shipments Under 20kg:

- Fractional kilograms are rounded up.

#### Return Fee for Shipments Under 20kg (VAT not included)

Inter-city /province	Inter-region	Intra-region	
	North ↔ North Central ↔ Central	Intra-nearby- region North ↔ Central	Intra-far-region North ↔ South

	<b>South ↔ South</b>	<b>Central ↔ South</b>	
5,000 VND per order	50% of delivery fee	100% of delivery fee	100% of delivery fee

Table 7. Return Fee Table for Shipments Under 20kg (VAT not included)

### **Address Change Fee for Shipments Under 20kg (VAT not included)**

Applicable only when CourierExpress receives customer notification of changes (time, recipient location) **before** the shipment status is updated to “in transit.”

Inter-city /province	Inter-region	Intra-region	
	North ↔ North	Intra-nearby- region	Intra-far-region
	Central ↔ Central	North ↔ Central	North ↔ South
	South ↔ South	Central ↔ South	
Free of charge	10% of delivery fee	Address change not supported	Address change not supported

Table 8. Address Change Fee Table for Shipments Under 20kg (VAT not included)

### **Warehouse Handling Fee (if return delivery cannot be completed) for Shipments Under 20kg (VAT not included)**

In cases where return delivery cannot be made to the recipient’s address, the goods will be stored at the CourierExpress warehouse. Storage will be maintained for up to 3 days from the date the return is refused.

- Service fee: **5,000 VND per day** (maximum **15,000 VND for 3 days**).

## Estimated Delivery Time

Pickup Time	Inter-city /province	Inter-region	Intra-region	
		North ↔ North Central ↔ Central South ↔ South	Intra-nearby- region North ↔ Central Central ↔ South	Intra-far- region North ↔ South
<b>Morning</b> <b>Pickup</b> <b>(7:00 → 12:00)</b>	1 – 2 days	2 – 3 days	3 – 5 days	4 – 5 days
<b>Afternoon</b> <b>Pickup</b> <b>(12:00 → 18:00)</b>	1 – 2 days	2 – 3 days	3 – 5 days	4 – 5 days

Table 9. Estimated Delivery Time table

### 1.2.6.1.2. Shipping Fee for Large and Bulky Shipments (20kg – 300kg)

The delivery fee table applies to shipments weighing between **20kg and 300kg (VAT not included)**.

Weight (min = 20kg &	Inter-city /province	Inter-region	Intra-region	
		North ↔ North Central ↔ Central	Intra-nearby- region	Intra-far- region

<b>max = 300kg)</b>		<b>South ↔ South</b>	<b>North ↔ Central Central ↔ South</b>	<b>North ↔ South</b>
<b>20kg</b>	90.000 VND	90.000 VND	90.000 VND	90.000 VND
<b>30kg</b>	125.000 VND	125.000 VND	125.000 VND	125.000 VND
<b>40kg</b>	180.000 VND	180.000 VND	180.000 VND	180.000 VND
<b>50kg</b>	220.000 VND	220.000 VND	220.000 VND	220.000 VND
<b>Above 50kg (fee per kg)</b>	130.000 VND	130.000 VND	130.000 VND	130.000 VND

Table 10. Shipping Fee Table for Large and Bulky Shipments (20kg – 300kg)

### Important Notes for Large and Bulky Delivery Service

- **Volumetric weight formula:** Dimensions (cm) (Length × Width × Height) ÷ 4000.
- **Maximum parcel weight:** 50kg per parcel.
- **Fractional kilograms:** Rounded up.

### Return Fee for Shipments 20kg – 300kg (VAT not included)

<b>Inter-city /province</b>	<b>Inter-region</b>		<b>Intra-region</b>
	<b>North ↔ North Central ↔ Central</b>	<b>Intra-nearby- region North ↔ Central</b>	<b>Intra-far-region North ↔ South</b>

	<b>South ↔ South</b>	<b>Central ↔ South</b>	
50% of delivery fee	100% of delivery fee	100% of delivery fee	100% of delivery fee

*Table 11. Return Fee table for Shipments 20kg – 300kg (VAT not included)*

### **Address Change Fee for Shipments 20kg – 300kg (VAT not included)**

Applicable only when CourierExpress receives customer notification of changes (time, recipient location) before the shipment status is updated to “in transit.”

<b>Inter-city /province</b>	<b>Inter-region</b>	<b>Intra-region</b>	
	<b>North ↔ North</b> <b>Central ↔ Central</b> <b>South ↔ South</b>	<b>Intra-nearby- region</b> <b>North ↔ Central</b> <b>Central ↔ South</b>	<b>Intra-far-region</b> <b>North ↔ South</b>
Free of charge	15% of delivery fee	Address change not supported	Address change not supported

*Table 12. Address Change Fee Table for Shipments 20kg – 300kg (VAT not included)*

### **Warehouse Handling Fee (if return delivery cannot be completed) for Shipments 20kg – 300kg (VAT not included)**

In cases where return delivery cannot be made to the recipient’s address, the goods will be stored at the CourierExpress warehouse. Storage will be maintained for up to 3 days from the date the return is refused.

- For bulky items occupying large space, the service fee is: **7,000 VND per day** (maximum **21,000 VND for 3 days**).

### **Estimated Delivery Time**

<b>Pickup Time</b>	<b>Inter-city /province</b>	<b>Inter-region</b>	<b>Intra-region</b>	
		<b>North ↔ North</b> <b>Central ↔ Central</b> <b>South ↔ South</b>	<b>Intra-nearby- region</b> <b>North ↔ Central</b> <b>Central ↔ South</b>	<b>Intra-far- region</b> <b>North ↔</b> <b>South</b>
<b>Morning Pickup (7:00 → 12:00)</b>	1 – 2 days	2 – 3 days	4 – 5 days	4 – 5 days
<b>Afternoon Pickup (12:00 → 18:00)</b>	1 – 2 days	2 – 3 days	4 – 5 days	4 – 5 days

*Table 13. Estimated Delivery Time table*

#### **1.2.6.2. Express Delivery Pricing**

**The pricing table applies to shipments under 20kg with express delivery (VAT not included)**

Express delivery service is available **only in Ho Chi Minh City and Hanoi**. Other provinces and cities do not offer express delivery service.

Parcel Size	Under 5kg	5kg – 20kg
<b>S (max 25 × 32 × 12cm)</b>	50,000 VND	60,000 VND
<b>M (max 50 × 40 × 50cm)</b>	60,000 VND	70,000 VND
<b>L (max 60 × 50 × 60cm)</b>	70,000 VND	80,000 VND
<b>XL (max 90 × 70 × 90cm)</b>	80,000 VND	90,000 VND

Table 14. The pricing table applies to shipments under 20kg with express delivery (VAT included)

### Return Fee Table for Express Shipments Under 20kg (VAT not included)

Area	Return Fee
Ho Chi Minh → Ho Chi Minh	100% of delivery fee
Hanoi → Hanoi	100% of delivery fee

Table 15. Return Fee Table for Express Shipments Under 20kg (VAT included)

### Warehouse Handling Fee (if return delivery cannot be completed) for Express Shipments (VAT not included)

In cases where return delivery cannot be made to the recipient's address, the goods will be stored at the CourierExpress warehouse. Storage will be maintained for up to 3 days from the date the return is refused.

- For bulky items occupying large space, the service fee is: 5,000 VND per day (maximum 15,000 VND for 3 days).

### Estimated Delivery Time

Pickup Time	Area
	<b>Ho Chi Minh → Ho Chi Minh</b>
<b>Hanoi → Hanoi</b>	
Morning pickup (7:00 → 12:00)	Same day or Next day
Afternoon pickup (12:00 → 18:00)	Next day

Table 16. Estimated Delivery Time table

### 1.2.7. Compensation Policy for Damaged Goods

Type of Damage	Compensation for Order
<b>Goods inside the parcel remain intact, but external packaging is:</b> <ul style="list-style-type: none"> <li>• Torn, broken, or wet carton/box</li> <li>• Manufacturer's seal torn, product intact</li> </ul>	5% of product value based on invoice (maximum 10,000,000 VND)
Goods broken/damaged <b>up to 30%</b>	30% of product value based on invoice (maximum 10,000,000 VND)
Goods broken/damaged from <b>30% to 50%</b>	50% of product value based on invoice (maximum 10,000,000 VND)
Goods broken/damaged from <b>50% to 70%</b>	70% of product value based on invoice (maximum 10,000,000 VND)
Goods broken/damaged <b>over 70%</b>	100% of product value based on invoice (maximum 10,000,000 VND)

### **1.2.8. Goods Refused for Transportation**

- Goods classified as prohibited under the law.
- Commercial/imported goods without complete invoices or proper documentation.
- In cases where prohibited goods are discovered after acceptance, the carrier has full authority to handle them, and the customer will be held responsible before government authorities.

### **1.2.9. Process of Creating Waybills and Transporting Goods**

#### **Step 1: Waybill Creation Process**

Customers access the **Courier Express** website and create an order by following these steps:

##### **1. Address Information**

- **Sender:** Enter Full Name, Phone Number, and detailed Pickup Address.
- **Receiver:** Enter Full Name, Phone Number, and detailed Delivery Address.

*(Note: Address includes House Number/Street Name, Ward/Commune, District, Province/City)*

##### **2. Select Service Type**

Customers choose one of two service options:

- **Standard Delivery:** Nationwide coverage.
- **Express Delivery:** Applicable only within Ho Chi Minh City and Hanoi (requires suitable package size).

##### **3. Product Information**

The system requires service type selection before entering this section to calculate accurate charges:

- **Product details:** Allows adding multiple items in one order.
- **Weight:** Enter weight (grams).
- **Dimensions:**
  - For **Standard Delivery**: Enter Length (cm), Width (cm), Height (cm).
  - For **Express Delivery**: Choose from standard sizes (S, M, L, XL):
    - Size S: max  $25 \times 32 \times 12$  cm
    - Size M: max  $50 \times 40 \times 50$  cm
    - Size L: max  $60 \times 50 \times 60$  cm
    - Size XL: max  $90 \times 70 \times 90$  cm
- **Item type:** Select from the predefined list so the system can assign suitable transport:
  - Premium fashion items
  - Food and beverages
  - Stationery and small office equipment
  - Electronic devices
  - Fragile high-value goods
  - Decorative furniture
  - Construction materials
  - Vehicles

- Personal belongings and small-scale home/office relocation
- **Product photo:** Upload actual images for staff to check prohibited items, packaging standards, and assign suitable transport.
- **Product value:** Enter total value for insurance and compensation purposes in case of incidents.

#### 4. Pickup & Delivery Policy

- **Pickup request:**
  - Enter pickup date
  - Select time slot for courier staff:
    - Morning: 7:00–12:00
    - Afternoon: 12:00–18:00
- **Inspection policy:** Choose one of three options:
  - No item inspection
  - Allow inspection, no trial
  - Allow trial

#### 5. Delivery Notes

Enter special instructions (e.g., narrow alley, high-rise apartment, call before arrival).

#### 6. Payment & Confirmation

- **Payment method:** Choose Cash or Bank Transfer (paid directly to courier staff upon pickup).
- **Completion:** Customer clicks “Create Order”.

## **Step 2: Goods Pickup Process**

- The system records the Customer's request → sends a notification to the admin and the branch (Agent) closest to the Sender's address.
- The Agent confirms the pickup date and time at the Sender's address in the system → then the system sends a confirmation notification of the pickup time and location to the Customer via email and SMS.
- On the scheduled pickup date and time, the Delivery Staff contacts the Sender by phone at least 15 minutes before arriving.
  - If the Customer does not answer the phone three times, the system will update the status as "pickup unsuccessful."
  - If the Customer answers and confirms, the branch will dispatch staff and transport vehicles to the location to check and collect the goods, then weigh and measure the actual dimensions of the shipment.
- After the Agent staff weigh and measure the shipment, they will take photos of the actual goods before uploading them into the system to store reference data in case the Order is not intact upon delivery to the recipient or is canceled and returned.
- The Agent staff and the Sender will sign a handover record or scan the order receipt code to confirm the number of parcels collected → then the Agent staff will print the shipping order with a QR code for payment so the Customer can make the transfer.

## **Step 3: Delivery Process**

- After successful pickup, the Delivery Staff will deliver the goods to the recipient at the location agreed upon by both Parties.
- For addresses belonging to organizations, agencies, or associations (where the recipient's name and phone number are not specified), CourierXpress will deliver

the goods to the administrative department, security staff, or an authorized representative of that organization, agency, or association.

- If the Customer cancels the Order after the Goods have left the CourierXpress sending branch, the Customer is still liable for the Shipping Fee and Return Fee.
- If CourierXpress receives notification of changes to delivery information (time, location of recipient) from the Customer **before** updating the shipment status to “in transit,” CourierXpress may support delivery according to the following:
  - If the new delivery address is within the same district as the original address, CourierXpress will deliver to the new address without additional charges.
  - If the new delivery address is in a different district from the original address, CourierXpress will deliver to the new address with additional charges, or may refuse support if unable to fulfill the request.
- If CourierXpress receives notification of changes to delivery information (time, location of recipient) **after** updating the shipment status to “in transit,” CourierXpress will refuse support, and the Customer remains liable for the Shipping Fee and Return Fee (if applicable).
- Delivery Staff will contact the Recipient by phone at least 15 minutes before arriving at the delivery location.
- The maximum number of delivery attempts for each Order before CourierXpress cancels the Order is **three unsuccessful attempts**. If the Recipient refuses to accept the Goods, CourierXpress has the right to cancel the Order immediately, and the Customer is still liable for the Shipping Fee and Return Fee.

- If the Recipient does not pay the full amount specified by the Customer, this is considered a refusal to accept the Goods, and CourierXpress will proceed with returning the Goods.

#### **Step 4: Return Process**

- Delivery Staff will contact the Sender by phone at least 15 minutes before returning the Goods.
- The Sender may schedule the return at another convenient time, but this must be within **five days** from the first return request contact.
- At the time of handover, the Sender and CourierXpress will prepare and sign a Handover Record specifying the condition of the Order. If the external condition of the Order is no longer intact, the Sender and Delivery Staff will conduct joint inspection.
- Within **seven days** from the date of refusal of returned Goods, the Customer or Sender has the right to contact CourierXpress and collect the Goods from CourierXpress's warehouse, with the obligation to pay any applicable Storage Fees. After this period, CourierXpress reserves the right to handle the Goods at its sole discretion without compensation or refund to the Customer or Sender.

#### **Return Timeframes**

- **Within province:** 3–5 working days
- **Within region:** 6–8 working days
- **Inter-region:** 7–12 working days

### **1.3. The CourierXpress Solution**

After analyzing the project specifications of CourierXpress, and in order to meet the requirements of modern logistics as well as e-commerce standards, we conclude that to achieve optimal functionality and user experience, the system must address the following requirements:

### **1.4. Core Features**

CourierXpress is designed with an intuitive interface, organized into clear functional menus to support key activities:

- **Booking Management:** Digitizes the process of creating new orders.
- **Real-time Tracking:** Enables customers to check order status anytime, anywhere.
- **Billing & Invoicing:** Automates cost calculation and payment management.
- **Reporting & Statistics:** Provides managers with an overview of operational performance.

### **1.5. User Roles**

The system incorporates strict role-based access control to serve three main user groups:

- **Admin:** Manages the entire system, user accounts, and consolidated reports.
- **Agent:** Handles shipment tasks, updates delivery status, and supports customers.
- **Customer:** Places orders, tracks delivery progress, and manages shipping history.

## **2. Customer Requirement Specification (CRS)**

**Client:** Courier Service Organization - CourierXpress (Express Delivery Service Company)

### **2.1. Hardware and software required for implementing the project**

#### **2.4.1. Hardware infrastructure required**

Web Server:

Component	Requirement
CPU	Intel Core i7 or higher
RAM	32 GB RAM or greater
Storage	2TB SSD
Devices	Keyboard, Mouse
Connection	Stable Internet

*Table 17. Hardware infrastructure required of web server table*

Client:

Component	Requirement
CPU	Intel Core i5 or higher
RAM	8 GB RAM or greater
Storage	1TB HDD

Devices	Keyboard, Mouse
Connection	Stable Internet

*Table 18. Hardware infrastructure required of client table*

## 2.4.2. Software required

Web Server:

Component	Requirement
Operating System	Windows 10 or later
Browser	Google Chrome version 35
Database	MySQL
Internet Information Service	Required
Software	PHP – Laravel framework

*Table 19. Software required of web server table*

Client:

Component	Requirement
Operating System	Windows 10 or higher
Browser	Google Chrome version 35

*Table 20. Software required of client table*

## 2.2. Technology Stack

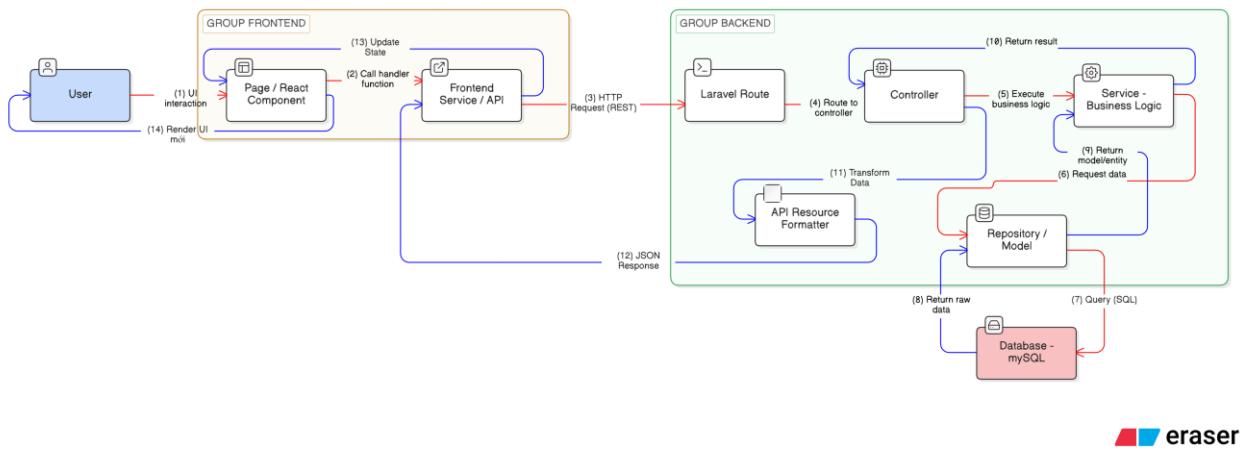


Figure 1. Technology Stack of Project

Component	Description
OS	Windows
Frontend	HTML5, CSS3, Tailwind, ReactJS, JQuery
Backend	PHP 7.2+ (Laravel), NodeJS
Database	MySQL 8.0+
Tools	VS Code, Git, Browser, Figma

Table 21. Technology Stack table

# 3. Data Flow Diagram (DFD)

## 3.1. DFD - Level 0: Context

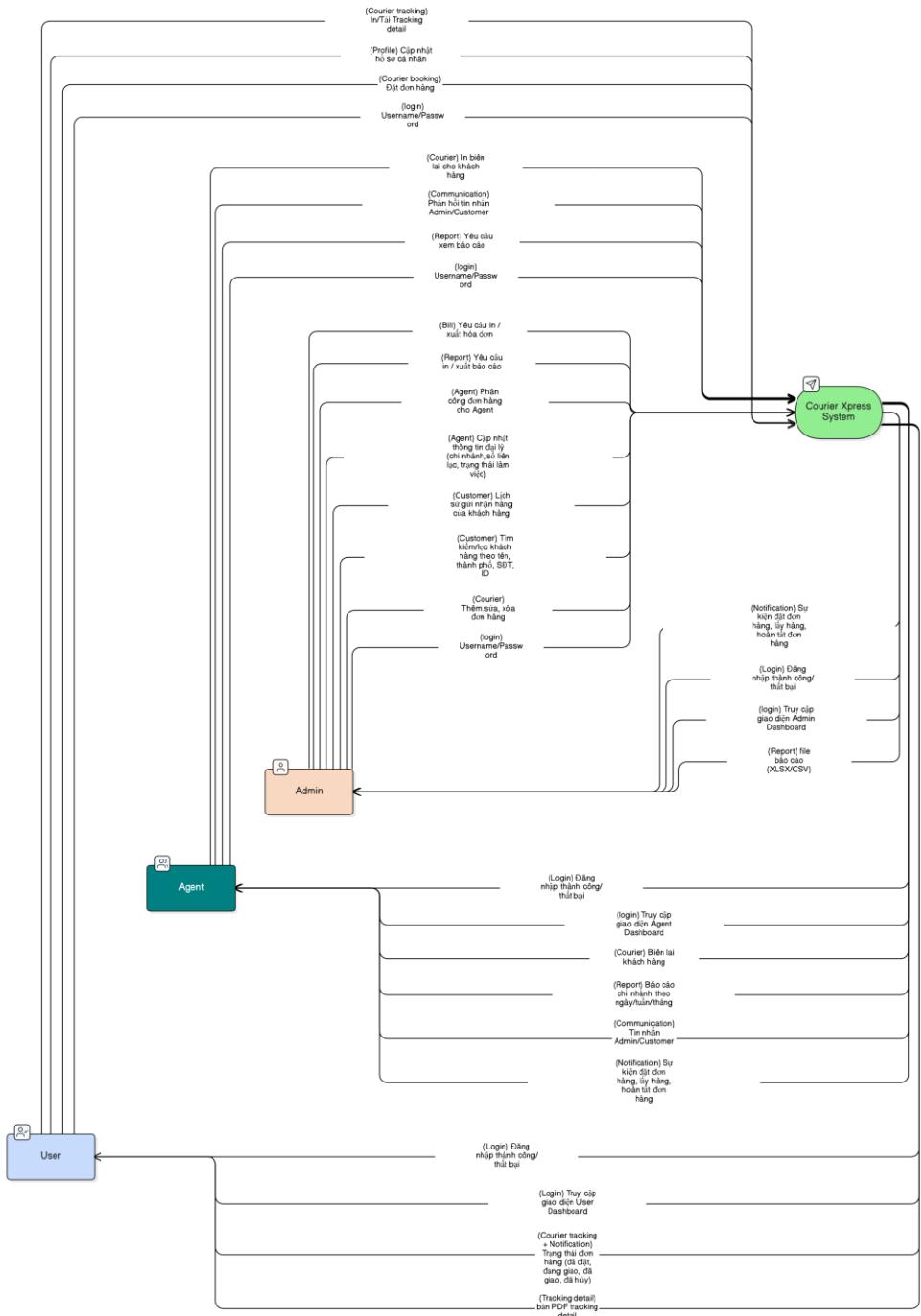


Figure 2. DFD - Level 0: Context

### 3.2. DFD - Level 1- Login/Logout & Authentication Process

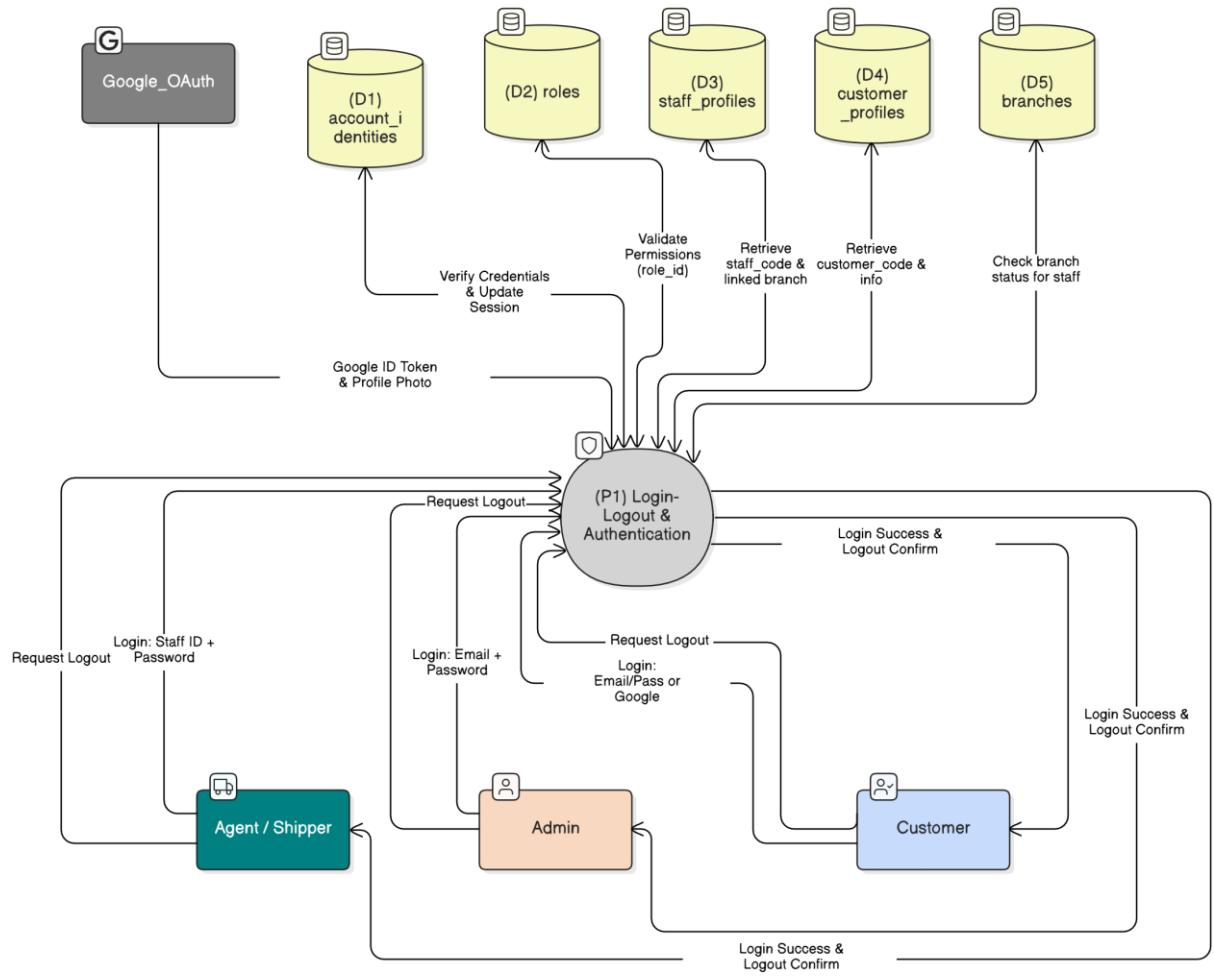


Figure 3. DFD Level 1 - Login/Logout & Authentication Process

#### Data Flow Description:

#### Inputs

- Admin / Agent / User

- Submit login credentials: email (username) + password
- Request logout (invalidate session/token)
- Request password reset (email/username)

## Data Store Interactions

- **(D1) User DB**
  - P1 looks up the account by email/username
  - Validates password hash and checks status = active
  - Retrieves role\_id, and (if applicable) user–branch linkage fields
- **(D2) Roles DB:** P1 resolves role\_id → role name/permissions (Admin / Agent / User)
- **(D3) Branches DB:** For agents, P1 loads branch/agent context (e.g., branch\_id, branch status) to scope dashboard access

## Process Logic (P1)

- Authenticate credentials (user exists + password hash match).
- Authorize access (account active + role-based permissions).
- Create session / issue access token (and refresh token if used).
- Handle logout by revoking/invalidating tokens.
- Handle password reset by issuing a reset token and updating the stored password hash.

