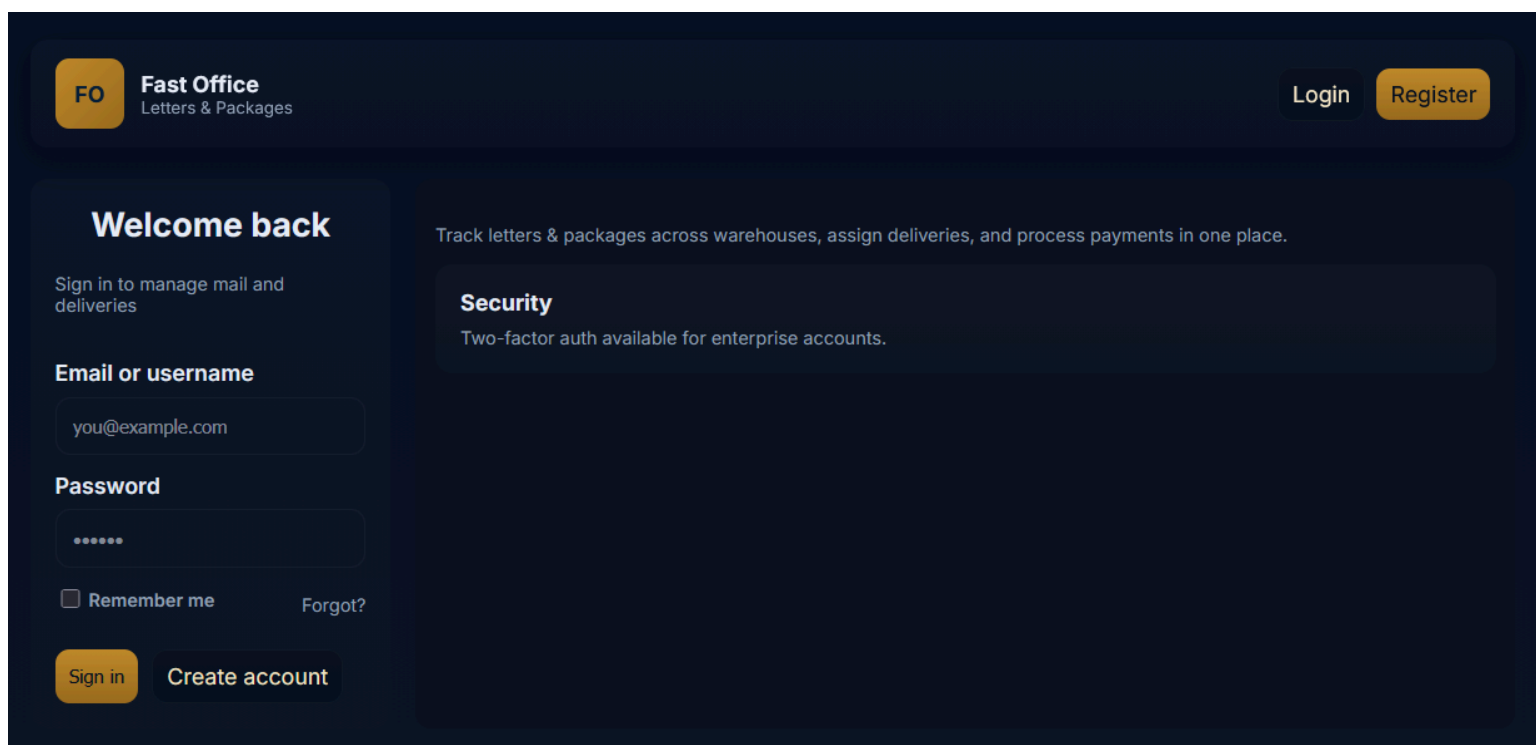


Ficha 10 - Desenvolvimento do projeto prático

GITHUB REPO: https://github.com/Diego-Alonso-05/Post_Office.git

(a) Implemente em Django o protótipo de aplicação. Nesta implementação deve ser possível navegar-se na aplicação como se esta já estivesse na totalidade implementada.

Login



The image shows a dark-themed web interface for 'Fast Office'. At the top left is a logo with 'FO' and the text 'Fast Office Letters & Packages'. At the top right are 'Login' and 'Register' buttons. The main content area is split into two columns. The left column is titled 'Welcome back' and contains a sign-in form with fields for 'Email or username' (containing 'you@example.com') and 'Password' (containing six dots). Below the password field are checkboxes for 'Remember me' and a link for 'Forgot?'. At the bottom of this column are 'Sign in' and 'Create account' buttons. The right column contains a description: 'Track letters & packages across warehouses, assign deliveries, and process payments in one place.' Below this is a 'Security' section stating 'Two-factor auth available for enterprise accounts.'

Register

FO**Fast Office**
Letters & Packages

LoginRegister

Create an account

Sign up as Client, Driver, or Employee.