## Outputs

- **Admin**

- Login result (success/failure)
- Access to Admin Dashboard (role-based permissions)
- **Agent**
  - Login result (success/failure)
  - Access to Agent Dashboard (scoped by branch)
- **User**
  - Login result (success/failure)
  - Access to User features (booking/tracking/profile)

### 3.3. DFD – Level 1- Vehicle Routing & Assign Process

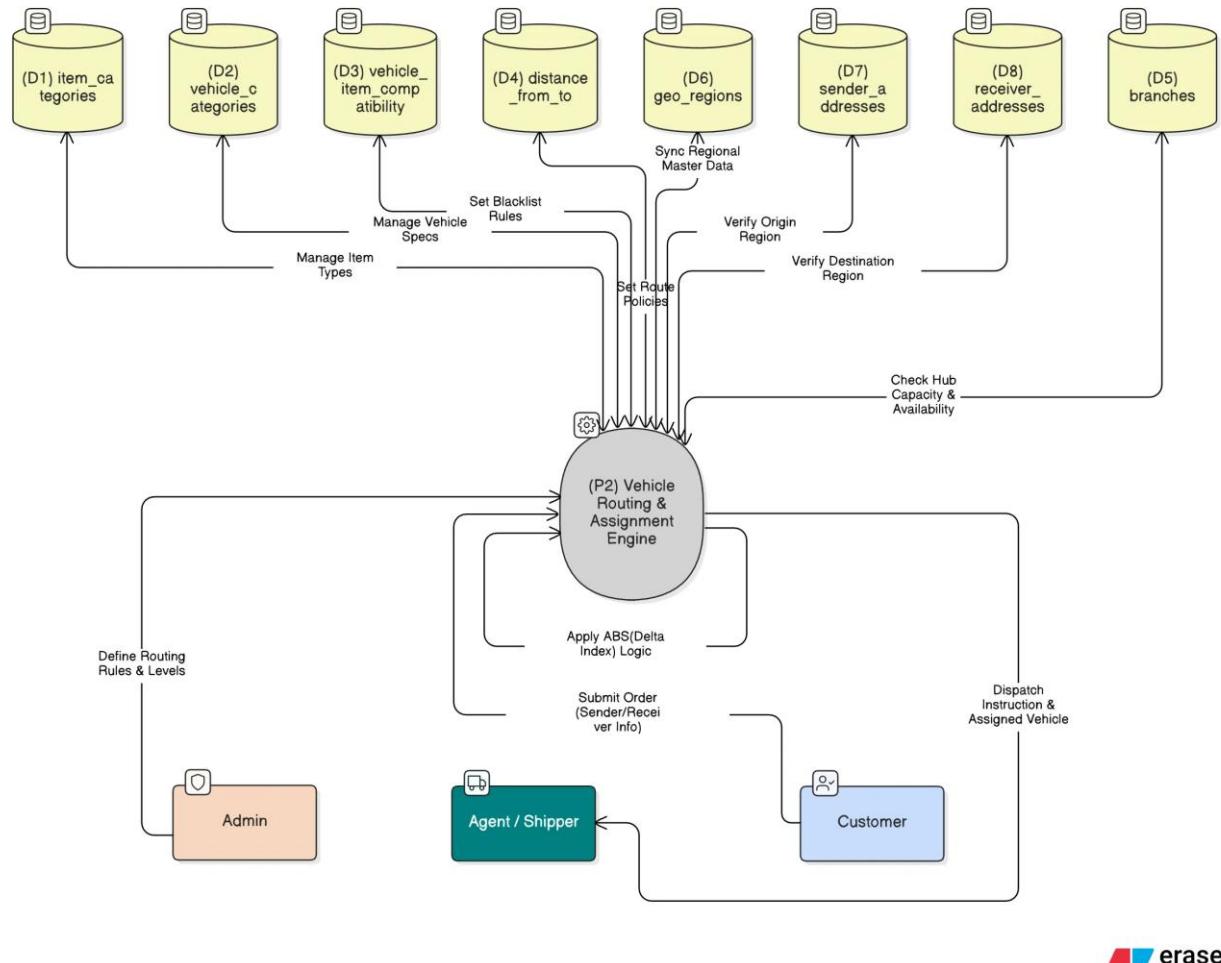


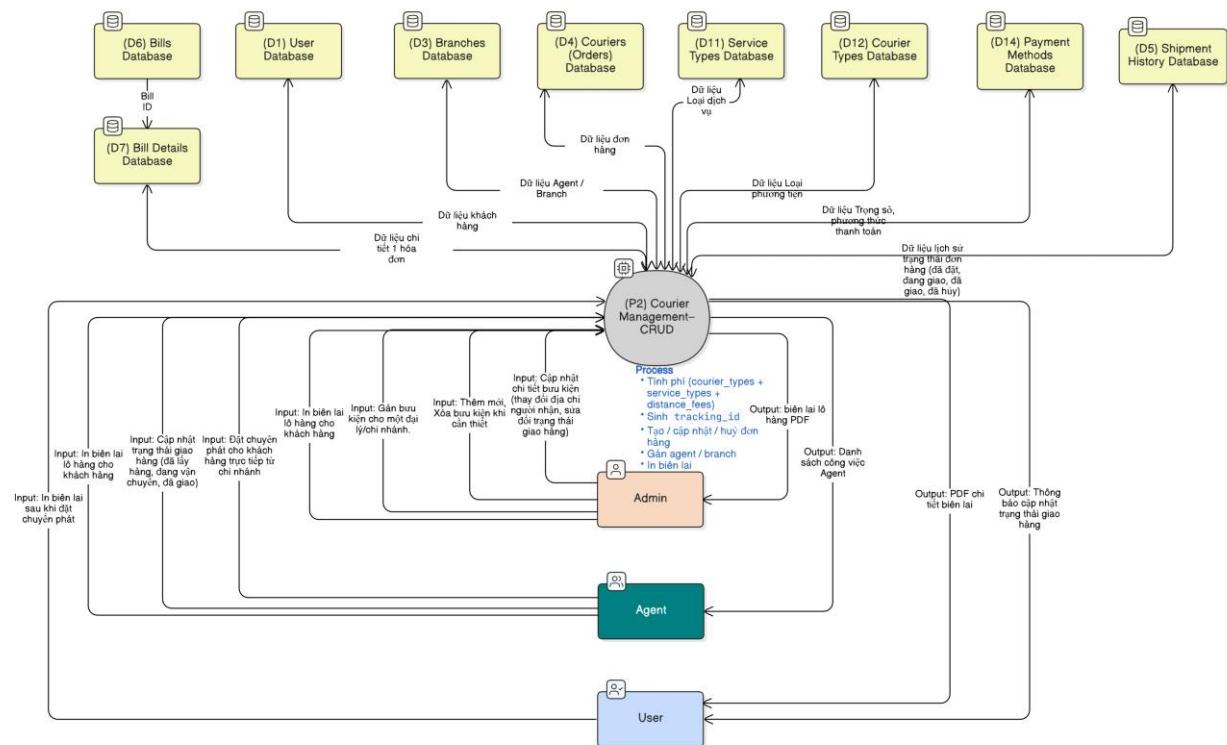
Figure 4. DFD Level 1 - Vehicle Routing & Assign

#### Data Flow Description

- **Inputs:**
  - **Admin:** Sets the “truth” parameters such as vehicle level (*vehicle\_level*), forbidden rules (FORBIDDEN), and types of routes (*distance\_type*).
  - **Customer:** Provides order initialization information including sender/receiver address codes.
- **Process Logic (P2):**

- Validate addresses and map them to standardized regions.
  - Determine route policy and service eligibility (e.g., express allowed or not) using region-pair rules.
  - Filter candidate vehicles by:
    - item compatibility (forbidden/blacklist),
    - minimum vehicle category required,
    - capacity feasibility (weight/volume).
  - Validate infrastructure readiness (branch/hub availability and capacity).
  - Apply scoring/optimization (ABS / Delta Index logic) to select the best vehicle + route plan.
  - Produce a dispatch instruction with the assigned vehicle type and handling branch.
- **Data Store Interactions:**
  - **Region Identification (D6, D7, D8):** P2 retrieves the *region\_id* from the customer's address and cross-checks it with the standardized region catalog.
  - **Strategy Calculation (D4):** Based on the region pair, P2 extracts constraints such as *min\_vehicle\_category\_id* and *allow\_express*.
  - **Vehicle Filtering (D2, D3):** P2 eliminates vehicles listed as forbidden based on the item category (*item\_category\_id*) and checks physical load capacity.
  - **Infrastructure Check (D5):** Verifies whether the branch in the sending region is active and has available storage capacity (*current\_storage\_m3*) before assigning the order.
- **Outputs:**
  - **Agent\_Shipper:** Receives an optimized dispatch command, including the specific vehicle type and receiving branch.

### 3.4. DFD - Level 1- Courier Management – CRUD



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Figure 5. DFD - Level 1- Courier Management – CRUD

### Data Flow Description

#### Inputs:

- **Admin**
  - Manages operational data and order lifecycle:

- Create / update / cancel shipments (couriers/orders)
  - Assign **agent** / **branch**
  - Adjust shipment fields (sender/receiver info, address changes, status overrides)
  - Trigger invoice generation / reconciliation steps
- **Agent:** Executes and updates operational steps:
  - Confirm pickup / in-transit / delivered / failed attempts
  - Update proof/notes (if supported), and status transitions during handling
  - Confirm cash collection / handover to branch (depending on payment flow)
- **User (Customer):** Initiates shipment requests and receives tracking updates:
  - Create shipment request (sender/receiver, package details)
  - Select service type + payment method
  - View shipment status, tracking, invoices/receipts (if enabled)

### **Process Logic (P2):**

- **Fee Calculation**
  - Computes shipping fee using: courier\_types + service\_types + (optional) distance\_fees / pricing rules
  - Snapshots the final fee into the order/billing records for consistency
- **Tracking Generation:** Generates **tracking\_id** when shipment is created/confirmed

- **CRUD Operations:** Create / update / cancel shipments with validation: address changes, service/payment changes, status change constraints
- **Assignment:** Assigns **agent/branch**, then updates operational workload queues
- **Billing Workflow**
  - Creates bill + bill details
  - Updates bill status based on payment confirmation or timeout/fallback rules
- **History Logging:** Writes every change into shipment history for audit + UI timeline rendering

### **Data Store Interactions:**

- **Core Shipment CRUD - (D4) Couriers (Orders) Database**
  - P2 creates a new shipment record (order initialization)
  - P2 updates shipment state (scheduled, picking up, in transit, delivered, returned, cancelled)
  - P2 stores operational metadata (assigned branch/agent, fees snapshot, tracking\_id)
- **Customer & Actor Identity - (D1) User Database**
  - P2 retrieves customer profile/contact information
  - P2 validates user ownership and request permissions (admin/agent/customer scope)
- **Branch & Assignment Validation - (D3) Branches Database**
  - P2 fetches available branches and branch attributes
  - P2 validates assignment rules (active branch, operational availability)

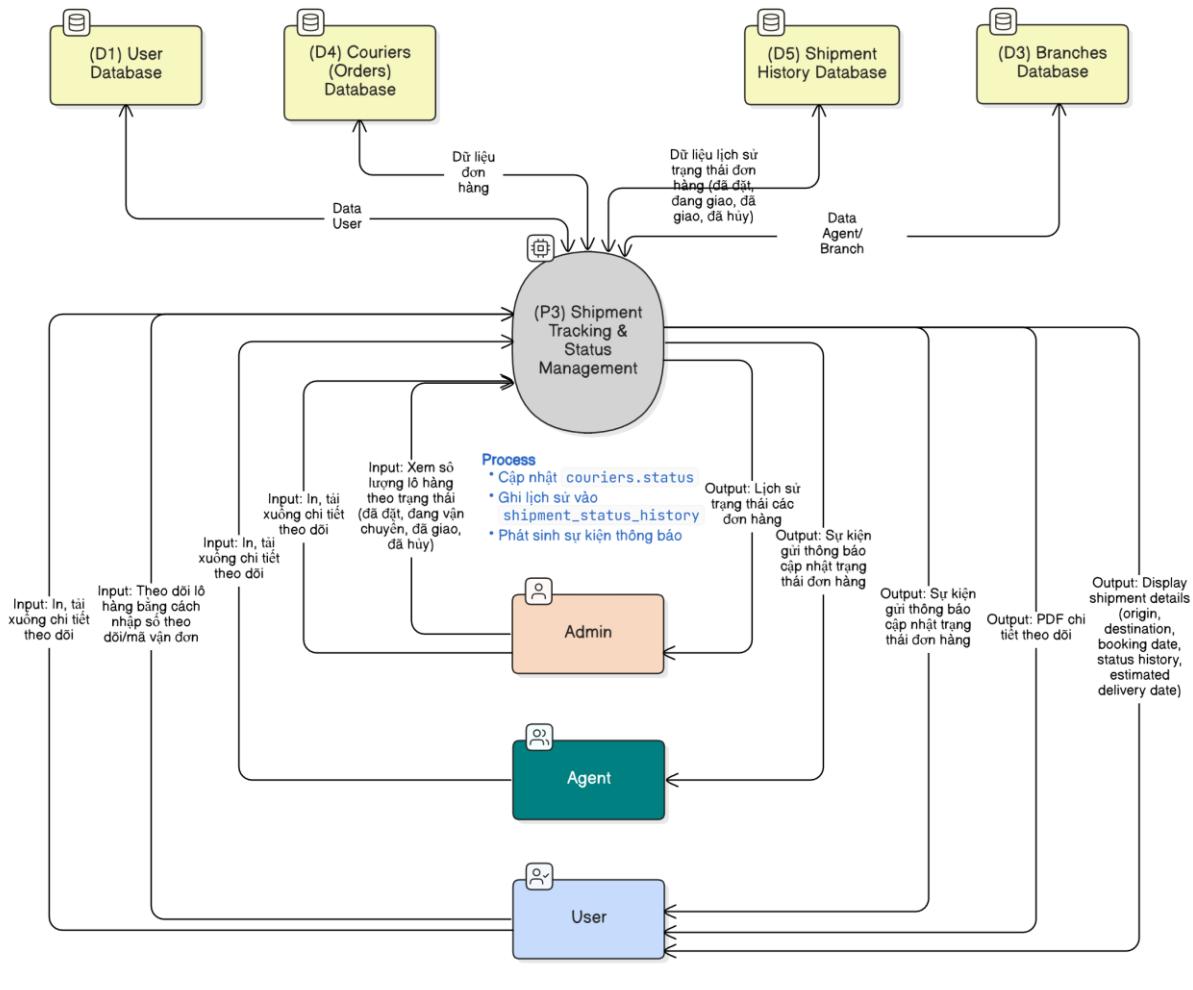
- P2 links shipment → branch\_id for handling and routing ownership
- **Service & Vehicle Type Configuration - (D11) Service Types Database**
  - P2 loads service definitions (standard/express, SLA rules, enabled flags)
  - Used to determine allowed service + fee components by service type
- **Vehicle Type Configuration - (D12) Courier Types Database**
  - P2 loads courier/vehicle categories (bike/van/truck tiers, constraints)
  - Used in pricing and assignment constraints (where applicable)
- **Payment - (D14) Payment Methods Database**
  - P2 validates payment method (cash, bank transfer, wallet, etc.)
  - Applies method-specific rules (e.g., COD required, transfer proof needed)
- **Billing - (D6) Bills Database**
  - P2 creates/updates a **bill header** (bill\_id, total, status: unpaid/paid/timeout)
  - Links bill to shipment/order reference
- **Bill details - (D7) Bill Details Database**
  - P2 generates line items (base fee, distance fee, surcharge, insurance, COD fee, discount)
  - Ensures bill details remain consistent with the shipment's fee snapshot
- **Shipment Status History / Auditing – (D5) Shipment History Database**
  - P2 appends timeline events for every significant state transition: created → booked → assigned → pickup → transit → delivery → delivered/failed/returned/cancelled

- Stores event time, actor (admin/agent/system), and notes (reason codes)

## Outputs

- **Agent**
  - Receives an operational **task/work list**: shipments to pickup / to deliver / exceptions needing action
  - Receives dispatch/handling instructions linked to assigned branch and shipment status
- **User (Customer) Receives:**
  - shipment creation confirmation + **tracking\_id**
  - real-time status updates (in-app notification / tracking page refresh)
  - bill summary / receipt availability (depending on payment method)
- **Admin Receives:**
  - operational dashboards (shipment counts by status, revenue, exceptions)

### 3.5. DFD - Level 1- Shipment Tracking & Status Process



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Figure 6. DFD - Level 1- Shipment Tracking & Status Process

#### Data Flow Description:

#### Inputs:

- Admin / Agent: Trigger status changes (e.g., booked, in transit, delivered, cancelled), request tracking lists, export tracking details.
- User (Customer): Search tracking by tracking ID, view shipment details and status timeline, download tracking PDF.

### **Process Logic (P3):**

- Validate requested status transition and permissions (admin/agent/customer scope).
- Update current shipment status in **orders**.
- Write an immutable event to **shipment history** (timestamp, actor, status, notes/reason).
- Emit notification events to relevant parties (user/agent/admin) based on status changes.

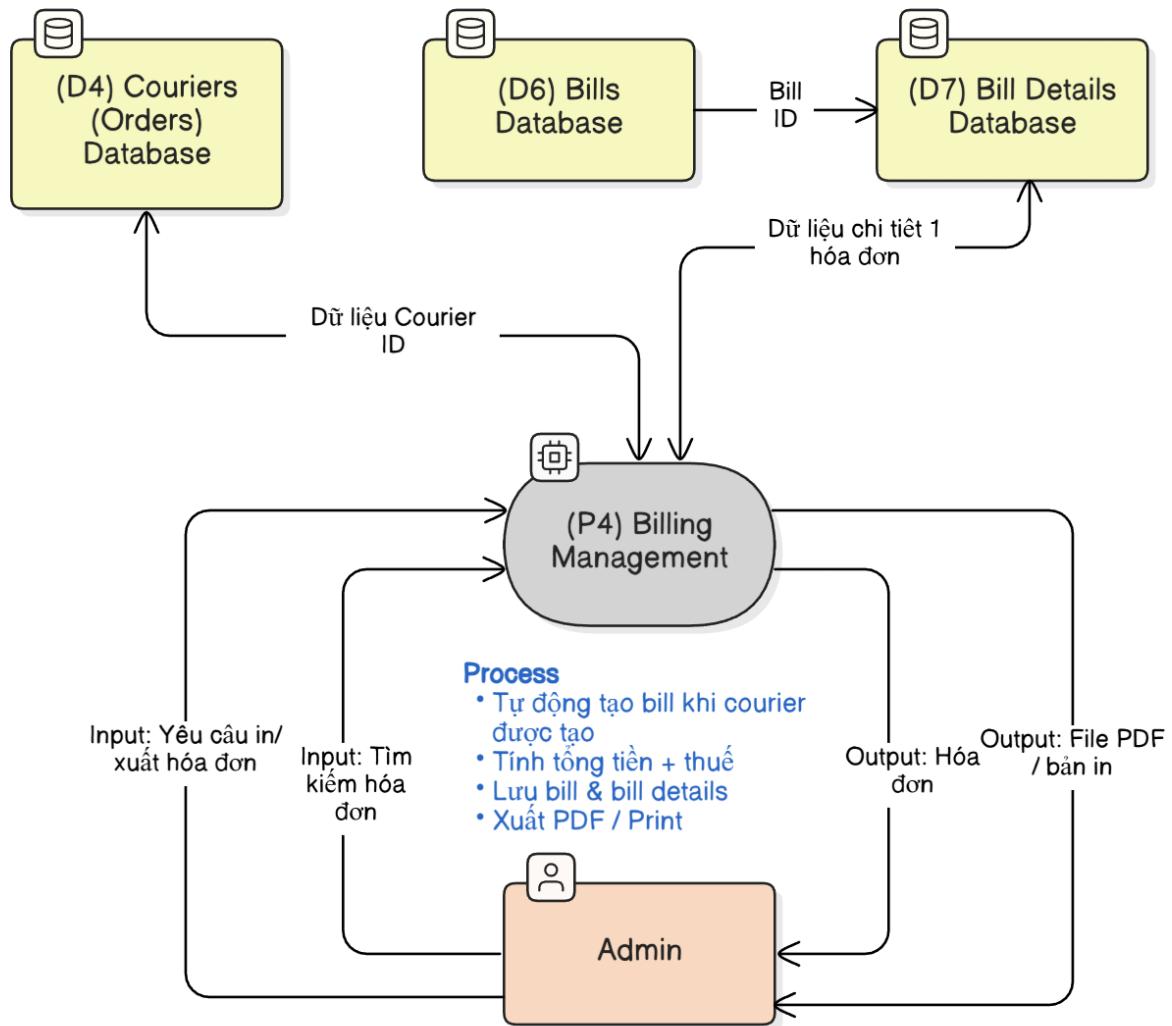
### **Data Store Interactions**

- (D4) Couriers (Orders) DB: Read shipment core data; update couriers.status when a status transition occurs.
- (D5) Shipment History DB: Append timeline records into shipment\_status\_history for every status change; retrieve history for display.
- (D1) User DB: Validate user identity/ownership and fetch customer info for shipment detail rendering.
- (D3) Branches DB: Fetch agent/branch and location metadata to show origin/destination handling points.

### **Outputs**

- Status history timeline for each shipment.
- Notification events (status update alerts).
- Tracking detail PDF export.
- Shipment detail display (origin, destination, booking date, status history, estimated delivery date).

### 3.6. DFD - Level 1- Billing Management Process



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Figure 7. DFD - Level 1- Billing Management Process

#### Data Flow Description

##### Inputs

- System:

- Trigger: a new shipment is created in **(D4) Couriers (Orders) DB**
- Input data: courier\_id and chargeable fields (fees, discounts, tax rules)
- **Admin:**
  - Search invoices: bill\_id / courier\_id / tracking\_id, date range, status
  - Request export/print: bill\_id (PDF / Print)

### **Process Logic (P4):**

- Auto-generate a bill when a courier/order is created.
- Calculate **subtotal + tax = total**.
- Persist **bill header + bill details**.
- Generate **PDF** output for download/print.

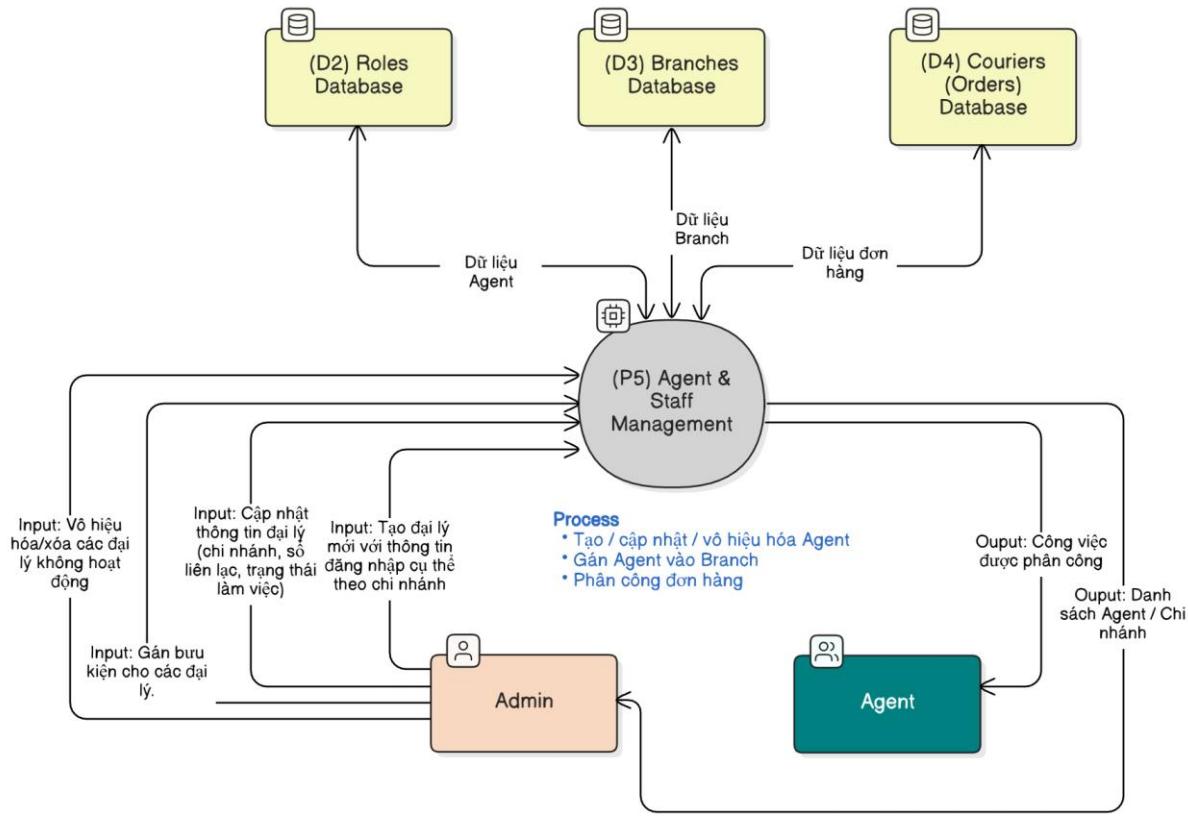
### **Data Store Interactions**

- **(D4) Couriers (Orders) DB:** P4 reads shipment data using courier\_id (fee snapshot, customer/order info).
- **(D6) Bills DB:** P4 creates/updates the invoice header (bill total, tax, status).
- **(D7) Bill Details DB:** P4 stores invoice line items linked by bill\_id (base fee, surcharges, tax, discounts).

### **Outputs**

- **Admin**
  - Invoice record (bill header + line items)
  - **PDF invoice / printable version**

### 3.7. DFD - Level 1- Agent & Staff Management Process



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Figure 8. DFD - Level 1- Agent & Staff Management Process

#### Data Flow Description

##### Inputs

- **Admin**
  - Create a new agent account (login credentials + profile)
  - Update agent information (branch, contact, working status)
  - Deactivate / delete inactive agents
  - Assign business rules or workload conditions (if applicable)

- Trigger order assignment to agents
- **Agent**
  - View assigned tasks/orders and agent/branch info

## **Process Logic (P5)**

- Create / update / deactivate agents.
- Attach agents to branches and enforce role-based permissions.
- Allocate orders to agents based on branch and workload rules.

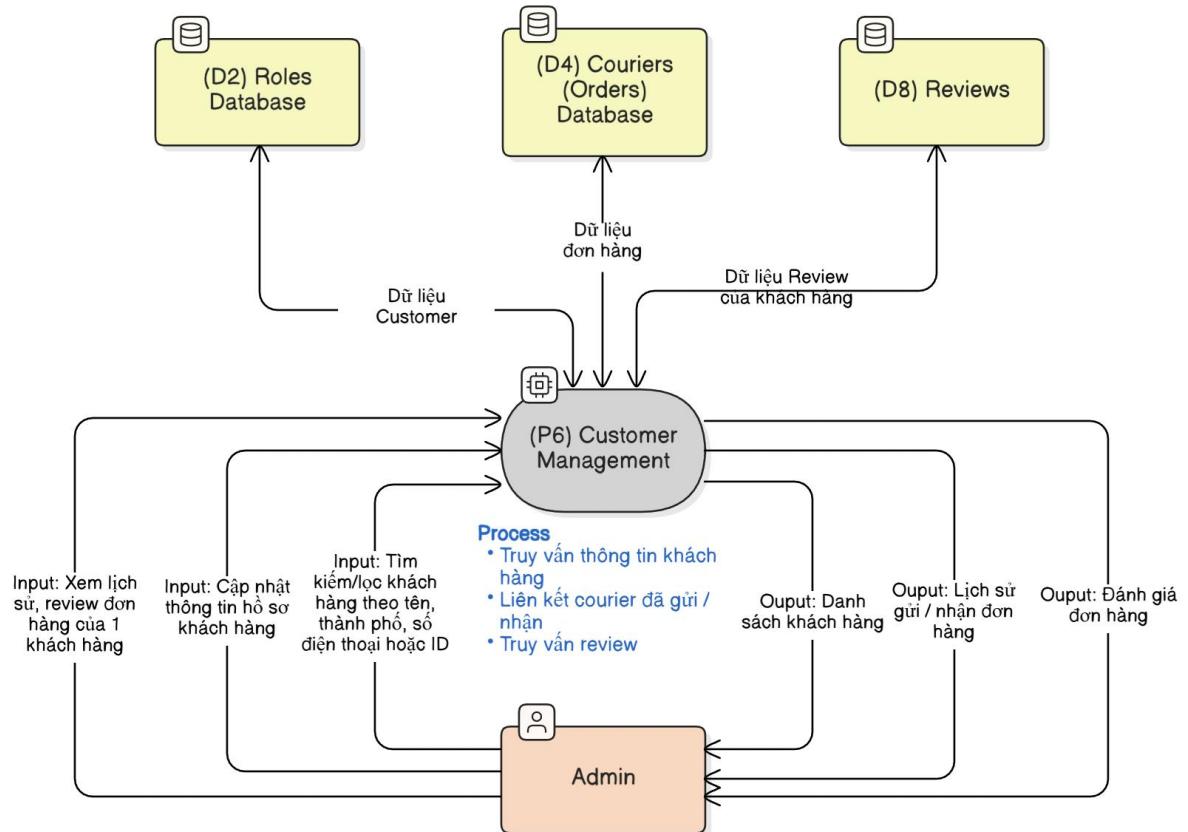
## **Data Store Interactions**

- **(D2) Roles DB:** P5 reads role definitions and permissions (e.g., Agent, Admin) and applies access control.
- **(D3) Branches DB:** P5 links agents to a branch (branch\_id), validates branch existence/status, and fetches branch metadata.
- **(D4) Couriers (Orders) DB:** P5 reads unassigned/queued orders and writes assignments (e.g., agent\_id, branch\_id, task status).

## **Outputs:**

- **Admin**
  - Agent/branch directory (list of agents by branch, active/inactive status)
  - Assignment results (which orders/tasks were assigned to which agent)
- **Agent**
  - Assigned work list (orders/tasks to process)

### 3.8. DFD - Level 1- Customer Management Process



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Figure 9. DFD - Level 1- Customer Management Process

### Data Flow Description

#### Inputs

- Admin
  - Search/filter customers (by city, phone number, customer ID)
  - View a customer profile (details, shipment history, reviews)

- Update customer profile information (contact/address fields if allowed)

## **Process Logic (P6)**

- Query customer records and return searchable lists.
- Link the customer to related couriers (sender/receiver relationships).
- Load and aggregate customer reviews for display and reporting.

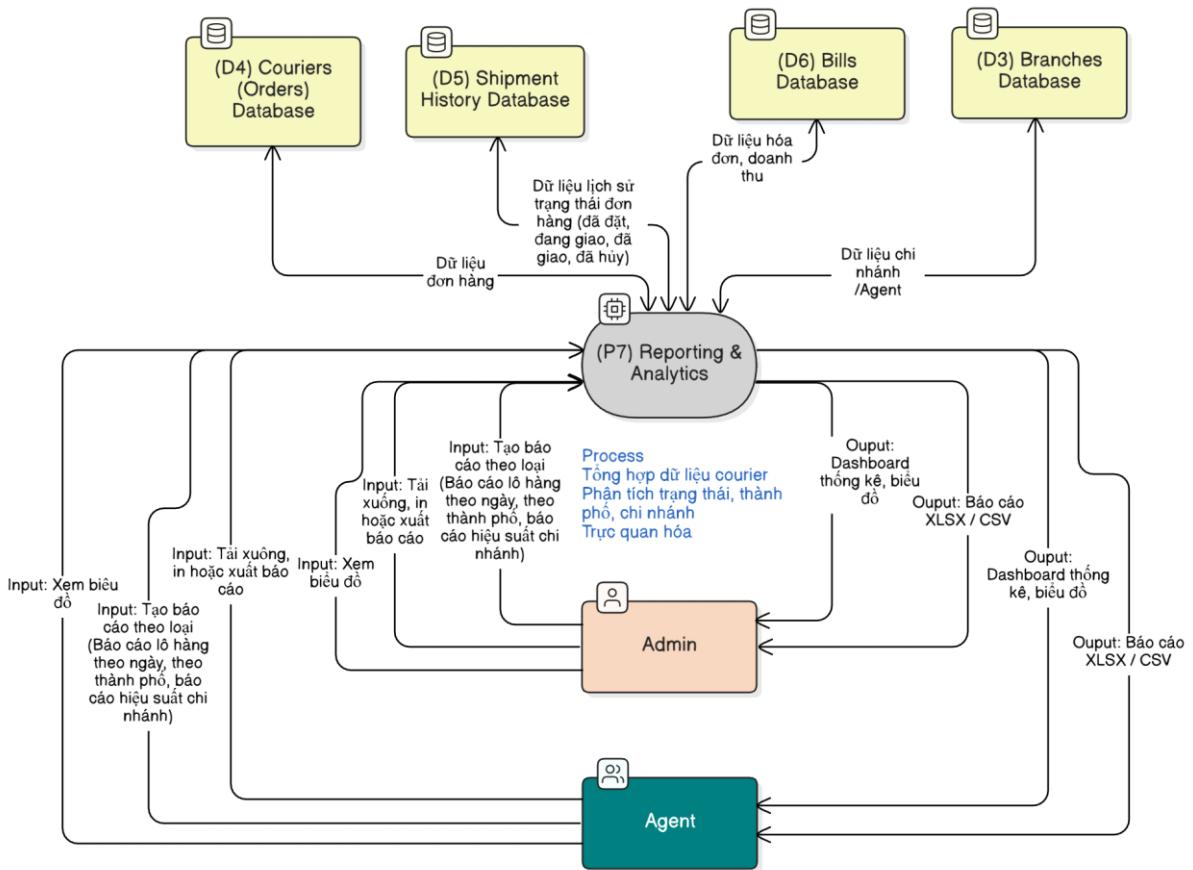
## **Data Store Interactions**

- **(D2) Roles DB:** P6 checks admin permissions for customer data access and editing.
- **(D4) Couriers (Orders) DB:** P6 retrieves shipment/order history linked to the customer (sent/received couriers, status summary).
- **(D8) Reviews DB:** P6 retrieves customer reviews for completed shipments (ratings, comments, timestamps).

## **Outputs**

- **Admin**
  - Customer list (search results)
  - Customer shipment history (sent/received orders)
  - Customer review summary/details

### 3.9. DFD - Level 1- Report & Analytics Process



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Figure 10. DFD - Level 1- Report & Analytics Process

#### Data Flow Description

##### Inputs

- **Admin**
  - Choose report type (shipments by day/city/status, branch performance, revenue)
  - View dashboards/charts
  - Export/download reports (XLSX/CSV) or print

- **Agent**
  - View branch/agent dashboards and shipment performance charts
  - Export/download reports (XLSX/CSV) where permitted

## **Process Logic (P7)**

- Collect and join courier + history + billing + branch datasets.
- Aggregate KPIs by time/region/branch/agent (counts, conversion rates, delivery success, lead time, revenue).
- Visualize results as dashboards and charts.
- Generate downloadable exports (XLSX/CSV).

## **Data Store Interactions**

- **(D4) Couriers (Orders) DB:** P7 pulls shipment/order data for volume metrics (created, assigned, delivered, cancelled).
- **(D5) Shipment History DB:** P7 aggregates status timelines (booked → transit → delivered) for SLA, lead time, and status distribution.
- **(D6) Bills DB:** P7 reads billing totals for revenue, taxes, and payment status analytics.
- **(D3) Branches DB:** P7 maps orders and metrics to branches/agents (branch performance, capacity/coverage context).

## **Outputs**

- **Admin**
  - Analytics dashboards (stats + charts)
  - Exported reports (XLSX/CSV)

- **Agent**

- Branch/agent dashboards (stats + charts)
- Exported reports (XLSX/CSV)

### 3.10. DFD - Level 1- Notifications Process

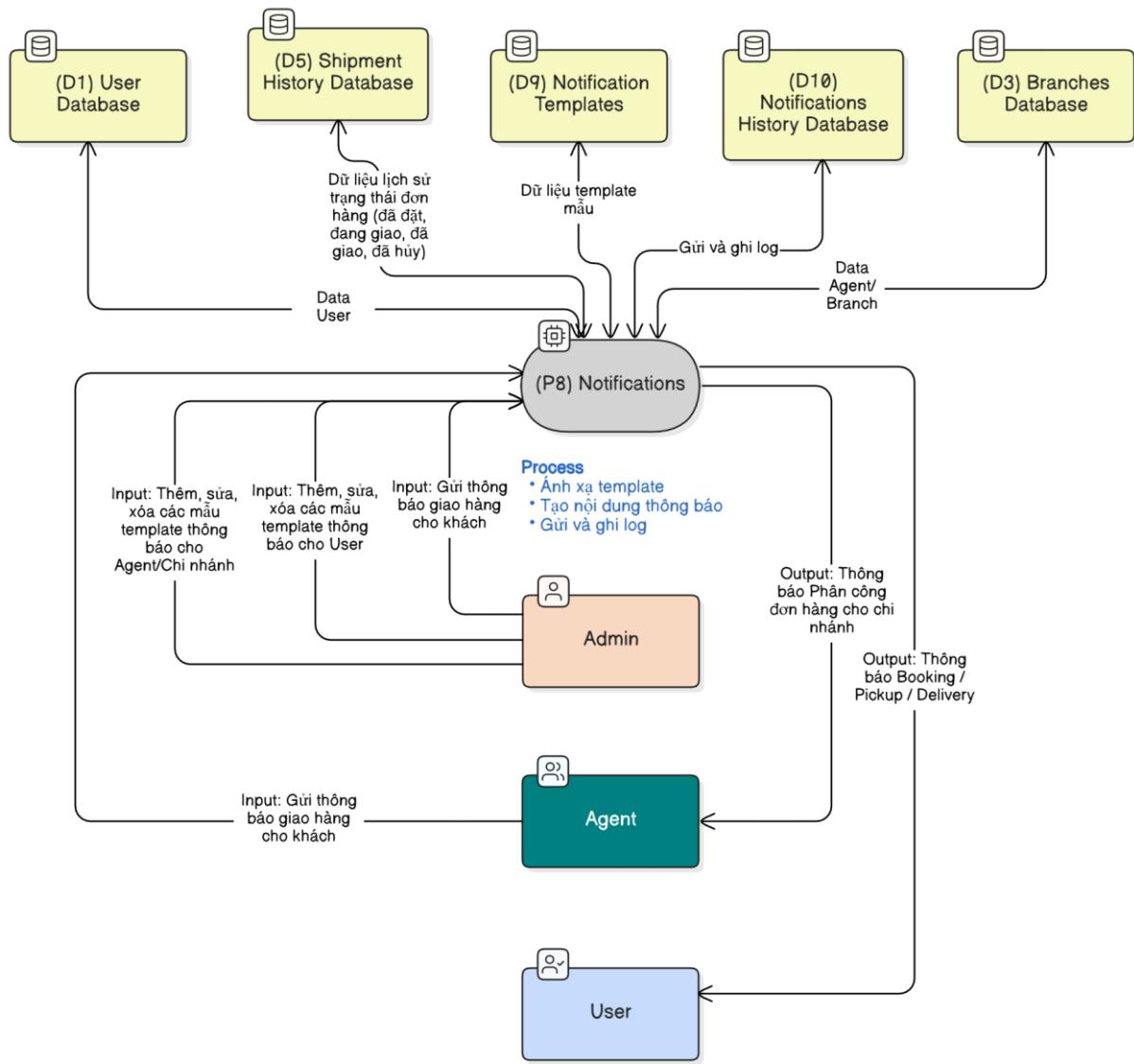


Figure 11. DFD - Level 1- Notifications Process

## Data Flow Description

### Inputs

- **Admin**
  - Create / update / delete notification templates (for Users and for Agents/Branches)
  - Trigger manual notifications (e.g., booking/pickup/delivery announcements)
- **Agent**
  - Trigger customer notifications during operations (e.g., delivery attempt, delivery completed)
- **System (Events)**
  - Shipment status changes from **shipment history** (booking → pickup → delivery, etc.)
  - Order assignment events to a branch/agent

### Process Logic (P8)

- Map event → template (by role and notification type).
- Build notification content (merge shipment/user/branch variables).
- Send notification to the target recipients (User / Agent / Branch).
- Persist send results and audit logs to notifications history.

### Data Store Interactions

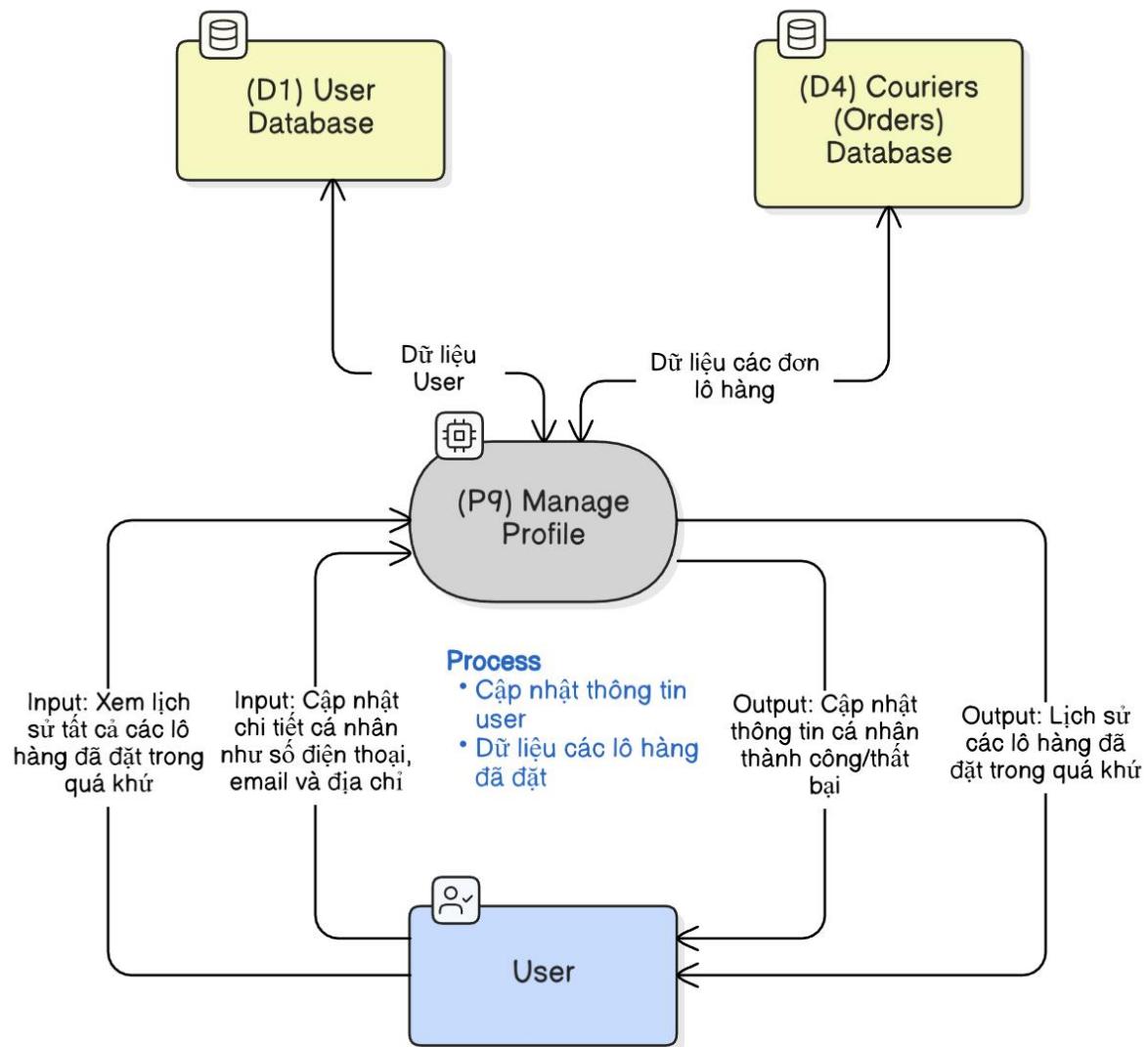
- **(D1) User DB:** P8 loads recipient info (user identity, contact channels, notification preferences if any).

- **(D5) Shipment History DB:** P8 reads latest shipment status events to decide which notification to send and to enrich content.
- **(D9) Notification Templates:** P8 selects and maps the correct template by event type + recipient role (User vs Agent/Branch).
- **(D3) Branches DB:** P8 resolves branch/agent routing info (who should receive assignment/ops notifications).
- **(D10) Notifications History DB:** P8 writes delivery logs (what was sent, to whom, channel, status, timestamps, error details).

## Outputs

- **User:** Booking / pickup / delivery status notifications
- **Agent / Branch:** Order assignment notifications and operational updates
- **Admin:** Template management results + notification delivery logs/reports

### 3.11. DFD - Level 1- Manage Profile Process



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Figure 12. DFD - Level 1- Manage Profile Process

#### Data Flow Description

##### Inputs

- User

- View past shipment history (all previously created orders)
- Update personal profile details (phone, email, address)

### **Process Logic (P9)**

- Authenticate the user and load profile data.
- Validate and persist profile updates (format, uniqueness rules if any).
- Query and return shipment history linked to the user account.

### **Data Store Interactions**

- **(D1) User DB**
  - P9 reads current user profile data
  - P9 updates user fields (phone/email/address) after validation
- **(D4) Couriers (Orders) DB:** P9 retrieves the user's order/shipment history (list + basic details)

### **Outputs**

- **User**
  - Profile update result (success/failure message)
  - Past shipment history list (previously booked shipments)

## **4. Database**

### **admin\_task table**

Column Name	Data Type	Null	Default Value	Constraint
task_id	bigint(20) UNSIGNED	No		PRIMARY KEY

task_code	varchar(50)	No		UNIQUE (task_code)
task_type	varchar(50)	No		
priority	int(11)	No	100	
status	varchar(30)	No		
shipment_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY - > shipments(shipme nt_id)
branch_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY - > branches(id)
driver_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY - > driver(driver_id)
manifest_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY - > transit_manifest( manifest_id)
return_order_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY - > return_order(retur n_order_id)
related_table	varchar(50)	Yes	NULL	
related_id	bigint(20) UNSIGNED	Yes	NULL	
title	varchar(200)	No		
description	text	Yes	NULL	
due_at	datetime	Yes	NULL	
assigned_to	bigint(20) UNSIGNED	Yes	NULL	
assigned_at	datetime	Yes	NULL	
resolved_at	datetime	Yes	NULL	
resolution_code	varchar(30)	Yes	NULL	

resolution_note	text	Yes	NULL	
created_at	timestamp	Yes	NULL	
updated_at	timestamp	Yes	NULL	

## admin\_task\_event table

Column Name	Data Type	Null	Default Value	Constraint
task_event_id	bigint(20) UNSIGNED	No		PRIMARY KEY
task_id	bigint(20) UNSIGNED	No		FOREIGN KEY -> admin_task(task_id)
event_type	varchar(50)	No		
event_at	datetime	No		
actor_type	varchar(20)	Yes	NULL	
actor_id	bigint(20) UNSIGNED	Yes	NULL	
old_status	varchar(30)	Yes	NULL	
new_status	varchar(30)	Yes	NULL	
message	text	Yes	NULL	

## agents table

Column Name	Data Type	Null	Default Value	Constraint
id	bigint(20) UNSIGNED	No		PRIMARY KEY
agent_code	varchar(20)	No		UNIQUE (agent_code)
name	varchar(120)	No		
phone	varchar(20)	No		
email	varchar(120)	Yes	NULL	

branch_id	bigint(20) UNSIGNED	No		FOREIGN KEY -> branches(id)
motorbike	int(10) UNSIGNED	No	0	
truck_500kg	int(10) UNSIGNED	No	0	
truck_1t	int(10) UNSIGNED	No	0	
truck_2t	int(10) UNSIGNED	No	0	
truck_2_5t	int(10) UNSIGNED	No	0	
truck_3_5t	int(10) UNSIGNED	No	0	
truck_5t	int(10) UNSIGNED	No	0	
total_shipments	int(10) UNSIGNED	No	0	
active_shipments	int(10) UNSIGNED	No	0	
status	enum('ACTIVE','INACTIVE')	No	'ACTIVE'	
created_at	timestamp	Yes	NULL	
updated_at	timestamp	Yes	NULL	

## bills table

Column Name	Data Type	Null	Default Value	Constraint
id	bigint(20) UNSIGNED	No		PRIMARY KEY
bill_number	varchar(50)	No		UNIQUE (bill_number)
courier_id	bigint(20) UNSIGNED	Yes	NULL	
shipment_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> shipments(shipment_id)
user_id	bigint(20) UNSIGNED	No		FOREIGN KEY -> users(id)
amount	decimal(12,2)	No		
status	enum('PAID','UNPAID','REFUNDED')	No	'UNPAID'	
payment_date	datetime	Yes	NULL	
created_at	timestamp	Yes	NULL	
updated_at	timestamp	Yes	NULL	

## branches table

Column Name	Data Type	Null	Default Value	Constraint
id	bigint(20) UNSIGNED	No		PRIMARY KEY
branch_code	varchar(20)	No		UNIQUE (branch_code)
name	varchar(120)	No		
location	varchar(200)	Yes	NULL	
city	varchar(100)	Yes	NULL	
district	varchar(100)	Yes	NULL	
address	text	Yes	NULL	
address_text	text	Yes	NULL	
province_code	varchar(10)	Yes	NULL	FOREIGN KEY -> province_master(province_code)
latitude	decimal(10,6)	Yes	NULL	
longitude	decimal(10,6)	Yes	NULL	
branch_image	varchar(255)	Yes	NULL	
branch_manager_name	varchar(120)	Yes	NULL	
branch_manager_phone	varchar(20)	Yes	NULL	
agent_code	varchar(20)	Yes	NULL	
status	enum('ACTIVE','INACTIVE')	No	'ACTIVE'	
is_active	tinyint(1)	No	1	
motorbike	int(10) UNSIGNED	No	0	
truck_500kg	int(10) UNSIGNED	No	0	
truck_1t	int(10) UNSIGNED	No	0	
truck_2t	int(10) UNSIGNED	No	0	
truck_2_5t	int(10) UNSIGNED	No	0	
truck_3_5t	int(10) UNSIGNED	No	0	
truck_5t	int(10) UNSIGNED	No	0	

total_shipments	int(10) UNSIGNED	No	0	
active_shipments	int(10) UNSIGNED	No	0	
created_at	timestamp	Yes	NULL	
updated_at	timestamp	Yes	NULL	

## branch\_vehicles table

Column Name	Data Type	Null	Default Value	Constraint
branch_id	bigint(20) UNSIGNED	No		PRIMARY KEY; FOREIGN KEY -> branches(id)
vehicle_id	bigint(20) UNSIGNED	No		PRIMARY KEY; FOREIGN KEY -> vehicles(vehicle_id)
quantity	int(11)	No	1	
created_at	timestamp	Yes	NULL	
updated_at	timestamp	Yes	NULL	

## call\_log table

Column Name	Data Type	Null	Default Value	Constraint
call_log_id	bigint(20) UNSIGNED	No		PRIMARY KEY
shipment_id	bigint(20) UNSIGNED	No		UNIQUE (shipment_id, call_type, attempt_no); FOREIGN KEY -> shipments(shipment_id)
assignment_id	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> driver_assignment(assignment_id)
call_type	varchar(30)	No		UNIQUE (shipment_id, call_type, attempt_no)
target_role	varchar(30)	No		
target_phone	varchar(20)	No		

<b>driver_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> driver(driver_id)
		UNSIGNED		
<b>branch_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> branches(id)
	UNSIGNED			
<b>attempt_no</b>	int(11)	No		UNIQUE (shipment_id, call_type, attempt_no)
<b>call_started_at</b>	datetime	No		
<b>call_ended_at</b>	datetime	Yes	NULL	
<b>call_result</b>	varchar(30)	Yes	NULL	
<b>duration_seconds</b>	int(11)	Yes	NULL	
<b>note</b>	text	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## couriers table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>order_id</b>	varchar(255)	No		UNIQUE (order_id)
<b>tracking_id</b>	varchar(255)	No		UNIQUE (tracking_id)
<b>user_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> users(id) UNSIGNED
<b>branch_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> branches(id) UNSIGNED
<b>agent_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> agents(id) UNSIGNED
<b>created_by</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> users(id) UNSIGNED
<b>sender_name</b>	varchar(255)	No		
<b>sender_phone</b>	varchar(255)	No		
<b>sender_address</b>	text	No		
<b>sender_ward</b>	varchar(255)	Yes	NULL	

<b>sender_district</b>	varchar(255)	Yes	NULL
<b>sender_province</b>	varchar(255)	Yes	NULL
<b>receiver_name</b>	varchar(255)	No	
<b>receiver_phone</b>	varchar(255)	No	
<b>receiver_address</b>	text	No	
<b>receiver_ward</b>	varchar(255)	Yes	NULL
<b>receiver_district</b>	varchar(255)	Yes	NULL
<b>receiver_province</b>	varchar(255)	Yes	NULL
<b>package_type</b>	varchar(255)	Yes	NULL
<b>weight</b>	decimal(10,2)	No	0.00
<b>dimensions</b>	varchar(255)	Yes	NULL
<b>items</b>	longtext CHARACTER SET utf8mb4	Yes	NULL
<b>service_type</b>	varchar(30)	No	
<b>vehicle_type</b>	varchar(255)	Yes	NULL
<b>base_charge</b>	decimal(12,2)	No	0.00
<b>tax</b>	decimal(12,2)	No	0.00
<b>total</b>	decimal(12,2)	No	0.00
<b>estimated_fee</b>	decimal(12,2)	No	0.00
<b>pricing_breakdown</b>	longtext CHARACTER SET utf8mb4	Yes	NULL
<b>input_snapshot</b>	longtext CHARACTER SET utf8mb4	No	
<b>status</b>	varchar(30)	No	
<b>booking_date</b>	datetime	No	
<b>pickup_date</b>	date	Yes	NULL
<b>pickup_slot</b>	varchar(255)	Yes	NULL
<b>inspection_policy</b>	varchar(255)	Yes	NULL
<b>payment_method</b>	varchar(255)	Yes	NULL
<b>delivery_notes</b>	text	Yes	NULL

<b>eta</b>	datetime	Yes	NULL
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## **district\_alias table**

Column Name	Data Type	Null	Default Value	Constraint
<b>alias_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>district_code</b>	varchar(10)	No		FOREIGN KEY -> district_master(district_code)
<b>alias_text</b>	varchar(160)	No		
<b>priority</b>	int(11)	No	100	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **district\_master table**

Column Name	Data Type	Null	Default Value	Constraint
<b>district_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>district_code</b>	varchar(10)	No		UNIQUE (district_code)
<b>province_code</b>	varchar(10)	No		FOREIGN KEY -> province_master(province_code)
<b>district_name</b>	varchar(120)	No		
<b>district_name_raw</b>	varchar(120)	No		
<b>district_type</b>	varchar(30)	No		
<b>is_active</b>	tinyint(1)	No	1	
<b>effective_from</b>	date	Yes	NULL	
<b>effective_to</b>	date	Yes	NULL	
<b>source_name</b>	varchar(80)	Yes	NULL	

<b>source_ref</b>	varchar(120)	Yes	NULL
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## driver table

Column Name	Data Type	Null	Default Value	Constraint
<b>driver_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>driver_code</b>	varchar(30)	No		UNIQUE (driver_code)
<b>full_name</b>	varchar(120)	No		
<b>phone_number</b>	varchar(20)	No		
<b>email</b>	varchar(120)	Yes	NULL	
<b>branch_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> branches(id)
<b>vehicle_id</b>	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> vehicles(vehicle_id)
<b>home_province_code</b>	varchar(10)	No		FOREIGN KEY -> province_master(province_code)
<b>working_region</b>	varchar(20)	No		
<b>vehicle_type</b>	varchar(30)	No		
<b>license_number</b>	varchar(30)	Yes	NULL	
<b>driver_status</b>	varchar(30)	No	'AVAILABLE'	
<b>current_lat</b>	decimal(10,6)	Yes	NULL	
<b>current_lng</b>	decimal(10,6)	Yes	NULL	
<b>last_location_at</b>	datetime	Yes	NULL	
<b>max_active_orders</b>	int(11)	No	3	
<b>is_active</b>	tinyint(1)	No	1	
<b>joined_at</b>	date	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## driver\_assignment table

Column Name	Data Type	Null	Default Value	Constraint
<b>assignment_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>shipment_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> shipments(shipment_id)
<b>assignment_type</b>	varchar(20)	No		
<b>branch_id</b>	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> branches(id)
<b>driver_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> driver(driver_id)
<b>status</b>	varchar(30)	No	'ASSIGNED'	
<b>assigned_by_type</b>	varchar(20)	No	'SYSTEM'	
<b>assigned_by</b>	bigint(20) UNSIGNED	Yes	NULL	
<b>assigned_at</b>	datetime	No		
<b>accepted_at</b>	datetime	Yes	NULL	
<b>started_at</b>	datetime	Yes	NULL	
<b>completed_at</b>	datetime	Yes	NULL	
<b>cancelled_at</b>	datetime	Yes	NULL	
<b>eta_at</b>	datetime	Yes	NULL	
<b>distance_km</b>	decimal(10,2)	Yes	NULL	
<b>note</b>	text	Yes	NULL	
<b>is_active</b>	tinyint(1)	No	1	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## driver\_assignment\_history table

Column Name	Data Type	Null	Default Value	Constraint

<b>history_id</b>	bigint(20)	No	PRIMARY KEY
		UNSIGNED	
<b>assignment_id</b>	bigint(20)	No	FOREIGN KEY ->
	UNSIGNED		driver_assignment(assignment_id)
<b>shipment_id</b>	bigint(20)	No	FOREIGN KEY -> shipments(shipment_id)
	UNSIGNED		
<b>assignment_type</b>	varchar(20)	No	
<b>old_driver_id</b>	bigint(20)	Yes	NULL
	UNSIGNED		
<b>new_driver_id</b>	bigint(20)	Yes	NULL
	UNSIGNED		
<b>old_status</b>	varchar(30)	Yes	NULL
<b>new_status</b>	varchar(30)	Yes	NULL
<b>change_action</b>	varchar(50)	No	
<b>changed_by_type</b>	varchar(20)	No	
<b>changed_by</b>	bigint(20)	Yes	NULL
	UNSIGNED		
<b>changed_at</b>	datetime	No	
<b>note</b>	text	Yes	NULL
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## driver\_vehicle\_assignment\_history table

Column Name	Data Type	Null	Default Value	Constraint
<b>history_id</b>	bigint(20)	No		PRIMARY KEY
	UNSIGNED			
<b>driver_id</b>	bigint(20)	No		FOREIGN KEY -> driver(driver_id)
	UNSIGNED			
<b>vehicle_id</b>	bigint(20)	Yes		FOREIGN KEY -> vehicles(vehicle_id)
	UNSIGNED			
<b>assigned_at</b>	datetime	No		

<b>unassigned_at</b>	datetime	Yes	NULL	
<b>assigned_by</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> users(id) UNSIGNED
<b>note</b>	text	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## goods\_inspection table

Column Name	Data Type	Null	Default Value	Constraint
<b>inspection_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>shipment_id</b>	bigint(20)	No		FOREIGN KEY -> shipments(shipment_id) UNSIGNED
<b>assignment_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> driver_assignment(assignment_id) UNSIGNED
<b>driver_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> driver(driver_id) UNSIGNED
<b>branch_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> branches(id) UNSIGNED
<b>inspected_at</b>	datetime	No		
<b>actual_weight_kg</b>	decimal(10,2)	No		
<b>actual_length_cm</b>	decimal(10,2)	Yes	NULL	
<b>actual_width_cm</b>	decimal(10,2)	Yes	NULL	
<b>actual_height_cm</b>	decimal(10,2)	Yes	NULL	
<b>actual_volume_m3</b>	decimal(10,3)	Yes	NULL	
<b>packaging_condition</b>	varchar(30)	Yes	NULL	
<b>special_handling_flags</b>	varchar(100)	Yes	NULL	
<b>note</b>	text	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	

## jobs table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	bigint(20)	No UNSIGNED		PRIMARY KEY
<b>queue</b>	varchar(255)	No		
<b>payload</b>	longtext	No		
<b>attempts</b>	tinyint(3)	No UNSIGNED		
<b>reserved_at</b>	int(10)	Yes UNSIGNED	NULL	
<b>available_at</b>	int(10)	No UNSIGNED		
<b>created_at</b>	int(10)	No UNSIGNED		

## job\_batches table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	varchar(255)	No		PRIMARY KEY
<b>name</b>	varchar(255)	No		
<b>total_jobs</b>	int(11)	No		
<b>pending_jobs</b>	int(11)	No		
<b>failed_jobs</b>	int(11)	No		
<b>failed_job_ids</b>	longtext	No		
<b>options</b>	mediumtext	Yes	NULL	
<b>cancelled_at</b>	int(11)	Yes	NULL	
<b>created_at</b>	int(11)	No		
<b>finished_at</b>	int(11)	Yes	NULL	

## notifications table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	bigint(20)	No UNSIGNED		PRIMARY KEY
<b>user_id</b>	bigint(20)	No UNSIGNED		FOREIGN KEY -> users(id)
<b>type</b>	varchar(50)	No		
<b>title</b>	varchar(200)	No		
<b>message</b>	text	No		
<b>related_type</b>	varchar(50)	Yes	NULL	
<b>related_id</b>	bigint(20)	Yes UNSIGNED	NULL	
<b>is_read</b>	tinyint(1)	No	0	
<b>read_at</b>	datetime	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## password\_reset\_tokens table

Column Name	Data Type	Null	Default Value	Constraint
<b>email</b>	varchar(255)	No		PRIMARY KEY
<b>token</b>	varchar(255)	No		
<b>created_at</b>	timestamp	Yes	NULL	

## payment\_event\_log table

Column Name	Data Type	Null	Default Value	Constraint
<b>payment_event_id</b>	bigint(20)	No UNSIGNED		PRIMARY KEY

<b>payment_intent_id</b>	bigint(20)	No	FOREIGN KEY ->
	UNSIGNED		payment_intent(payment_intent_id)
<b>shipment_id</b>	bigint(20)	No	FOREIGN KEY -> shipments(shipment_id)
	UNSIGNED		
<b>event_type</b>	varchar(50)	No	
<b>event_at</b>	datetime	No	
<b>actor_type</b>	varchar(20)	Yes	NULL
<b>actor_id</b>	bigint(20)	Yes	NULL
	UNSIGNED		
<b>old_status</b>	varchar(30)	Yes	NULL
<b>new_status</b>	varchar(30)	Yes	NULL
<b>message</b>	text	Yes	NULL
<b>raw_payload</b>	text	Yes	NULL
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## payment\_intent table

Column Name	Data Type	Null	Default Value	Constraint
<b>payment_intent_id</b>	bigint(20)	No		PRIMARY KEY
	UNSIGNED			
<b>shipment_id</b>	bigint(20)	No		FOREIGN KEY -
	UNSIGNED			>
				shipments(shipment_id)
<b>pricing_adjustment_id</b>	bigint(20)	Yes	NULL	
	UNSIGNED			
<b>currency</b>	varchar(3)	No	'VND'	
<b>method</b>	varchar(30)	No		
<b>provider</b>	varchar(50)	Yes	NULL	
<b>status</b>	varchar(30)	No		
<b>amount</b>	decimal(12,2)	No		
<b>amount_paid</b>	decimal(12,2)	No	0.00	

<b>payer_role</b>	varchar(20)	Yes	NULL	
<b>reference_code</b>	varchar(100)	Yes	NULL	
<b>provider_txn_id</b>	varchar(200)	Yes	NULL	
<b>expires_at</b>	datetime	Yes	NULL	
<b>confirmed_at</b>	datetime	Yes	NULL	
<b>failed_at</b>	datetime	Yes	NULL	
<b>fallback_payment_intent_id</b>	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> payment_intent(payment_intent_id)
<b>note</b>	text	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## pickup\_schedule table

Column Name	Data Type	Null	Default Value	Constraint
<b>pickup_schedule_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>shipment_id</b>	bigint(20) UNSIGNED	No		UNIQUE (shipment_id); FOREIGN KEY -> shipments(shipment_id)
<b>branch_id</b>	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> branches(id)
<b>scheduled_start_at</b>	datetime	No		
<b>scheduled_end_at</b>	datetime	No		
<b>confirmed_at</b>	datetime	Yes	NULL	
<b>confirmed_by</b>	bigint(20) UNSIGNED	Yes	NULL	
<b>confirm_method</b>	varchar(30)	No	'AGENT'	
<b>timezone</b>	varchar(40)	No	'Asia/Ho_Chi_Minh'	
<b>status</b>	varchar(30)	No	'SCHEDULED'	
<b>customer_note</b>	varchar(255)	Yes	NULL	

<b>internal_note</b>	varchar(255)	Yes	NULL
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## **pickup\_schedule\_history table**

Column Name	Data Type	Null	Default Value	Constraint
<b>history_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>pickup_schedule_id</b>	bigint(20)	No		FOREIGN KEY -> UNSIGNED pickup_schedule(pickup_schedule_id)
<b>shipment_id</b>	bigint(20)	No		FOREIGN KEY -> shipments(shipment_id) UNSIGNED
<b>old_start_at</b>	datetime	Yes	NULL	
<b>old_end_at</b>	datetime	Yes	NULL	
<b>new_start_at</b>	datetime	No		
<b>new_end_at</b>	datetime	No		
<b>change_reason</b>	varchar(50)	No		
<b>changed_by</b>	bigint(20)	Yes	NULL	 UNSIGNED
<b>changed_at</b>	datetime	No		
<b>note</b>	varchar(255)	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **prohibited\_categories table**

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED

<b>code</b>	varchar(20)	No	UNIQUE (code)
<b>name</b>	varchar(100)	No	
<b>description</b>	text	Yes	NULL
<b>is_active</b>	tinyint(1)	No	1
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## prohibited\_keywords table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>prohibited_category_id</b>	bigint(20)	No		FOREIGN KEY -> prohibited_categories(id) UNSIGNED
<b>keyword</b>	varchar(100)	No		
<b>match_type</b>	varchar(20)	No	'EXACT'	
<b>risk_weight</b>	int(11)	No	1	
<b>is_active</b>	tinyint(1)	No	1	
<b>created_at</b>	timestamp	Yes	NULL	

## province\_alias table

Column Name	Data Type	Null	Default Value	Constraint
<b>alias_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>province_code</b>	varchar(10)	No		FOREIGN KEY - > province_master(p rovince_code)
<b>alias_text</b>	varchar(160)	No		
<b>priority</b>	int(11)	No	100	

<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## **province\_master table**

Column Name	Data Type	Null	Default Value	Constraint
<b>province_code</b>	varchar(10)	No		PRIMARY KEY
<b>province_name</b>	varchar(120)	No		
<b>province_type</b>	varchar(30)	No		
<b>region_code</b>	varchar(20)	Yes	NULL	
<b>latitude</b>	decimal(10,6)	Yes	NULL	
<b>longitude</b>	decimal(10,6)	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **report\_snapshots table**

Column Name	Data Type	Null	Default Value	Constraint
<b>report_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>role_scope</b>	varchar(20)	No		
<b>branch_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> branches(id) UNSIGNED
<b>created_by</b>	bigint(20)	No		FOREIGN KEY -> users(id) UNSIGNED
<b>date_start</b>	date	No		
<b>date_end</b>	date	No		
<b>aggregated_metrics</b>	longtext	Yes	NULL CHARACTER SET utf8mb4	

<b>chart_data</b>	longtext	Yes	NULL
	CHARACTER		
	SET utf8mb4		
<b>export_format</b>	varchar(10)	Yes	NULL
<b>file_path</b>	varchar(500)	Yes	NULL
<b>generated_at</b>	datetime	No	
<b>created_at</b>	timestamp	Yes	NULL
<b>updated_at</b>	timestamp	Yes	NULL

## **return\_event\_log table**

Column Name	Data Type	Null	Default Value	Constraint
<b>return_event_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>return_order_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> return_order(return_order_id)
<b>original_shipment_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> shipments(shipment_id)
<b>event_type</b>	varchar(50)	No		
<b>old_status</b>	varchar(30)	Yes	NULL	
<b>new_status</b>	varchar(30)	Yes	NULL	
<b>event_at</b>	datetime	No		
<b>actor_type</b>	varchar(20)	Yes	NULL	
<b>actor_id</b>	bigint(20) UNSIGNED	Yes	NULL	
<b>message</b>	text	Yes	NULL	
<b>raw_payload</b>	text	Yes	NULL	

## return\_order table

Column Name	Data Type	Null	Default Value	Constraint
<b>return_order_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>original_shipment_id</b>	bigint(20)	No		FOREIGN KEY -> shipments(shipment_id) UNSIGNED
<b>return_shipment_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> shipments(shipment_id) UNSIGNED
<b>reason_code</b>	varchar(30)	No		
<b>reason_note</b>	text	Yes	NULL	
<b>service_type</b>	varchar(30)	Yes	NULL	
<b>route_scope</b>	varchar(30)	Yes	NULL	
<b>origin_branch_id</b>	bigint(20)	No		FOREIGN KEY -> branches(id) UNSIGNED
<b>dest_branch_id</b>	bigint(20)	No		FOREIGN KEY -> branches(id) UNSIGNED
<b>current_branch_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> branches(id) UNSIGNED
<b>status</b>	varchar(30)	No		
<b>created_by_type</b>	varchar(20)	Yes	NULL	
<b>created_by</b>	bigint(20)	Yes	NULL	
				UNSIGNED
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## return\_policy\_hold table

Column Name	Data Type	Null	Default Value	Constraint
<b>hold_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED

<b>return_order_id</b>	bigint(20)	No	FOREIGN KEY ->
	UNSIGNED		return_order(return_order_id)
<b>original_shipment_id</b>	bigint(20)	No	FOREIGN KEY ->
	UNSIGNED		shipments(shipment_id)
<b>hold_start_at</b>	datetime	No	
<b>hold_until_at</b>	datetime	No	
<b>pickup_by_customer_at</b>	datetime	Yes	NULL
<b>disposed_at</b>	datetime	Yes	NULL
<b>final_action</b>	varchar(30)	Yes	NULL
<b>decided_by_type</b>	varchar(20)	Yes	NULL
<b>decided_by</b>	bigint(20)	Yes	NULL
	UNSIGNED		
<b>note</b>	text	Yes	NULL

## sessions table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	varchar(255)	No		PRIMARY KEY
<b>user_id</b>	bigint(20)	Yes	NULL	
	UNSIGNED			
<b>ip_address</b>	varchar(45)	Yes	NULL	
<b>user_agent</b>	text	Yes	NULL	
<b>payload</b>	longtext	No		
<b>last_activity</b>	int(11)	No		

## shipments table

Column Name	Data Type	Null	Default Value	Constraint
<b>shipment_id</b>	bigint(20)	No		PRIMARY KEY
	UNSIGNED			

<b>tracking_id</b>	varchar(50)	Yes	NULL	UNIQUE (tracking_id)
<b>user_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> users(id) UNSIGNED
<b>sender_address_text</b>	text	No		
<b>sender_name</b>	varchar(120)	Yes	NULL	
<b>sender_phone</b>	varchar(20)	Yes	NULL	
<b>sender_province_code</b>	varchar(10)	Yes	NULL	FOREIGN KEY -> province_master(province_code)
<b>receiver_address_text</b>	text	No		
<b>receiver_name</b>	varchar(120)	Yes	NULL	
<b>receiver_phone</b>	varchar(20)	Yes	NULL	
<b>receiver_province_code</b>	varchar(10)	Yes	NULL	FOREIGN KEY -> province_master(province_code)
<b>service_type</b>	varchar(30)	No		
<b>goods_type</b>	varchar(50)	No		
<b>declared_value</b>	decimal(12,2)	No	0.00	
<b>total_weight_kg</b>	decimal(10,2)	No		
<b>total_volume_m3</b>	decimal(10,3)	Yes	NULL	
<b>parcel_length_cm</b>	decimal(10,2)	Yes	NULL	
<b>parcel_width_cm</b>	decimal(10,2)	Yes	NULL	
<b>parcel_height_cm</b>	decimal(10,2)	Yes	NULL	
<b>route_scope</b>	varchar(30)	No		
<b>assigned_branch_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> branches(id) UNSIGNED
<b>assigned_vehicle_id</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> vehicles(vehicle_id) UNSIGNED
<b>shipment_status</b>	varchar(30)	No		
<b>assigned_by</b>	bigint(20)	Yes	NULL	FOREIGN KEY -> users(id) UNSIGNED
<b>assigned_at</b>	datetime	Yes	NULL	
<b>delivered_at</b>	datetime	Yes	NULL	
<b>closed_at</b>	datetime	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	

<b>updated_at</b>	timestamp	Yes	NULL
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## shipment\_vehicle\_assignment\_logs table

Column Name	Data Type	Null	Default Value	Constraint
<b>log_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>shipment_id</b>	bigint(20)	No		UNIQUE (shipment_id, vehicle_id, branch_id, assigned_at); FOREIGN KEY -> shipments(shipment_id) UNSIGNED
<b>vehicle_id</b>	bigint(20)	No		UNIQUE (shipment_id, vehicle_id, branch_id, assigned_at); FOREIGN KEY -> vehicles(vehicle_id) UNSIGNED
<b>branch_id</b>	bigint(20)	No		UNIQUE (shipment_id, vehicle_id, branch_id, assigned_at); FOREIGN KEY -> branches(id) UNSIGNED
<b>assigned_by</b>	bigint(20)	Yes	NULL	UNSIGNED
<b>assigned_at</b>	datetime	No		UNIQUE (shipment_id, vehicle_id, branch_id, assigned_at)
<b>note</b>	text	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## transit\_manifest table

Column Name	Data Type	Null	Default Value	Constraint
<b>manifest_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>manifest_code</b>	varchar(50)	No		UNIQUE (manifest_code)

<b>vehicle_id</b>	bigint(20)	No UNSIGNED	FOREIGN KEY -> vehicles(vehicle_id)
<b>driver_id</b>	bigint(20)	No UNSIGNED	FOREIGN KEY -> driver(driver_id)
<b>origin_branch_id</b>	bigint(20)	No UNSIGNED	FOREIGN KEY -> branches(id)
<b>origin_warehouse_role</b>	varchar(20)	Yes	NULL
<b>dest_branch_id</b>	bigint(20)	No UNSIGNED	FOREIGN KEY -> branches(id)
<b>dest_warehouse_role</b>	varchar(20)	Yes	NULL
<b>route_scope</b>	varchar(30)	No	
<b>service_type</b>	varchar(30)	Yes	NULL
<b>status</b>	varchar(30)	No	
<b>created_by_type</b>	varchar(20)	Yes	NULL
<b>created_by</b>	bigint(20)	Yes UNSIGNED	NULL
<b>created_at</b>	datetime	No	
<b>loaded_at</b>	datetime	Yes	NULL
<b>departed_at</b>	datetime	Yes	NULL
<b>arrived_at</b>	datetime	Yes	NULL
<b>closed_at</b>	datetime	Yes	NULL
<b>note</b>	text	Yes	NULL

## transit\_manifest\_event table

Column Name	Data Type	Null	Default Value	Constraint
<b>event_id</b>	bigint(20)	No UNSIGNED		PRIMARY KEY
<b>manifest_id</b>	bigint(20)	No UNSIGNED		FOREIGN KEY -> transit_manifest(manifest_id)
<b>event_type</b>	varchar(50)	No		
<b>event_at</b>	datetime	No		

<b>actor_type</b>	varchar(20)	Yes	NULL
<b>actor_id</b>	bigint(20)	Yes	NULL UNSIGNED
<b>old_status</b>	varchar(30)	Yes	NULL
<b>new_status</b>	varchar(30)	Yes	NULL
<b>message</b>	text	Yes	NULL

## transit\_manifest\_item table

Column Name	Data Type	Null	Default Value	Constraint
<b>manifest_item_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>manifest_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> transit_manifest(manifest_id)
<b>shipment_id</b>	bigint(20) UNSIGNED	No		FOREIGN KEY -> shipments(shipment_id)
<b>item_status</b>	varchar(30)	No		
<b>added_at</b>	datetime	No		
<b>removed_at</b>	datetime	Yes	NULL	
<b>note</b>	text	Yes	NULL	

## users table

Column Name	Data Type	Null	Default Value	Constraint
<b>id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>name</b>	varchar(255)	No		
<b>email</b>	varchar(255)	No		UNIQUE (email)
<b>email_verified_at</b>	timestamp	Yes	NULL	

<b>password</b>	varchar(255)	No		
<b>role</b>	enum('ADMIN','AGENT','CUSTOMER')	No	'CUSTOMER'	
<b>branch_id</b>	bigint(20) UNSIGNED	Yes	NULL	FOREIGN KEY -> branches(id)
<b>phone</b>	varchar(255)	Yes	NULL	
<b>address</b>	varchar(255)	Yes	NULL	
<b>city</b>	varchar(255)	Yes	NULL	
<b>status</b>	enum('ACTIVE','INACTIVE','BLOCKED')	No	'ACTIVE'	
<b>remember_token</b>	varchar(100)	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## vehicles table

Column Name	Data Type	Null	Default Value	Constraint
<b>vehicle_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>vehicle_code</b>	varchar(30)	No		UNIQUE (vehicle_code)
<b>vehicle_type</b>	varchar(50)	No		
<b>max_load_kg</b>	decimal(10,2)	No		
<b>max_length_cm</b>	decimal(10,2)	Yes	NULL	
<b>max_width_cm</b>	decimal(10,2)	Yes	NULL	
<b>max_height_cm</b>	decimal(10,2)	Yes	NULL	
<b>max_volume_m3</b>	decimal(10,3)	Yes	NULL	
<b>route_scope</b>	varchar(30)	Yes	NULL	
<b>is_active</b>	tinyint(1)	No	1	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **vehicle\_load\_tracking table**

Column Name	Data Type	Null	Default Value	Constraint
<b>vehicle_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY; FOREIGN KEY -> vehicles(vehicle_id)
<b>current_load_kg</b>	decimal(10,2)	No	0.00	
<b>current_volume_m3</b>	decimal(10,3)	No	0.000	
<b>current_order_count</b>	int(11)	No	0	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **vehicle\_supported\_goods table**

Column Name	Data Type	Null	Default Value	Constraint
<b>vehicle_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY; FOREIGN KEY -> vehicles(vehicle_id)
<b>goods_type</b>	varchar(50)	No		PRIMARY KEY
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **ward\_alias table**

Column Name	Data Type	Null	Default Value	Constraint
<b>alias_id</b>	bigint(20) UNSIGNED	No		PRIMARY KEY
<b>ward_code</b>	varchar(10)	No		FOREIGN KEY -> ward_master(ward_code)
<b>alias_text</b>	varchar(160)	No		
<b>priority</b>	int(11)	No	100	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **ward\_master table**

Column Name	Data Type	Null	Default Value	Constraint
<b>ward_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>ward_code</b>	varchar(10)	No		UNIQUE (ward_code)
<b>district_code</b>	varchar(10)	No		FOREIGN KEY -> district_master(district_code)
<b>province_code</b>	varchar(10)	No		FOREIGN KEY -> province_master(province_code)
<b>ward_name</b>	varchar(120)	No		
<b>ward_name_raw</b>	varchar(120)	No		
<b>ward_type</b>	varchar(30)	No		
<b>is_active</b>	tinyint(1)	No	1	
<b>effective_from</b>	date	Yes	NULL	
<b>effective_to</b>	date	Yes	NULL	
<b>source_name</b>	varchar(80)	Yes	NULL	
<b>source_ref</b>	varchar(120)	Yes	NULL	
<b>created_at</b>	timestamp	Yes	NULL	
<b>updated_at</b>	timestamp	Yes	NULL	

## **warehouse\_reconciliation table**

Column Name	Data Type	Null	Default Value	Constraint
<b>reconciliation_id</b>	bigint(20)	No		PRIMARY KEY UNSIGNED
<b>shipment_id</b>	bigint(20)	No		FOREIGN KEY -> shipments(shipment_id)
<b>branch_id</b>	bigint(20)	No		FOREIGN KEY -> branches(id) UNSIGNED

<b>warehouse_role</b>	varchar(20)	No	
<b>reconciled_by</b>	bigint(20)	No UNSIGNED	
<b>reconciled_at</b>	datetime	No	
<b>goods_check_status</b>	varchar(30)	Yes	NULL
<b>waybill_check_status</b>	varchar(30)	Yes	NULL
<b>cash_check_status</b>	varchar(30)	Yes	NULL
<b>expected_cash_amount</b>	decimal(12,2)	Yes	NULL
<b>received_cash_amount</b>	decimal(12,2)	Yes	NULL
<b>discrepancy_note</b>	text	Yes	NULL
<b>final_status</b>	varchar(30)	No	
<b>created_at</b>	timestamp	Yes	NULL

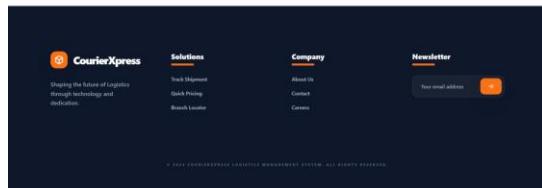
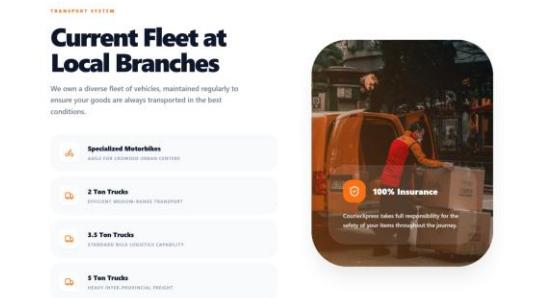
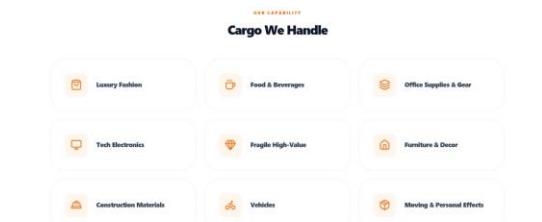
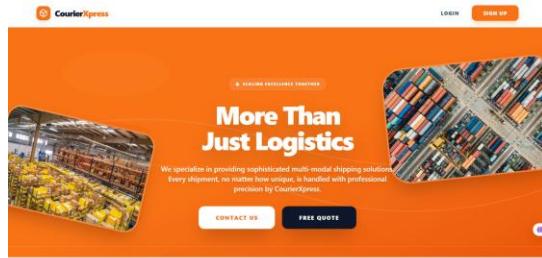
## warehouse\_scan table

Column Name	Data Type	Null	Default Value	Constraint
<b>scan_id</b>	bigint(20)	No UNSIGNED		PRIMARY KEY
<b>shipment_id</b>	bigint(20)	No UNSIGNED		UNIQUE (shipment_id, branch_id, warehouse_role, scan_type); FOREIGN KEY -> shipments(shipment_id)
<b>branch_id</b>	bigint(20)	No UNSIGNED		UNIQUE (shipment_id, branch_id, warehouse_role, scan_type); FOREIGN KEY -> branches(id)
<b>warehouse_role</b>	varchar(20)	No		UNIQUE (shipment_id, branch_id, warehouse_role, scan_type)
<b>scan_type</b>	varchar(20)	No		UNIQUE (shipment_id, branch_id, warehouse_role, scan_type)
<b>scanned_by_role</b>	varchar(30)	No		
<b>scanned_by</b>	bigint(20)	No UNSIGNED		
<b>scanned_at</b>	datetime	No		

<b>waybill_code</b>	varchar(50)	Yes	NULL
<b>package_count</b>	int(11)	No	1
<b>condition_status</b>	varchar(30)	Yes	NULL
<b>note</b>	text	Yes	NULL
<b>created_at</b>	timestamp	Yes	NULL

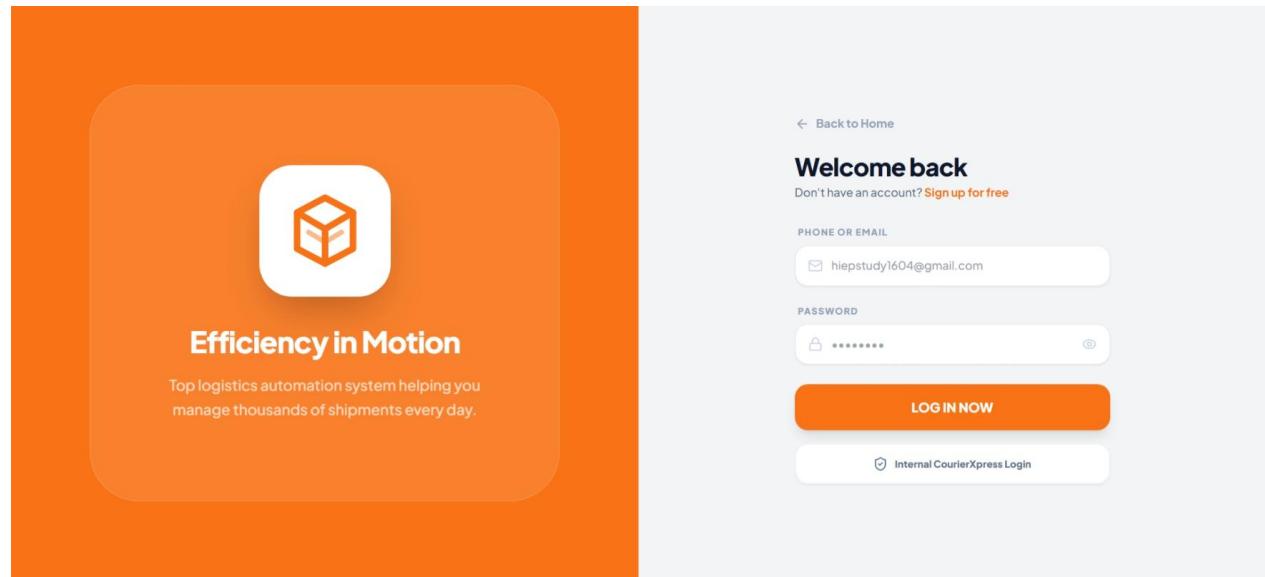
# 5. UX/UI

## 5.1. Landing page

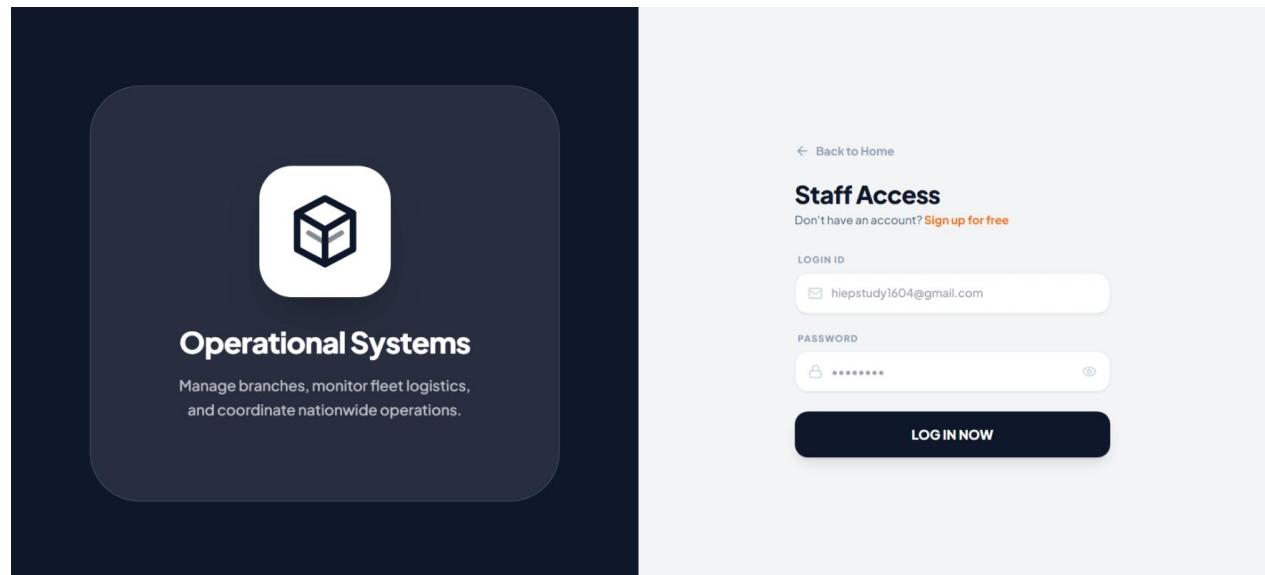


## 5.2. Login page

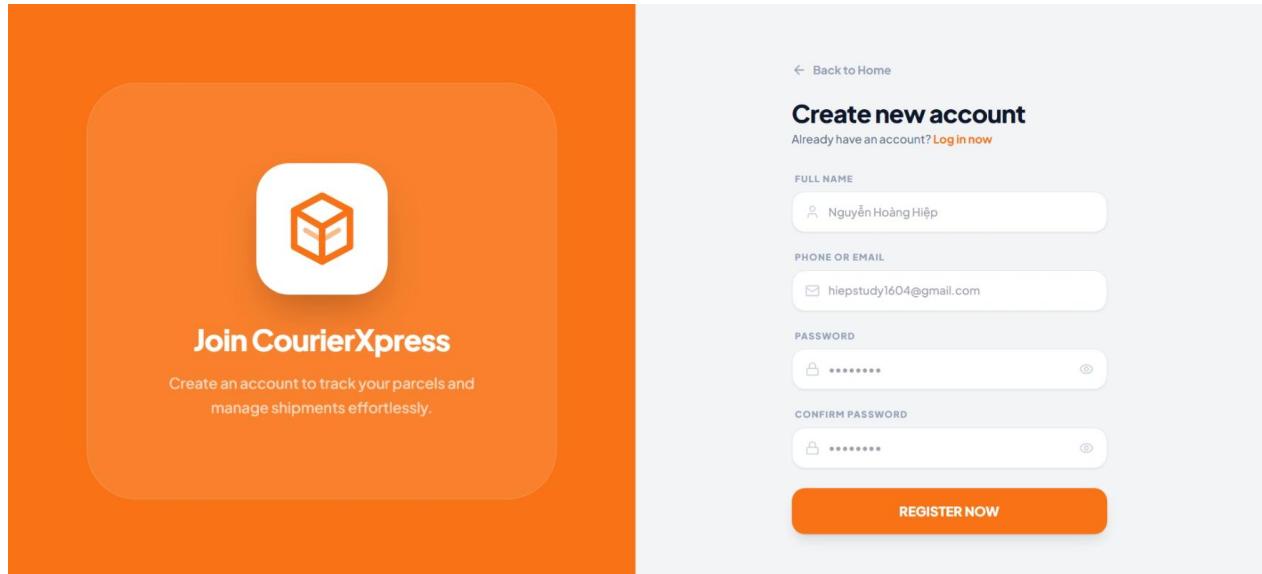
Customer log in:



Admin/Agent log in:

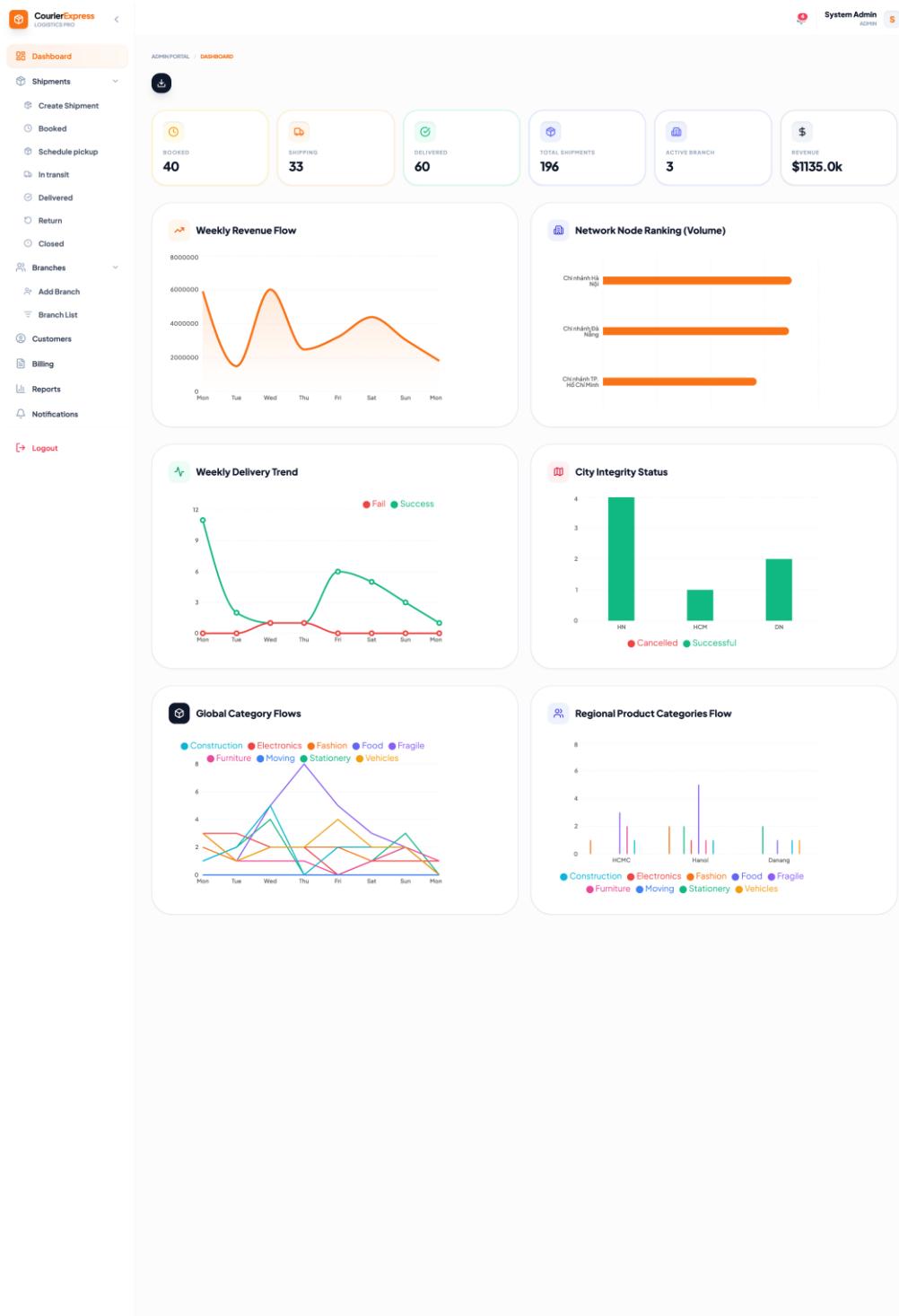


### 5.3. Sign in page



## 5.4. Admin

### 5.4.1. Admin dashboard



## 5.4.2. Admin shipment management

### Create shipment

The screenshot shows the CourierExpress Logistics Pro Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipments (with Create Shipment selected), Booked, Schedule pickup, In transit, Delivered, Return, Closed, Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The main area is titled 'CREATE SHIPMENT' and shows 'Input details' and 'Quotation' steps. The 'Order information' section includes fields for Sender (Name: Nguyễn Văn An, Phone: 0987654321, Address: Số 123, Đường ABC, Phường Dịch Vọng Hậu) and Receiver (Name: Trần Thị Bình, Phone: 0912345678, Address: 456 Đường XYZ, Phường Bến Nghé). It also includes dropdowns for province/city, district, and ward. Below this are fields for service level (STANDARD), date (01/27/2026), slot (Slot 1), payment method (Cash), and delivery note (Giao hàng giờ hành chính. Vui lè). The 'Items' section lists 'Item #1' with details: Item Name (Sách Lập Trình Nâng Cao), Weight (500g), Declared Value (150000 VND), Length (20cm), Width (15cm), Height (5cm), and Category (Stationery and small office). There is a 'Upload images' button and a note about max 4 images per item. A large orange 'Continue' button is at the bottom right.

ADMIN PORTAL / CREATE SHIPMENT

System Admin ADMIN S

Input details Quotation

Fill Test Data Reset

Order information

Sender

Receiver

Nguyễn Văn An  
0987654321  
Số 123, Đường ABC, Phường Dịch Vọng Hậu

Trần Thị Bình  
0912345678  
456 Đường XYZ, Phường Bến Nghé

Select province/city  
Select district  
Select ward

Select province/city  
Select district  
Select ward

STANDARD 01/27/2026 Slot 1

Cash View only(no try) Giao hàng giờ hành chính. Vui lè

Items

+ Add item

Item #1

ITEM NAME WEIGHT (G) DECLARED VALUE (VND)

Sách Lập Trình Nâng Cao 500 150000

LENGTH (CM) WIDTH (CM) HEIGHT (CM)

20 15 5

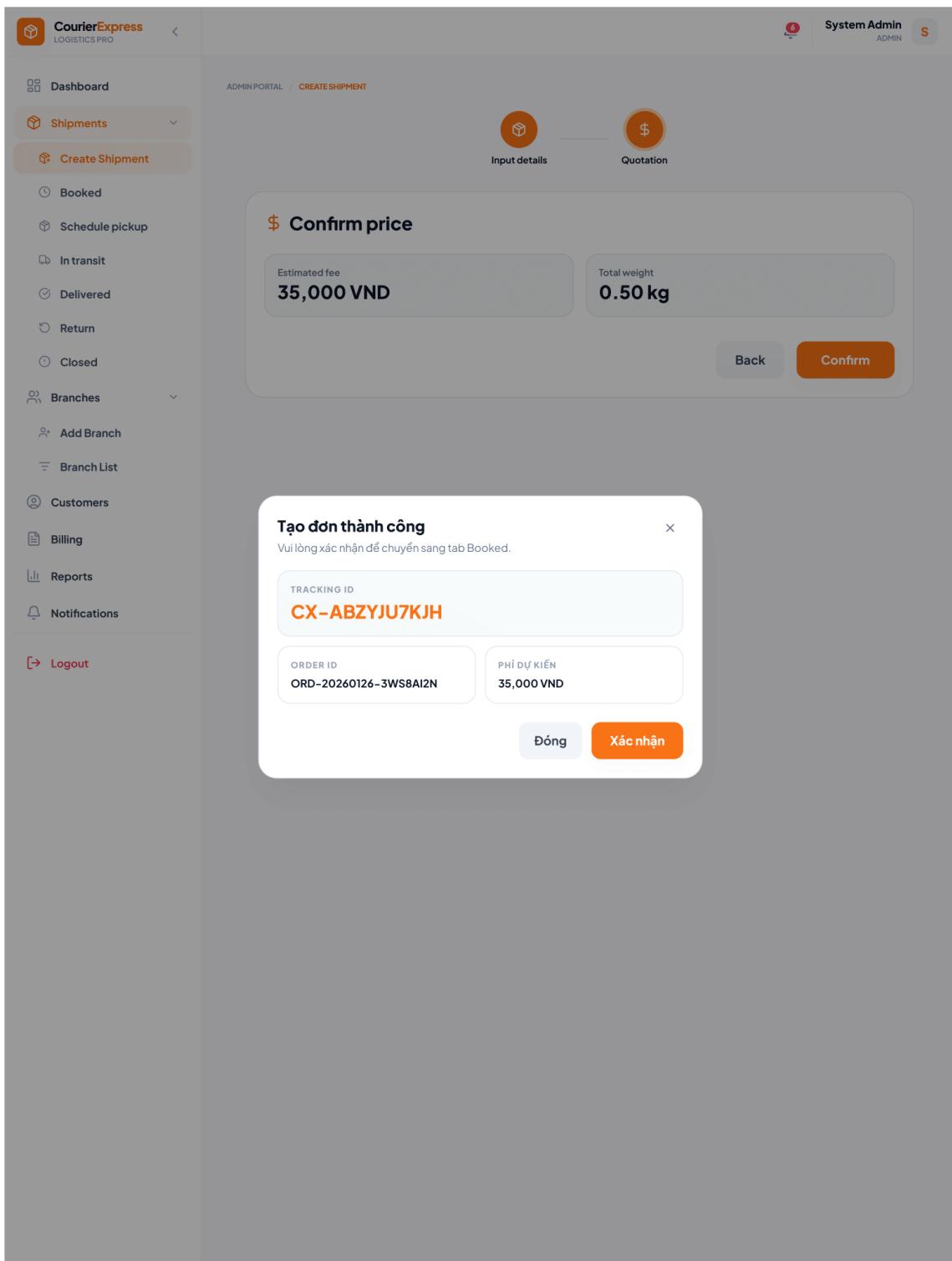
Stationery and small office

Upload images Max 4 Images per item

Continue

## Confirm fee

The screenshot shows the CourierExpress Logistics Pro Admin Portal interface. On the left is a sidebar with navigation links: Dashboard, Shipments (selected), Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed, Branches, Add Branch, Branch List, Customers, Billing, Reports, Notifications, and Logout. The main area is titled "CREATE SHIPMENT" and shows two circular icons: "Input details" (with a box icon) and "Quotation" (with a dollar sign icon). A central box is titled "\$ Confirm price" and displays "Estimated fee 35,000 VND" and "Total weight 0.50 kg". At the bottom right are "Back" and "Confirm" buttons. The top right corner shows a notification badge with the number 4, the title "System Admin", and the name "ADMIN".



## Manage Shipment

The screenshot shows the CourierExpress Logistics PRO Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipments (selected), Create Shipment, Booked (selected), Schedule pickup, In transit, Delivered, Return, Closed, Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The top right corner shows 'System Admin ADMIN' with a notification badge (6) and a user icon.

The main content area is titled 'Booked Shipments'. It features a top bar with 'Booked' (highlighted in orange), 'Assign branch', and 'Schedule pickup' buttons. Below this is a 'FILTERS' section with 'Tracking ID' (containing 'CX-88...') and 'Branch' (set to 'All Branches'). A 'Reset All' button is also present.

A table lists 10 shipment entries:

TRACKING ID	BRANCH	FLEET	PICKUP ADDRESS	DELIVERY ADDRESS	WEIGHT
CX-0000100159 ID: 159	3	5-ton Truck	820 Phố Lê Lợi, Quận Hải Châ...	263 Ngõ Lê Lợi, Quận Hải Châ...	3.55kg
CX-0000100083 ID: 83	3	Motorbike	493 Đường Điện Biên Phủ, Qu...	973 Đường Hoàng Diệu, Quận ...	34.60kg
CX-0000100112 ID: 112	3	2.5-ton Truck	998 Ngõ Nguyễn Huệ, Quận 1, ...	152 Ngõ Lý Thường Kiệt, Quận ...	2.23kg
CX-ABZYJU7KJH ID: 8	1	N/A	Số 123, Đường ABC, Phường D...	456 Đường XYZ, Phường Bến ...	0.50kg
CX-0000100132 ID: 132	2	2.5-ton Truck	682 Hẻm Võ Văn Tần, Quận 2, ...	475 Đường Nguyễn Huệ, Quận ...	13.73kg
CX-0000100071 ID: 71	2	Motorbike	990 Đường Lý Thường Kiệt, Q...	510 Phố Lê Duẩn, Quận Hoàn ...	4.64kg
CX-0000100143 ID: 143	2	2.5-ton Truck	469 Ngõ Lý Thường Kiệt, Quận...	111 Đường Lê Duẩn, Quận Hoà...	30.81kg
CX-0000100028 ID: 28	1	5-ton Truck	377 Phố Lý Thường Kiệt, Quận ...	871 Hẻm Nguyễn Huệ, Quận 1, ...	42.83kg
CX-0000100010 ID: 10	2	Motorbike	261 Đường Lý Thường Kiệt, Qu...	599 Ngõ Lý Thường Kiệt, Quận...	45.01kg
CX-0000100247 ID: 247	3	3.5-ton Truck	226 Ngõ Võ Văn Tần, Quận 3, ...	468 Phố Võ Văn Tần, Quận Ho...	10.63kg

At the bottom, it says 'Showing 1-10 of 99 shipments' with a page navigation bar from 1 to 10.

The screenshot shows the CourierExpress Logistics PRO Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipments (Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed), Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The main content area is titled "Pickup Shipments" and includes tabs for Set On The Way Pickup, Check Item, Check Price, Payment Confirm, and Pickup Complete. A "FILTERS" section allows filtering by Tracking ID (CX-88...) and Branch (All Branches). Below is a table listing 50 shipments:

TRACKING ID	BRANCH	FLEET	PICKUP ADDRESS	DELIVERY ADDRESS	WEIGHT
CX-0000100459 ID: 459	3	Motorbike	729 Phố Võ Văn Tần, Quận Hải ...	545 Đường Hoàng Diệu, Quận ...	30.91kg
CX-0000100474 ID: 474	3	2.5-ton Truck	150 Phố Lê Lợi, Quận 2, Đà Nẵng	666 Đường Hoàng Diệu, Quận ...	41.34kg
CX-0000100481 ID: 481	2	3.5-ton Truck	627 Đường Lý Thường Kiệt, Qu... 381 Phố Điện Biên Phủ, Quận B...	39.06kg	
CX-0000100457 ID: 457	2	Motorbike	985 Ngõ Lê Duẩn, Quận 2, TP. ...	877 Đường Điện Biên Phủ, Qu... 40.85kg	
CX-0000100460 ID: 460	3	5-ton Truck	992 Phố Trần Hưng Đạo, Quận ...	955 Đường Lê Lợi, Quận 3, Vi... 3.58kg	
CX-0000100463 ID: 463	1	3.5-ton Truck	106 Ngõ Nguyễn Huệ, Quận H... 28 Ngõ Lý Thường Kiệt, Quận ... 45.00kg		
CX-0000100455 ID: 455	3	3.5-ton Truck	26 Phố Lê Lợi, Quận Hoàn Kiế... 49 Ngõ Trần Hưng Đạo, Quận ... 2.89kg		
CX-0000100484 ID: 484	3	Motorbike	8 Phố Võ Văn Tần, Quận Hải C... 303 Đường Lý Thường Kiệt, Q... 35.54kg		
CX-0000100450 ID: 450	3	2.5-ton Truck	431 Hẻm Lê Duẩn, Quận Ba Đìn... 149 Đường Lý Thường Kiệt, Qu... 48.43kg		
CX-0000100470 ID: 470	1	5-ton Truck	622 Hẻm Nguyễn Huệ, Quận H... 710 Phố Lê Lợi, Quận Hoàn Kiế... 18.27kg		

Showing 1-10 of 50 shipments

**In-transit Shipments**

**FILTERS**

Tracking ID	Branch	Fleet	Pickup address	Delivery address	Weight
CX-0000101433 ID:1433	2	Motorbike	185 Ngõ Trần Hưng Đạo, Quận ...	165 Ngõ Lê Duẩn, Quận 2, TP ...	63.73kg
CX-0000101419 ID:1419	2	Motorbike	312 Hẻm Trần Hưng Đạo, Quận ...	271 Phố Nguyễn Huệ, Quận H... ... ... ...	56.35kg
CX-0000101500 ID:1500	3	3.5-ton Truck	226 Đường Lê Duẩn, Quận Ba ...	684 Đường Trần Hưng Đạo, Q... ... ...	11.61kg
CX-0000101423 ID:1423	1	3.5-ton Truck	347 Hẻm Lê Lợi, Quận 2, Việt ...	675 Phố Điện Biên Phủ, Quận ...	4.65kg
CX-0000101467 ID:1467	3	2.5-ton Truck	38 Đường Lê Lợi, Quận 3, Việt ...	511 Ngõ Lý Thường Kiệt, Quận ...	36.58kg
CX-0000101421 ID:1421	1	2.5-ton Truck	463 Hẻm Điện Biên Phủ, Quận ...	636 Đường Võ Văn Tần, Quận ...	13.94kg
CX-0000101473 ID:1473	3	3.5-ton Truck	983 Đường Trần Hưng Đạo, Q... ... ...	42 Đường Hoàng Diệu, Quận 3... ... ...	21.43kg
CX-0000101472 ID:1472	2	3.5-ton Truck	542 Đường Lê Duẩn, Quận Ba ...	531 Ngõ Trần Hưng Đạo, Quận ...	37.99kg
CX-0000101436 ID:1436	2	Motorbike	446 Ngõ Hoàng Diệu, Quận H... ... ...	742 Phố Hoàng Diệu, Quận 3, ...	8.81kg
CX-0000101470 ID:1470	3	2.5-ton Truck	827 Ngõ Trần Hưng Đạo, Quận ...	727 Phố Lê Lợi, Quận 2, Đà Nẵ... ... ...	32.63kg

Showing 1-10 of 59 shipments

**CourierExpress** LOGISTICS PRO

System Admin ADMIN S

Dashboard

Shipments

- Create Shipment
- Booked
- Schedule pickup
- In transit
- Delivered**
- Return
- Closed

Branches

- Add Branch
- Branch List

Customers

Billing

Reports

Notifications

Logout

ADMIN PORTAL / DELIVERED SHIPMENTS

## Delivered Shipments

Delivered Closed

FILTERS Reset All

Tracking ID	Branch	Fleet	Pickup address	Delivery address	Weight
<a href="#">CX-0000102108</a> ID: 2108	3	Motorbike	270 Đường Hoàng Diệu, Quận 2...	879 Ngõ Trần Hưng Đạo, Quận B...	22.6
<a href="#">CX-0000102049</a> ID: 2049	2	3.5-ton Truck	53 Phố Hoàng Diệu, Quận 1, Việt...	377 Phố Võ Văn Tần, Quận 1, Đà...	10.0
<a href="#">CX-0000102160</a> ID: 2160	1	3.5-ton Truck	416 Đường Lê Lợi, Quận 2, Việt ...	355 Ngõ Trần Hưng Đạo, Quận B...	31.3
<a href="#">CX-0000102213</a> ID: 2213	1	5-ton Truck	181 Phố Hoàng Diệu, Quận 2, Hà ...	900 Ngõ Nguyễn Huệ, Quận 2, -	45.0
<a href="#">CX-0000101946</a> ID: 1946	2	3.5-ton Truck	926 Hẻm Hoàng Diệu, Quận 2, V...	910 Đường Lê Duẩn, Quận Hoàn ...	18.4
<a href="#">CX-0000101898</a> ID: 1898	2	2.5-ton Truck	331 Ngõ Võ Văn Tần, Quận Hoàn...	90 Hẻm Võ Văn Tần, Quận Hải C...	32.4
<a href="#">CX-0000101913</a> ID: 1913	1	Motorbike	134 Hẻm Lê Duẩn, Quận 3, Việt ...	713 Phố Lê Lợi, Quận Hải Châu, -	11.9
<a href="#">CX-0000102235</a> ID: 2235	1	3.5-ton Truck	838 Phố Trần Hưng Đạo, Quận 2...	241 Đường Lê Duẩn, Quận 1, Viêt...	45.4
<a href="#">CX-0000102129</a> ID: 2129	3	Motorbike	348 Hẻm Điện Biên Phủ, Quận 2...	627 Hẻm Nguyễn Huệ, Quận Hải...	35.6
<a href="#">CX-0000102038</a> ID: 2038	1	2.5-ton Truck	898 Hẻm Lê Duẩn, Quận 1, Việt ...	281 Hẻm Nguyễn Huệ, Quận 3, -	16.5

Showing 1-10 of 149 shipments

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 >

The screenshot shows the CourierExpress Logistics Pro Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipment status (Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return), Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The main content area is titled "Return Shipments" and includes filters for Tracking ID (CX-88...) and Branch (All Branches). It lists 13 shipments with details like Shipment ID, Branch, Fleet, Pickup address, Delivery address, and Weight. The table shows the following data:

Shipment ID	Branch	Fleet	Pickup address	Delivery address	Weight
<b>CX-0000102648</b> ID: 2648	2	3.5-ton Truck	345 Hẻm Hoàng Diệu, Quận H...	201 Ngõ Nguyễn Huệ, Quận 3, ...	42.57kg
<b>CX-0000102641</b> ID: 2641	1	Motorbike	555 Phố Lê Lợi, Quận Ba Đình, ...	600 Ngõ Hoàng Diệu, Quận H...	18.87kg
<b>CX-0000102650</b> ID: 2650	1	Motorbike	321 Đường Điện Biên Phủ, Quận...	278 Hẻm Trần Hưng Đạo, Quận...	37.43kg
<b>CX-0000102653</b> ID: 2653	3	5-ton Truck	921 Phố Võ Văn Tần, Quận Ba Đ...	423 Đường Hoàng Diệu, Quận ...	40.98kg
<b>CX-0000102643</b> ID: 2643	3	2.5-ton Truck	285 Hẻm Nguyễn Huệ, Quận H...	134 Ngõ Lê Lợi, Quận 3, Việt N...	19.09kg
<b>CX-0000102665</b> ID: 2665	3	Motorbike	323 Ngõ Lê Lợi, Quận 3, Việt N...	880 Ngõ Lê Duẩn, Quận Hoàn ...	23.95kg
<b>CX-0000102651</b> ID: 2651	1	2.5-ton Truck	852 Phố Điện Biên Phủ, Quận 1...	244 Phố Lê Lợi, Quận Hoàn Kiếm...	8.76kg
<b>CX-0000102647</b> ID: 2647	1	Motorbike	92 Đường Lê Lợi, Quận Ba Đình...	842 Hẻm Lê Lợi, Quận Hải Châ...	26.39kg
<b>CX-0000102644</b> ID: 2644	1	3.5-ton Truck	140 Đường Võ Văn Tần, Quận 3...	293 Hẻm Nguyễn Huệ, Quận 2, ...	27.38kg
<b>CX-0000102656</b> ID: 2656	3	3.5-ton Truck	556 Hẻm Võ Văn Tần, Quận 3, ...	278 Đường Điện Biên Phủ, Quận ...	35.79kg

At the bottom, it says "Showing 1-10 of 13 shipments" and has navigation buttons for pages 1, 2, and 3.

The screenshot shows the CourierExpress Logistics Pro Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipments (Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed), Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The main content area is titled "Issue Shipments" and shows a list of 13 shipments. The columns include Shipment ID, Branch, Fleet, Pickup address, Delivery address, and a status indicator. The first shipment listed is CX-0000101852.

Shipment ID	Branch	Fleet	Pickup address	Delivery address	
CX-0000101852 ID: 1852	3	3.5-ton Truck	593 Hẻm Điện Biên Phủ, Quận 1, ...	962 Ngõ Hoàng Diệu, Quận Ba Đì...	20
CX-0000101854 ID: 1854	1	2.5-ton Truck	426 Hẻm Võ Văn Tần, Quận Hải C...	756 Phố Trần Hưng Đạo, Quận 2, ...	31
CX-0000101859 ID: 1859	3	3.5-ton Truck	956 Phố Lê Lợi, Quận Hải Châu, V...	247 Ngõ Võ Văn Tần, Quận 1, HÀ ...	5
CX-0000101845 ID: 1845	2	Motorbike	705 Ngõ Nguyễn Huệ, Quận Ba Đ...	15 Hẻm Lê Lợi, Quận 3, Đà Nẵng	30
CX-0000101838 ID: 1838	1	5-ton Truck	555 Ngõ Nguyễn Huệ, Quận 1, Vi...	932 Phố Hoàng Diệu, Quận Ba Đì...	3
CX-0000101841 ID: 1841	3	2.5-ton Truck	858 Đường Võ Văn Tần, Quận Ba ...	127 Hẻm Võ Văn Tần, Quận 2, Viêt...	1
CX-0000101853 ID: 1853	2	2.5-ton Truck	248 Hẻm Lý Thường Kiệt, Quận 3...	127 Phố Lê Lợi, Quận Ba Đình, Viêt...	2
CX-0000101860 ID: 1860	2	Motorbike	719 Ngõ Lê Lợi, Quận 3, Việt Nam	865 Đường Lê Duẩn, Quận 2, Viêt...	4
CX-0000101835 ID: 1835	2	3.5-ton Truck	797 Đường Điện Biên Phủ, Quận ...	891 Đường Hoàng Diệu, Quận Ba ...	3
CX-0000101840 ID: 1840	2	3.5-ton Truck	275 Ngõ Trần Hưng Đạo, Quận B...	797 Đường Hoàng Diệu, Quận Hà ...	4

Showing 1-10 of 13 shipments

### 5.4.3. Admin branch management

#### Add branch

The screenshot shows the CourierExpress Admin Portal interface. On the left is a sidebar with navigation links: Dashboard, Shipments (Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed), Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The main content area is titled 'ADMIN PORTAL / ADD BRANCH'. It contains four main sections: 'Operational Info' (with fields for Avatar, Branch Name, Manager Name, and Manager Phone), 'Branch Location' (with fields for Hub City, District, Select City, and Full Address), 'Transport Capacity (Fleet)' (showing icons for Motorbike, 2.0T Truck, 3.5T Truck, and 5.0T Truck, each with a value of 0), and 'Access Control & Security' (with fields for ID Branch, System Login ID, Security Code, and a 'Generate Account' button). A status bar at the bottom indicates 'Status: Active'. A note at the bottom states: 'NOTICE: CLICK "GENERATE ACCOUNT" TO AUTOMATICALLY GENERATE ID BRANCH, SYSTEM LOGIN ID, AND SECURITY CODE. ALL BRANCHES ARE CREATED WITH ACTIVE STATUS BY DEFAULT.' A large orange button at the bottom right says 'Register Branch'.

## Branch list

**ADMIN PORTAL / BRANCH LIST**

**FILTERS**

Branch ID: AG-HN-..., Hub City: All Cities, Account Status: All Statuses

**AG-DN-001**

Branch Name: Chi Nhánh Đà Nẵng  
Manager: Lê Văn C  
Phone: 0903000001

Administrative Area: Đà Nẵng - Hải Châu

Branch Address: 789 Lê Duẩn, Hải Châu

Transport Capacity (Fleet):

- MOTORBIKE: 0
- 2.0T TRUCK: 0
- 3.5T TRUCK: 0
- 5.0T TRUCK: 0

Account Status: ACTIVE

**AG-HN-001**

Branch Name: Chi Nhánh Hà Nội  
Manager: Nguyễn Văn A  
Phone: 0901000001

Administrative Area: Hà Nội - Hoàn Kiếm

Branch Address: 123 Phố Hàng Bông, Hoàn Kiếm

Transport Capacity (Fleet):

- MOTORBIKE: 0
- 2.0T TRUCK: 0
- 3.5T TRUCK: 0
- 5.0T TRUCK: 0

Account Status: ACTIVE

**AG-HCM-001**

Branch Name: Chi Nhánh TP. Hồ Chí Minh  
Manager: Trần Thị B  
Phone: 0902000001

Administrative Area: TP. Hồ Chí Minh - Quận 1

Branch Address: 456 Nguyễn Huệ, Quận 1

Transport Capacity (Fleet):

- MOTORBIKE: 0
- 2.0T TRUCK: 0
- 3.5T TRUCK: 0
- 5.0T TRUCK: 0

Account Status: ACTIVE

## 5.4.4. Admin customer management

The screenshot shows the CourierExpress Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipments (Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed), Branches (Add Branch, Branch List), Customers (selected), Billing, Reports, Notifications, and Logout. The main content area is titled 'ADMIN PORTAL - CUSTOMERS'. It features a 'FILTERS' section with fields for Customer ID (KH-1234), Name (Search N.), Email (example@), Phone Number (Search Ph.), City (Search Ci.), and Status (All Status). Below the filters is a table displaying customer data:

#	ID	Full Name	Email Address	Phone	City	Street Address
1	KH-0004	Nguyễn Văn Khách 1	customer1@example.com	0901001001	TP. Hồ Chí Minh	123 Đường A
2	KH-0005	Trần Thị Khách 2	customer2@example.com	0902002002	Hà Nội	456 Đường X
3	KH-0003	Test Customer	customer@example.com	N/A	N/A	N/A

At the bottom, it says 'Showing 1-3 of 3 customers' and has navigation arrows. The top right corner shows 'System Admin ADMIN' with a notification badge.

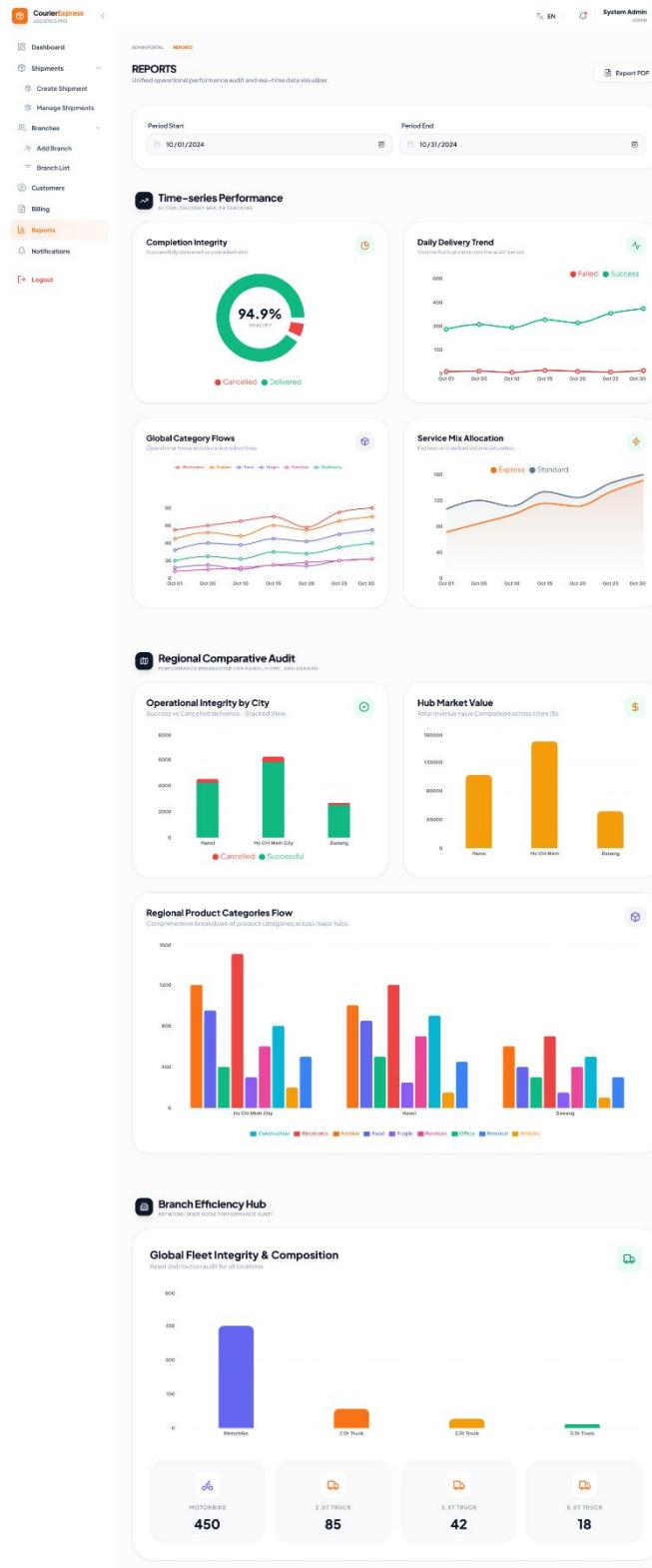
## 5.4.5. Admin billing management

The screenshot shows the CourierExpress Admin Portal interface. The left sidebar contains navigation links for Dashboard, Shipments (Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed), Branches (Add Branch, Branch List), Customers (Billing, Reports, Notifications), and Logout. The main content area is titled 'ADMIN PORTAL / BILLING' and features a 'FILTERS' section with fields for Bill ID (# BILL-...), Tracking ID (CX-...), and Creation Date (mm/dd/yyyy). Below the filters is a table listing 10 bills from a total of 400. The columns are Bill ID, Customer Name, Tracking ID, Creation Date, and Total. The bills listed are:

# Bill ID	Customer Name	Tracking ID	Creation Date	Total
90	Lê Văn Khách	CX-00001950	2026-01-27	
209	Vũ Văn Khách	CX-00002069	2026-01-26	
68	Vũ Văn Khách	CX-00001928	2026-01-26	
38	Trần Thị Khách	CX-00001898	2026-01-26	
246	Đỗ Thị Khách	CX-00002106	2026-01-26	
191	Nguyễn Thành Nam	CX-00002051	2026-01-26	
283	Trần Thị Khách	CX-00002143	2026-01-26	
302	Đặng Ngọc Hân	CX-00002162	2026-01-25	
194	Phạm Đức Thắng	CX-00002054	2026-01-24	
347	Vũ Quang Huy	CX-00002207	2026-01-24	

At the bottom, it says 'Showing 1-10 of 400 bills' and has a page navigation bar with buttons for 1, 2, 3, ..., 40, >.

## 5.4.6. Admin Report management



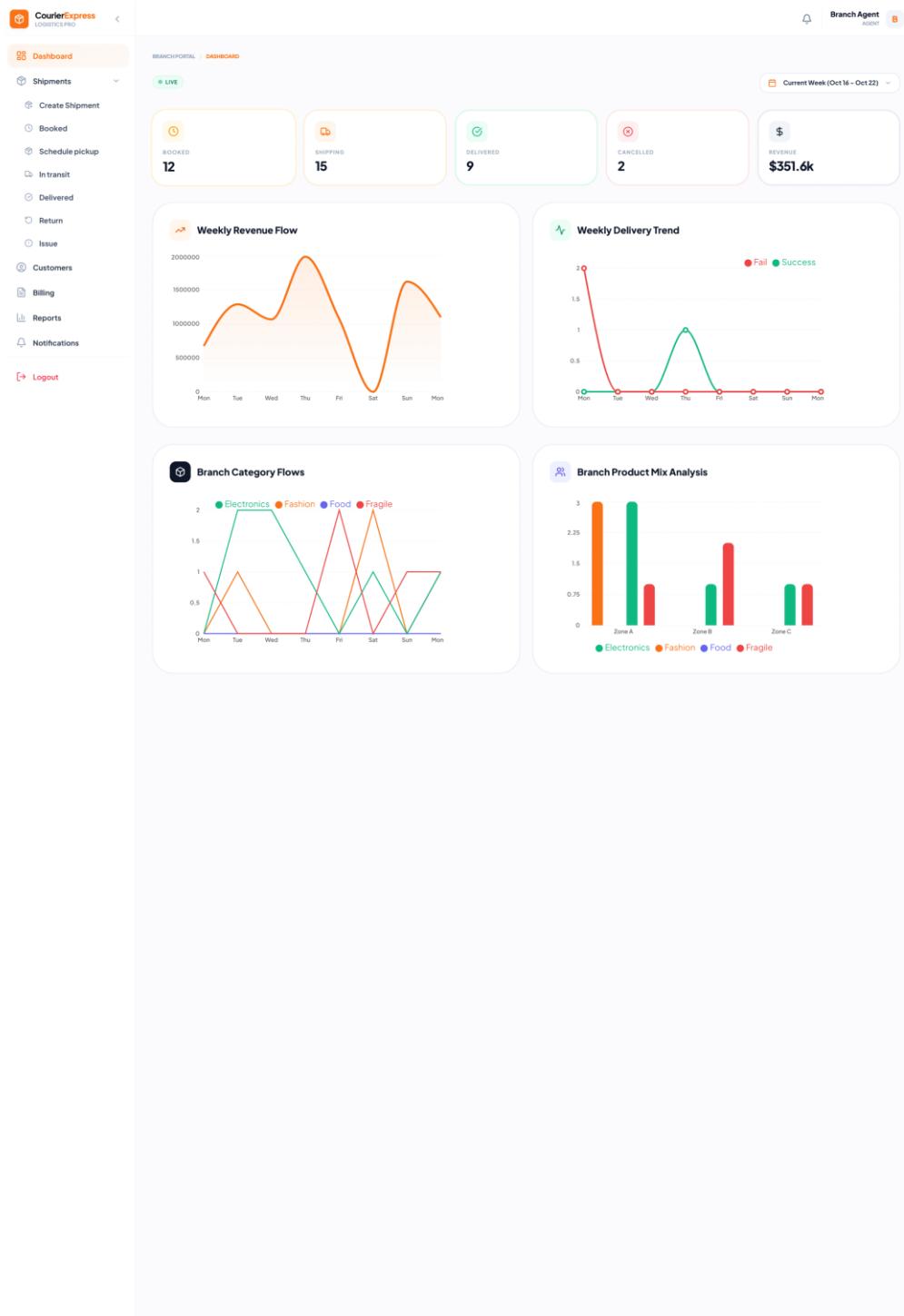
## 5.4.7. Admin Notification management

### Notification templates management

The screenshot shows the CourierExpress Admin Portal interface. On the left is a sidebar with navigation links: Dashboard, Shipments (with sub-options Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed), Branches (with sub-options Add Branch, Branch List), Customers, Billing, Reports, and Notifications (which is highlighted with an orange background). At the bottom of the sidebar are Logout and Help links. The main content area is titled "Notifications" and displays the message "Manage your notifications." Below this is a section titled "My Notifications" with a bell icon. It shows the message "Không có thông báo" (No notifications) and the sub-instruction "Bạn sẽ nhận được thông báo khi có cập nhật mới" (You will receive a notification when there is a new update).

## 5.5. Agent

### 5.5.1 Agent dashboard



## 5.5.2 Agent shipment

The screenshot shows the CourierExpress Logistics PRO Admin Portal interface. On the left is a sidebar with navigation links: Dashboard, Shipments (selected), Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Closed, Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout. The main area is titled 'CREATE SHIPMENT' and shows 'Input details' and 'Quotation' tabs. The 'Input details' tab is active, displaying 'Order information' with fields for Sender (Name: Nguyễn Văn An, Phone: 0987654321, Address: Số 123, Đường ABC, Phường Dịch Vọng Hậu) and Receiver (Name: Trần Thị Bình, Phone: 0912345678, Address: 456 Đường XYZ, Phường Bến Nghé). Below these are dropdowns for province/city, district, and ward. Payment method is set to Cash, and delivery note is 'Giao hàng giờ hành chính. Vui lì'. The 'Items' section lists one item: 'Item #1' (Sách Lập Trình Nâng Cao, 500g, 150000 VND, dimensions 20x15x5 cm, Stationery and small office). An 'Upload images' button is available. A 'Continue' button is at the bottom right. The top right shows a 'System Admin' status with 4 notifications.

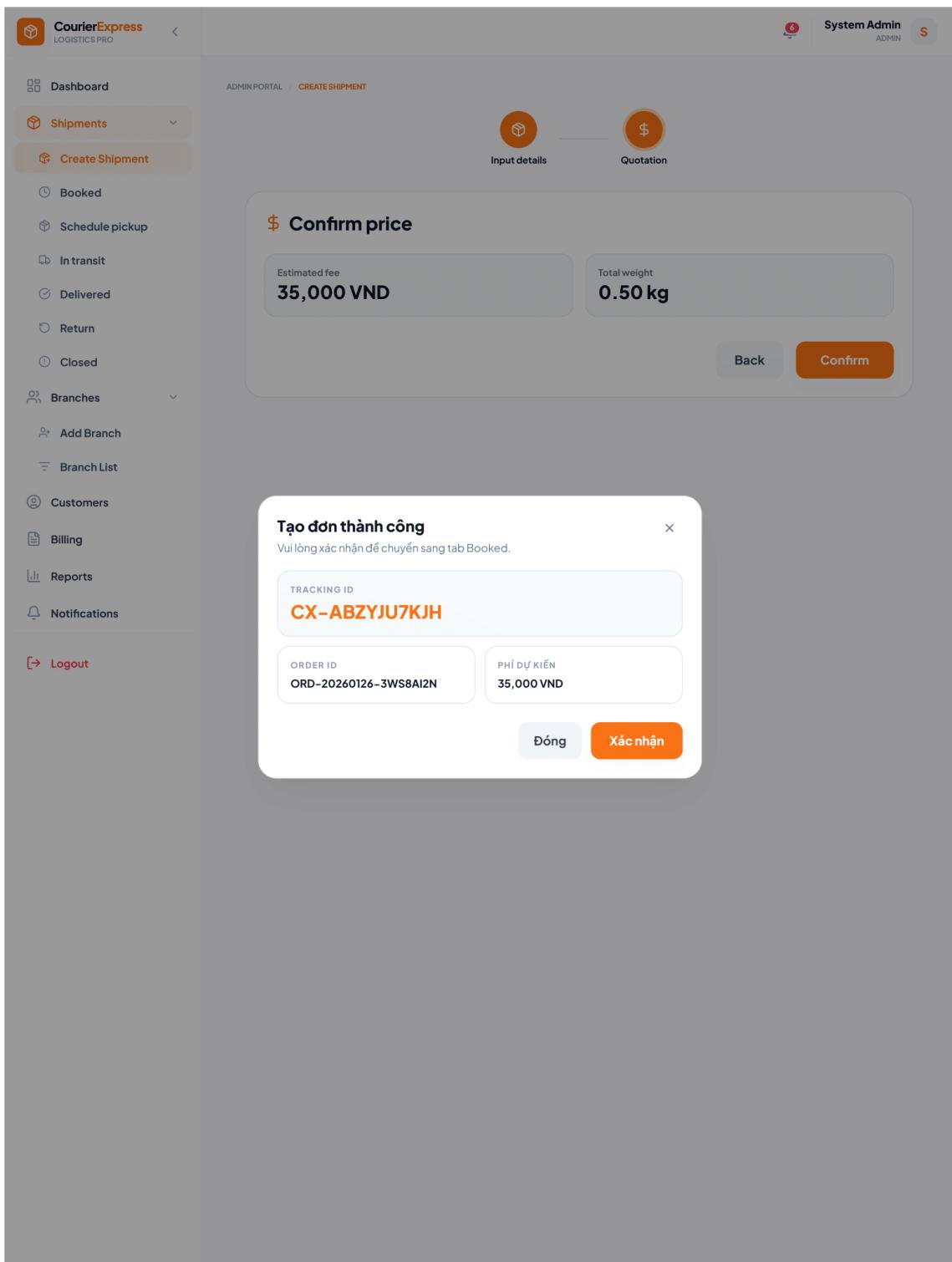
The screenshot shows the CourierExpress Logistics Pro Admin Portal interface. On the left, a sidebar navigation menu includes: Dashboard, Shipments (selected), Create Shipment (highlighted in orange), Booked, Schedule pickup, In transit, Delivered, Return, Closed, Branches (Add Branch, Branch List), Customers, Billing, Reports, Notifications, and Logout.

The main content area is titled "CREATE SHIPMENT" and shows two circular icons: "Input details" (with a package icon) and "Quotation" (with a dollar sign icon).

A central modal window is titled "\$ Confirm price". It displays the following information:

- Estimated fee: **35,000 VND**
- Total weight: **0.50 kg**

At the bottom right of the modal are "Back" and "Confirm" buttons.



The screenshot shows the CourierExpress software interface for managing shipments. The left sidebar contains navigation links for Dashboard, Shipment (Booked, Schedule pickup, In transit, Delivered, Return, Issue), Customers, Billing, Reports, Notifications, and Logout. The main area is titled 'Booked Shipments' and displays a table of 95 entries. The columns include Tracking ID, Branch, Fleet, Pickup Address, Delivery Address, Weight, Dimensions, Fee, Status, and Action (View detail). A search bar at the top allows filtering by Tracking ID. The table shows various shipping details such as addresses in Ho Chi Minh City, weights ranging from 29.18kg to 48.10kg, and fees ranging from \$101.60 to \$198.40.

TRACKING ID	BRANCH	FLEET	PICKUP ADDRESS	DELIVERY ADDRESS	WEIGHT	DIMENSIONS	FEES	STATUS	ACTION
CX-0000100097	2	2.5-ton Truck	508 Hẻm Trần Hưng Đạo, Quận Ba Đình, TP. Hồ Chí Minh, Việt Nam	482 Hẻm Trần Hưng Đạo, Quận Ba Đình, TP. Hồ Chí Minh, Việt Nam	29.18kg	37.00 x 38.00 x 42.00 cm	\$101.60	BOOKED	<button>View detail</button>
CX-0000100096	2	2.5-ton Truck	777 Nghĩa Lộ Duẩn, Quận Ba Đình, Việt Nam	935 Đường Lê Duẩn, Quận 1, TP. Hồ Chí Minh, Việt Nam	36.44kg	44.00 x 64.00 x 18.00 cm	\$42.42	PRICE ESTIMATED	<button>View detail</button>
CX-0000100033	2	2.5-ton Truck	158 Hẻm Nguyễn Huệ, Quận 2, TP. Hồ Chí Minh, Việt Nam	542 Phố Võ Văn Tần, Quận 3, Việt Nam	41.31kg	54.00 x 63.00 x 25.00 cm	\$80.31	BOOKED	<button>View detail</button>
CX-0000100030	2	2.5-ton Truck	637 Đường Trần Hưng Đạo, Quận 1, TP. Hồ Chí Minh, Việt Nam	444 Phố Trần Hưng Đạo, Quận 1, TP. Hồ Chí Minh, Việt Nam	21.09kg	30.00 x 50.00 x 20.00 cm	\$145.63	BOOKED	<button>View detail</button>
CX-0000100195	2	5-ton Truck	908 Phố Lê Duẩn, Quận 1, Việt Nam	808 Hẻm Điện Biên Phủ, Quận Ba Đình, TP. Hồ Chí Minh, Việt Nam	15.23kg	38.00 x 31.00 x 21.00 cm	\$74.21	PRICE ESTIMATED	<button>View detail</button>
CX-0000100018	2	2.5-ton Truck	823 Đường Lê Duẩn, Quận 2, Việt Nam	233 Hẻm Lê Duẩn, Quận 3, Việt Nam	28.15kg	33.00 x 34.00 x 26.00 cm	\$152.40	BOOKED	<button>View detail</button>
CX-0000100086	2	5-ton Truck	120 Phố Lý Thường Kiệt, Quận 1, TP. Hồ Chí Minh, Việt Nam	285 Hẻm Lê Lợi, Quận Ba Đình, Đà Nẵng	12.53kg	46.00 x 31.00 x 47.00 cm	\$158.54	BOOKED	<button>View detail</button>
CX-0000100067	2	Motorcycle	412 Hẻm Võ Văn Tần, Quận 3, TP. Hồ Chí Minh, Việt Nam	580 Hẻm Điện Biên Phủ, Quận Hải Châu, TP. Đà Nẵng	34.89kg	78.00 x 30.00 x 27.00 cm	\$196.84	BOOKED	<button>View detail</button>
CX-0000100041	2	2.5-ton Truck	139 Hẻm Điện Biên Phủ, Quận 2, Việt Nam	500 Hẻm Võ Văn Tần, Quận Hải Châu, TP. Đà Nẵng	44.73kg	70.00 x 36.00 x 27.00 cm	\$46.61	PRICE ESTIMATED	<button>View detail</button>
CX-0000100153	2	2.5-ton Truck	348 Hẻm Lê Duẩn, Quận 3, Việt Nam	213 Ngõ Võ Văn Tần, Quận 3, Đà Nẵng	48.10kg	40.00 x 43.00 x 26.00 cm	\$198.40	PRICE ESTIMATED	<button>View detail</button>

### 5.5.3 Agent customer

**Customer List**

ID	Name	Email	Phone Number	City	Orders	Success	Failed	Status	Actions
KH-0017	Test Customer	customer@example.com	N/A	N/A	53	53	0	Active	
KH-0001	Nguyễn Văn Khách	nguyenvankhach@example.com	092374854	TP. Hồ Chí Minh	57	51	6	Active	
KH-0002	Trần Thị Khách	tranthikhach@example.com	0238475629	Hà Nội	53	48	5	Blocked	
KH-0003	Lê Văn Khách	levankhach@example.com	0123456789	TP. Đà Nẵng	58	57	1	Active	
KH-0004	Phạm Thị Khách	phamthikhach@example.com	0987654321	Hà Nội	61	58	3	Blocked	
KH-0005	Hoàng Văn Khách	hoangvankhach@example.com	0369857421	TP. Hồ Chí Minh	48	46	2	Active	
KH-0006	Đỗ Thị Khách	dothikhach@example.com	0741852963	Đà Nẵng	55	52	3	Blocked	
KH-0007	Vũ Văn Khách	vuvankhach@example.com	0123478945	TP. Hồ Chí Minh	52	50	2	Active	
KH-0008	Nguyễn Thành Nam	thanhnhan.nguyen@gmail.com	0909123456	TP. Hồ Chí Minh	47	44	3	Active	
KH-0009	Lê Thị Minh Thư	minhthu.le9@yahoo.com	0912345678	Hà Nội	62	61	1	Active	

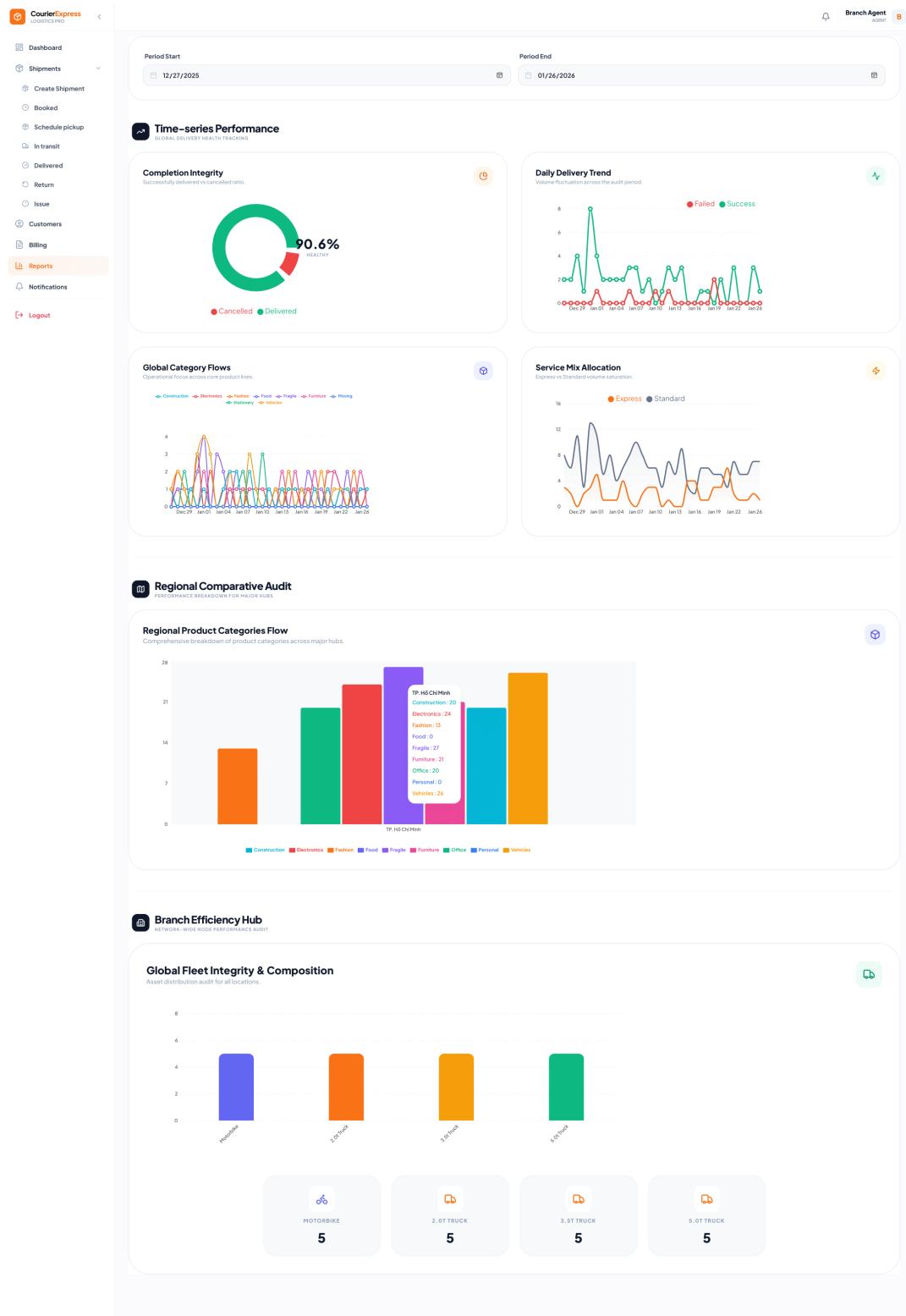
Showing 1-10 of 15 customers

## 5.5.4 Agent billing

The screenshot shows the CourierExpress BranchAgent interface. On the left is a sidebar with navigation links: Dashboard, Shipments (Create Shipment, Booked, Schedule pickup, In transit), Delivered, Return, Issue, Customers, Billing (selected), Reports, Notifications, and Logout. The main area has tabs for 'SHIPMENTS' and 'BILLS'. The 'BILLS' tab is selected, showing a table of bill details. The table has columns: BILL ID, Customer Name, Tracking ID, Creation Date, and Total Amount. There are filters at the top for BILL ID, Tracking ID, and Creation Date. A message bar at the top right says 'BranchAgent'.

BILL ID	Customer Name	Tracking ID	Creation Date	Total Amount
90	Lê Văn Khách	CX-000001950	2026-01-27	\$4.527
37	Trần Thị Khách	CX-000001977	2026-01-22	\$14.947
233	Hoàng Mai Anh	CX-000003993	2026-01-14	\$16.567
179	Test Customer	CX-000002339	2026-01-12	\$4.03
337	Trần Thị Khách	CX-000002197	2026-01-12	\$10.847
349	Lê Văn Khách	CX-000002229	2026-01-09	\$13.16
282	Phạm Đức Thắng	CX-000001142	2026-01-08	\$3.352
251	Đỗ Thị Khách	CX-000002111	2026-01-07	\$14.267
273	Test Customer	CX-000002133	2026-01-06	\$11.192
222	Hoàng Văn Khách	CX-000002082	2026-01-06	\$17.715

## 5.5.5 Agent report



## 5.5.6 Agent notification

The screenshot shows the CourierExpress Branch Portal interface. The left sidebar contains navigation links: Dashboard, Shipments (with sub-options Create Shipment, Booked, Schedule pickup, In transit, Delivered, Return, Issue), Customers, Billing, Reports, Notifications (which is the active tab, highlighted in orange), and Logout. The main content area is titled "Notifications" and "Manage your notifications". A sub-section titled "My Notifications" displays a bell icon and the message "Không có thông báo" (No notifications). Below this, a smaller note says "Bạn sẽ nhận được thông báo khi có cập nhật mới". The top right corner shows the user status "Branch Agent" and a small profile icon.

## 5.6. Customer

### 5.6.1. Customer shipment

The screenshot shows the CourierExpress Logistics Pro Customer Portal interface. On the left is a sidebar with the CourierExpress logo and navigation links: Shipments (selected), Create Shipment, Booked, In transit, Delivered, Billing, Notifications, and Logout. The main area is titled "CREATE SHIPMENT". At the top right, it shows "Test Customer" and "CUSTOMER". Below the title, there are two tabs: "Input details" (selected) and "Quotation". A button bar at the bottom has "Fill Test Data" and "Reset".

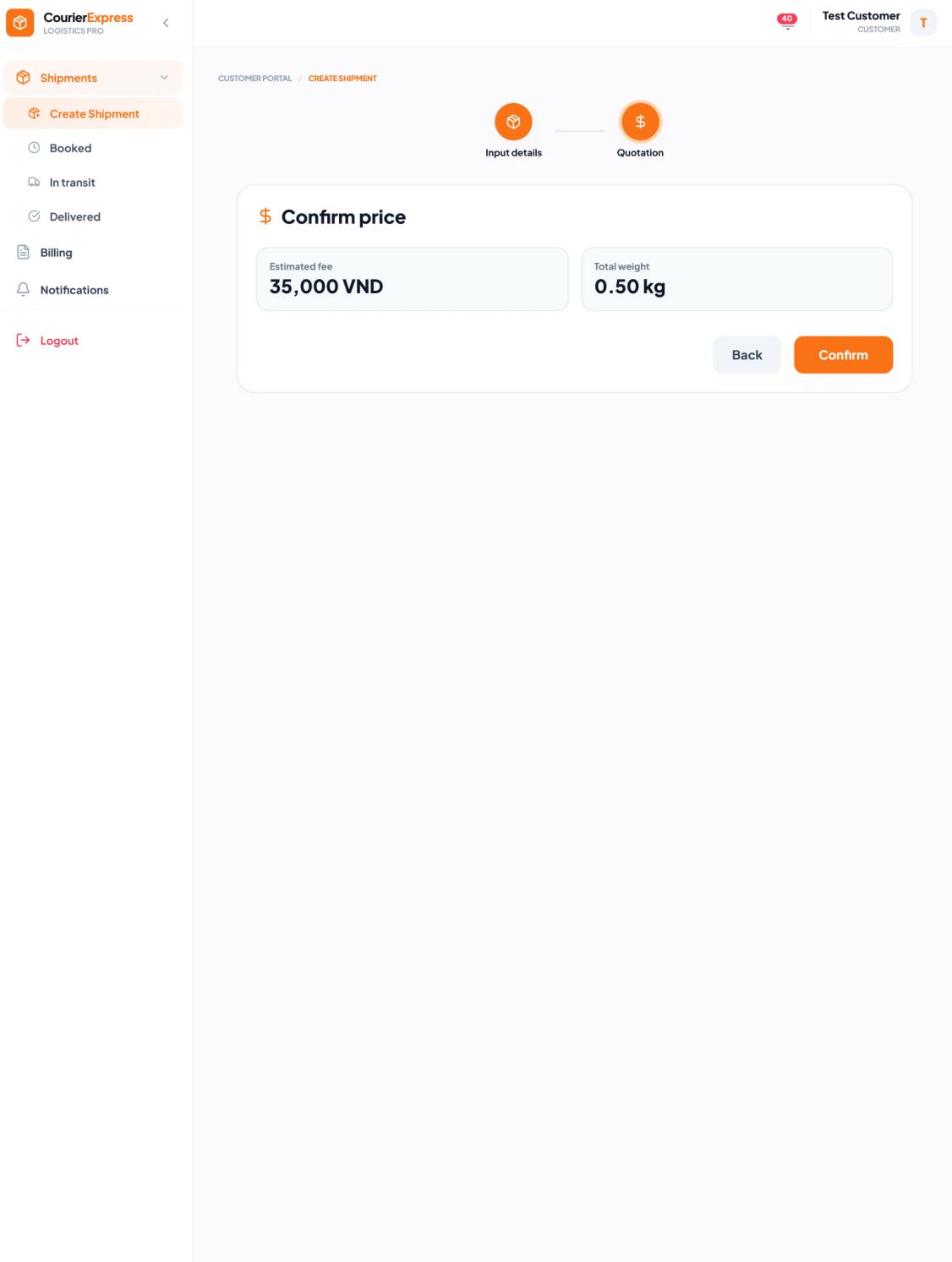
**Order information**

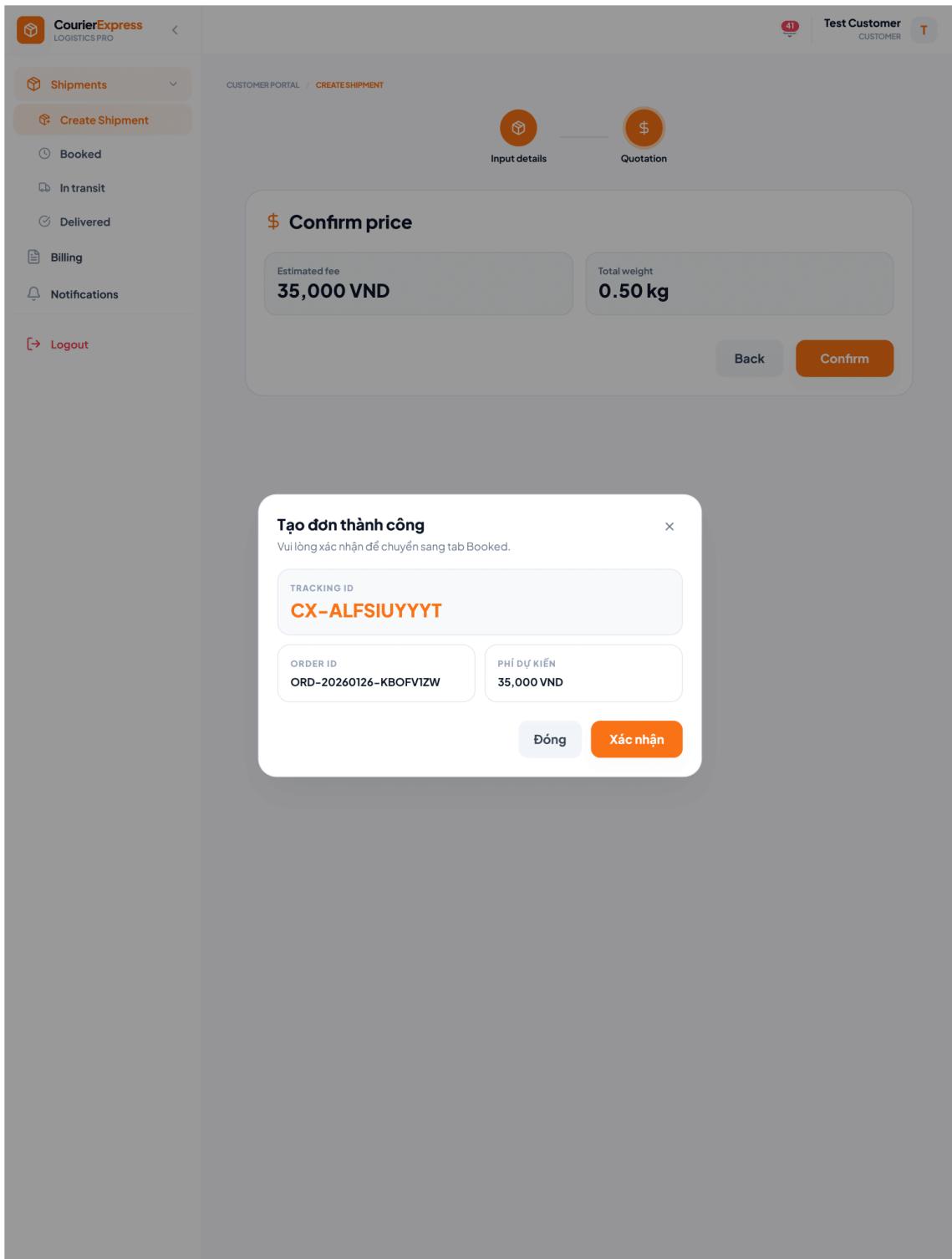
Sender	Receiver	
Nguyễn Văn An	Trần Thị Bình	
0987654321	0912345678	
Số 123, Đường ABC, Phường Dịch Vọng Hậu	456 Đường XYZ, Phường Bến Nghé	
Select province/city	Select province/city	
Select district	Select district	
Select ward	Select ward	
STANDARD	01/27/2026	Slot1
Cash	View only (no try)	Giao hàng giờ hành chính. Vui

**Items**

Item #1		
ITEM NAME	WEIGHT (G)	DECLARED VALUE (VND)
Sách Lập Trình Nâng Cao	500	150000
LENGTH (CM)	WIDTH (CM)	HEIGHT (CM)
20	15	5
Stationery and small office equipment		
<input type="button" value="Upload images"/> Max 4 Images per item		

**Continue**





**CourierExpress**  
Customer Portal

**Shipments**

- Create Shipment
- Booked**
- In transit
- Delivered
- Billing
- Notifications

**Logout**

**CUSTOMER PORTAL** **BOOKED SHIPMENTS**

### Booked Shipments

**FILTERS** ▾

Tracking ID  
CX-88...

**Reset All**

TRACKING ID	PICKUP ADDRESS	DELIVERY ADDRESS	Weight	Dimensions	Fee	Status
CX-0000100097	508 Hẻm Trần Hưng Đạo, Quận Ba Đình, Việt Nam	482 Hẻm Trần Hưng Đạo, Quận Ba Đình, Việt Nam	29.18kg	37.00 x 28.00 x 42.00 cm	\$101.60	BOOKED
CX-0000100066	327 Phố Lý Thường Kiệt, Quận Ba Đình, Việt Nam	96 Phố Nguyễn Huệ, Quận 3, Việt Nam	40.51kg	83.00 x 12.00 x 25.00 cm	\$114.65	BOOKED
CX-0000100258	484 Đường Lý Thường Kiệt, Quận Hoàn Kiếm, Việt Nam	489 Ngõ Trần Hưng Đạo, Quận Ba Đình, Việt Nam	36.85kg	96.00 x 15.00 x 54.00 cm	\$36.10	PRICE ESTIMATED
CX-0000100139	649 Đường Lý Thường Kiệt, Quận 3, Việt Nam	347 Ngõ Lê Lợi, Quận 3, Việt Nam	30.92kg	38.00 x 13.00 x 17.00 cm	\$108.17	PRICE ESTIMATED
CX-0000100191	703 Ngõ Hoàng Diệu, Quận Ba Đình, Việt Nam	858 Hẻm Lý Thường Kiệt, Quận 2, Đà Nẵng	42.14kg	28.00 x 19.00 x 16.00 cm	\$197.42	PRICE ESTIMATED
CX-0000100093	444 Phố Lê Duẩn, Quận 3, Việt Nam	53 Ngõ Hoàng Diệu, Quận Hải Châu, Việt Nam	44.37kg	48.00 x 43.00 x 58.00 cm	\$106.02	BOOKED
CX-0000100253	163 Hẻm Lý Thường Kiệt, Quận 1, Việt Nam	728 Đường Trần Hưng Đạo, Quận Hải Châu, Việt Nam	16.85kg	81.00 x 78.00 x 47.00 cm	\$125.57	PRICE ESTIMATED
CX-0000100196	777 Ngõ Lê Duẩn, Quận Ba Đình, Việt Nam	935 Đường Lê Duẩn, Quận 1, TP. Hồ Chí Minh	36.46kg	44.00 x 44.00 x 58.00 cm	\$62.42	PRICE ESTIMATED
CX-0000100033	158 Hẻm Nguyễn Huệ, Quận 2, TP. Hồ Chí Minh	562 Phố Võ Văn Tần, Quận 1, Việt Nam	41.31kg	56.00 x 63.00 x 25.00 cm	\$80.31	BOOKED
CX-0000100030	637 Đường Trần Hưng Đạo, Quận 1, Việt Nam	446 Phố Trần Hưng Đạo, Quận 1, Việt Nam	21.09kg	30.00 x 10.00 x 20.00 cm	\$145.63	BOOKED

Showing 1-10 of 101 shipments

1 2 3 ... 11 >

CourierExpress  
Customer Portal

**In-transit Shipments**

**FILTERS**

Tracking ID: CX-88...

Tracking ID	Pickup address	Delivery address	Weight	Dimensions	Fee	Status
CX-0000101446	176 Ngõ Nguyễn Huệ, Quận Hải Châu, TP. Hồ Chí Minh, Việt Nam	964 Phố Lý Thường Kiệt, Quận 1, Việt Nam	10.14kg	78.70 x 68.35 x 54.60 cm	\$4.73 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101441	793 Đường Lý Thường Kiệt, Quận Ba Đình, Hà Nội	291 Hẻm Võ Văn Tần, Quận Hoàn Kiếm, Việt Nam	46.11kg	82.00 x 14.00 x 25.00 cm	\$26.52 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101440	260 Phố Lê Duẩn, Quận 3, Việt Nam	365 Hẻm Lê Duẩn, Quận Hải Châu, Việt Nam	44.64kg	68.40 x 26.60 x 52.25 cm	\$17.15 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101512	288 Ngõ Lý Thường Kiệt, Quận Hoàn Kiếm, Việt Nam	194 Phố Nguyễn Huệ, Quận 3, Việt Nam	50.70kg	72.10 x 73.11 x 56.40 cm	\$19.33 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101406	500 Đường Lý Thường Kiệt, Quận 2, TP. Hồ Chí Minh, Việt Nam	708 Hẻm Điện Biên Phủ, Quận Hoàn Kiếm, Việt Nam	42.62kg	40.33 x 69.76 x 29.43 cm	\$24.63 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101456	699 Ngõ Lê Lợi, Quận Ba Đình, Việt Nam	735 Hẻm Trần Hưng Đạo, Quận Hoàn Kiếm, Hà Nội	12.60kg	17.10 x 52.25 x 33.30 cm	\$5.62 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101383	73 Đường Lê Lợi, Quận 1, Việt Nam	173 Hẻm Võ Văn Tần, Quận Hoàn Kiếm, Việt Nam	6.32kg	33.66 x 31.62 x 45.90 cm	\$3.36 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101485	264 Đường Hoàng Diệu, Quận Ba Đình, Việt Nam	490 Ngõ Lê Duẩn, Quận 3, Việt Nam	50.26kg	27.00 x 14.04 x 28.08 cm	\$19.17 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101493	980 Phố Nguyễn Huệ, Quận 2, Việt Nam	499 Phố Lê Duẩn, Quận 1, Hà Nội	1.73kg	48.00 x 75.00 x 51.00 cm	\$1.70 ONLINE	IN ORIGIN WAREHOUSE
CX-0000101473	745 Đường Trần Hưng Đạo, Quận Hải Châu, Đà Nẵng, Việt Nam	715 Phố Điện Biên Phủ, Quận 2, Việt Nam	30.14kg	35.52 x 28.80 x 50.68 cm	\$11.93 ONLINE	IN ORIGIN WAREHOUSE

Showing 1-10 of 54 shipments

**CourierExpress**  
Customer Portal

**Shipments**

- Create Shipment
- Booked
- In transit
- Delivered**
- Billing
- Notifications

**Logout**

**Delivered Shipments**

**FILTERS**

Tracking ID: CX-88...

**Reset All**

Tracking ID	Pickup address	Delivery address	Weight	Dimensions	Fee	Status
CX-0000101950	87 Đường Lý Thường Kiệt, Quận Hoàn Kiếm, Việt Nam	41 Hẻm Võ Văn Tân, Quận Ba Đình, Việt Nam	15.13kg	35.97 x 74.12 x 62.13 cm	\$6.53 CAD	DELIVERED
CX-0000102069	826 Hẻm Trần Hưng Đạo, Quận Ba Đình, Việt Nam	58 Ngõ Trần Hưng Đạo, Quận 2, Hà Nội	40.42kg	32.00 x 52.00 x 16.00 cm	\$15.63 CAD	DELIVERED
CX-0000101928	680 Ngõ Hoàng Diệu, Quận 3, Việt Nam	702 Phố Điện Biên Phủ, Quận Hoàn Kiếm, Việt Nam	49.07kg	77.25 x 63.54 x 25.75 cm	\$13.54 CAD	DELIVERED
CX-0000101898	302 Đường Lê Duẩn, Quận Hoàn Kiếm, Hà Nội	190 Hẻm Lê Duẩn, Quận 2, Hà Nội	56.75kg	63.00 x 38.83 x 16.80 cm	\$15.54 CAD	DELIVERED
CX-0000102106	815 Hẻm Lê Duẩn, Quận Hai Chùa, Việt Nam	140 Hẻm Nguyễn Huệ, Quận Ba Đình, Việt Nam	22.10kg	61.95 x 55.70 x 12.60 cm	\$13.55 CAD	DELIVERED
CX-0000102051	127 Hẻm Nguyễn Huệ, Quận Ba Đình, Việt Nam	16 Ngõ Lý Thường Kiệt, Quận 1, Việt Nam	32.34kg	75.46 x 68.80 x 30.38 cm	\$12.72 CAD	DELIVERED
CX-0000102143	534 Ngõ Trần Hưng Đạo, Quận 2, Đà Nẵng	541 Hẻm Lê Lợi, Quận Hoàn Kiếm, Việt Nam	1.42kg	50.60 x 16.50 x 41.80 cm	\$1.59 CAD	DELIVERED
CX-0000102162	874 Ngõ Hoàng Diệu, Quận 1, Việt Nam	483 Phố Hoàng Diệu, Quận Hoàn Kiếm, Việt Nam	46.07kg	15.52 x 66.93 x 29.30 cm	\$12.76 CAD	DELIVERED
CX-0000102054	446 Hẻm Lê Duẩn, Quận 2, Hà Nội	453 Đường Hoàng Diệu, Quận Hoàn Kiếm, Việt Nam	59.14kg	60.40 x 55.55 x 7.07 cm	\$22.37 CAD	DELIVERED
CX-0000102207	386 Hẻm Nguyễn Huệ, Quận 2, Việt Nam	52 Đường Trần Hưng Đạo, Quận Ba Đình, Việt Nam	21.38kg	101.20 x 58.30 x 39.40 cm	\$8.78 CAD	DELIVERED

Showing 1-10 of 143 shipments

## 5.6.2. Customer billing

The screenshot shows the CourierExpress Logistics Pro Customer Portal. The left sidebar includes links for Shipments, Create Shipment, Booked, In transit, Delivered, and Billing (which is selected). Other links include Notifications and Logout. The main content area is titled 'CUSTOMER PORTAL / BILLING'. It features a 'FILTERS' section with dropdowns for Bill ID (# BILL-...), Tracking ID (CX-...), and Creation Date (mm/dd/yyyy). A 'Reset All' button is also present. Below this is a table listing 30 bills. The columns are: # Bill ID, Customer Name, Tracking ID, Creation Date, and Total Amount. The table shows various bill IDs, customer names all listed as 'Test Customer', tracking IDs starting with CX-, creation dates ranging from 2025-12-05 to 2026-01-19, and total amounts ranging from \$4.131 to \$25.925. At the bottom, it says 'Showing 1-10 of 30 bills' and has navigation buttons for pages 1, 2, 3, and >.

# Bill ID	Customer Name	Tracking ID	Creation Date	Total Amount
86	Test Customer	CX-00001946	2026-01-19	\$25.925
240	Test Customer	CX-00002100	2026-01-19	\$6.595
179	Test Customer	CX-00002039	2026-01-12	\$6.03
94	Test Customer	CX-00001954	2026-01-11	\$5.645
273	Test Customer	CX-00002133	2026-01-06	\$11.192
376	Test Customer	CX-00002236	2026-01-05	\$5.27
284	Test Customer	CX-00002144	2025-12-25	\$18.587
71	Test Customer	CX-00001931	2025-12-16	\$12.514
84	Test Customer	CX-00001944	2025-12-06	\$14.67
99	Test Customer	CX-00001959	2025-12-05	\$4.131

### 5.6.3. Customer notification

The screenshot shows the CourierExpress Logistics Pro Customer Portal interface. At the top right, it displays "Test Customer" and "CUSTOMER". On the left, there's a sidebar with "Shipments" (Create Shipment, Booked, In transit, Delivered), "Billing", and "Notifications" (selected). Below the sidebar is the main content area titled "Notifications" with the sub-section "My Notifications" and a count of "40 unread". The notifications list includes the following entries:

- Đơn hàng đã được phân bổ chi nhánh [shipment\_status:BRANCH\_ASSIGNED:266]**  
Đơn hàng CX-0000100266 đã được phân bổ đến chi nhánh. Vui lòng chờ nhận hàng.  
⌚ 2 days ago shipment #266
- Giao hàng thành công [shipment\_status:DELIVERED\_SUCCESS:1946]**  
Đơn hàng CX-0000101946 đã được giao thành công. Cảm ơn bạn đã sử dụng dịch vụ!  
⌚ 6 days ago shipment #1946
- Giao hàng thành công [shipment\_status:DELIVERED\_SUCCESS:2100]**  
Đơn hàng CX-0000102100 đã được giao thành công. Cảm ơn bạn đã sử dụng dịch vụ!  
⌚ 19/01/2026 shipment #2100
- Hàng đang được giao [shipment\_status:OUT\_FOR\_DELIVERY:1759]**  
Đơn hàng CX-0000101759 đang được giao đến bạn. Vui lòng chuẩn bị nhận hàng.  
⌚ 18/01/2026 shipment #1759
- Đơn hàng đã được phân bổ chi nhánh [shipment\_status:BRANCH\_ASSIGNED:336]**  
Đơn hàng CX-0000100336 đã được phân bổ đến chi nhánh. Vui lòng chờ nhận hàng.  
⌚ 17/01/2026 shipment #336
- Đơn hàng được tạo yêu cầu trả hàng [shipment\_status:RETURN\_CREATED:2658]**  
Đơn hàng CX-0000102658 đã được tạo yêu cầu trả hàng.  
⌚ 15/01/2026 shipment #2658
- Hàng đang trong quá trình vận chuyển [shipment\_status:IN\_TRANSIT:1635]**  
Đơn hàng CX-0000101635 đang trong quá trình vận chuyển đến điểm đến.  
⌚ 12/01/2026 shipment #1635
- Giao hàng thành công [shipment\_status:DELIVERED\_SUCCESS:2039]**  
Đơn hàng CX-0000102039 đã được giao thành công. Cảm ơn bạn đã sử dụng dịch vụ!  
⌚ 12/01/2026 shipment #2039
- Hàng đã được lấy thành công [shipment\_status:PICKUP\_COMPLETED:1240]**  
Đơn hàng CX-0000101240 đã được lấy thành công và đang được vận chuyển.  
⌚ 12/01/2026 shipment #1240
- Giao hàng thành công [shipment\_status:DELIVERED\_SUCCESS:1954]**  
Đơn hàng CX-0000101954 đã được giao thành công. Cảm ơn bạn đã sử dụng dịch vụ!  
⌚ 12/01/2026 shipment #1954
- Hàng đang được giao [shipment\_status:OUT\_FOR\_DELIVERY:1779]**  
Đơn hàng CX-0000101779 đang được giao đến bạn. Vui lòng chuẩn bị nhận hàng.  
⌚ 12/01/2026 shipment #1779
- Hàng đang trong quá trình vận chuyển [shipment\_status:IN\_TRANSIT:1634]**  
Đơn hàng CX-0000101634 đang trong quá trình vận chuyển đến điểm đến.  
⌚ 08/01/2026 shipment #1634
- Giao hàng thành công [shipment\_status:DELIVERED\_SUCCESS:2133]**  
Đơn hàng CX-0000102133 đã được giao thành công. Cảm ơn bạn đã sử dụng dịch vụ!  
⌚ 06/01/2026 shipment #2133

## 5.6.4. Customer profile

The screenshot shows the CourierExpress Logistics PRO customer portal interface. On the left, there is a sidebar with the following navigation options:

- Shipments
- Create Shipment
- Booked
- In transit
- Delivered
- Billing
- Notifications
- Logout

The main content area is titled "PROFILE". It displays the "Test Customer" profile, which includes the following information:

- Test Customer** (Profile icon)
- Email: `customer@example.com`
- Status: CUSTOMER (blue badge) ACTIVE (green badge)
- Full Name: `Test Customer`
- Email Address: `customer@example.com`
- Phone Number: `Not provided`
- City: `Not provided`
- Address: `Not provided`

A prominent orange button at the top right of the profile section says "Update Profile".

## 6. Task sheet

Member	Task	Description	Deadline frontend	Deadline backend	Status
Nguyễn Hoàng Hiệp	Frontend + Backend	Create shipment (admin, agent, customer)	18/1/2026	26/1/2026	done
		Manage shipments (admin, agent, customer)			done
		Notification (admin, agent, customer)			done
Lê Hồng Đức Plinl	Frontend + Backend	Dashboard (admin, agent)	18/1/2026	26/1/2026	done
		Customer (admin, agent)			done
		Reports (admin, agent)			done
Phạm Kim Nghi	Frontend + Backend	Login + Sign up page (customer, admin, agent role)	18/1/2026	26/1/2026	done
		Billing (admin, agent, customer)			done
Đào Nguyễn Phúc	Frontend + Backend	Landing page	18/1/2026	26/1/2026	done
		Profile (admin, agent, customer)			done
		Add branch + Branch management (admin)			done