Full name

Role

Client

Email

Password

Confirm password

Create accountBack to login

Logged in (dashboard)

FO**Fast Office**
Letters & Packages

DashboardProfileLogout

Client

Profile

My Deliveries

Total Mail

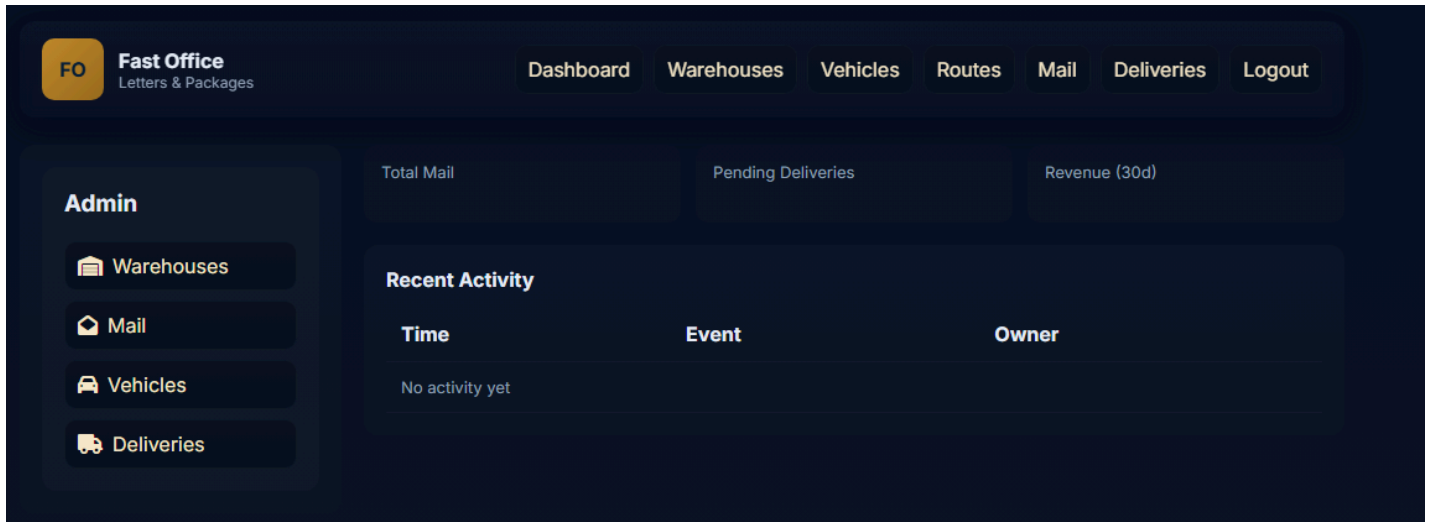
Pending Deliveries

Revenue (30d)

Recent Activity

Time	Event	Owner
No activity yet		

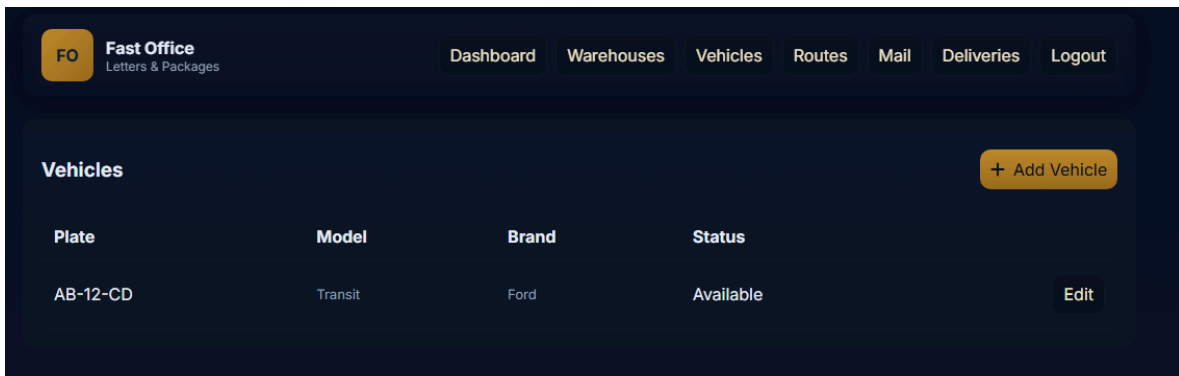
Admin (dashboard)



The screenshot shows the 'Fast Office' admin dashboard. The header includes the logo 'FO Fast Office Letters & Packages' and a navigation menu with links: Dashboard, Warehouses, Vehicles, Routes, Mail, Deliveries, and Logout. On the left, an 'Admin' sidebar contains links for Warehouses, Mail, Vehicles, and Deliveries. The main content area features three summary cards: 'Total Mail', 'Pending Deliveries', and 'Revenue (30d)'. Below these is a 'Recent Activity' section with a table header: Time, Event, and Owner. The table currently shows 'No activity yet'.

Time	Event	Owner
No activity yet		

Admin - Vehicle Management



The screenshot shows the 'Fast Office' vehicle management interface. The header is identical to the dashboard. The main content area is titled 'Vehicles' and includes a '+ Add Vehicle' button. Below is a table with columns: Plate, Model, Brand, and Status. One vehicle is listed with the plate 'AB-12-CD', model 'Transit', brand 'Ford', and status 'Available'. An 'Edit' button is located to the right of the vehicle entry.

Plate	Model	Brand	Status
AB-12-CD	Transit	Ford	Available

Admin - Vehicle Management (add vehicle)

FO

Fast Office
Letters & Packages

Dashboard

Warehouses

Vehicles

Mail

Deliveries

Logout

Add Vehicle

Plate Number:

Model:

Assigned driver:

Status:

Active

Save Vehicle

Warehouse Management (Admin)

FO

Fast Office
Letters & Packages

Warehouses

Vehicles

Mail

Deliveries

Profile

Login

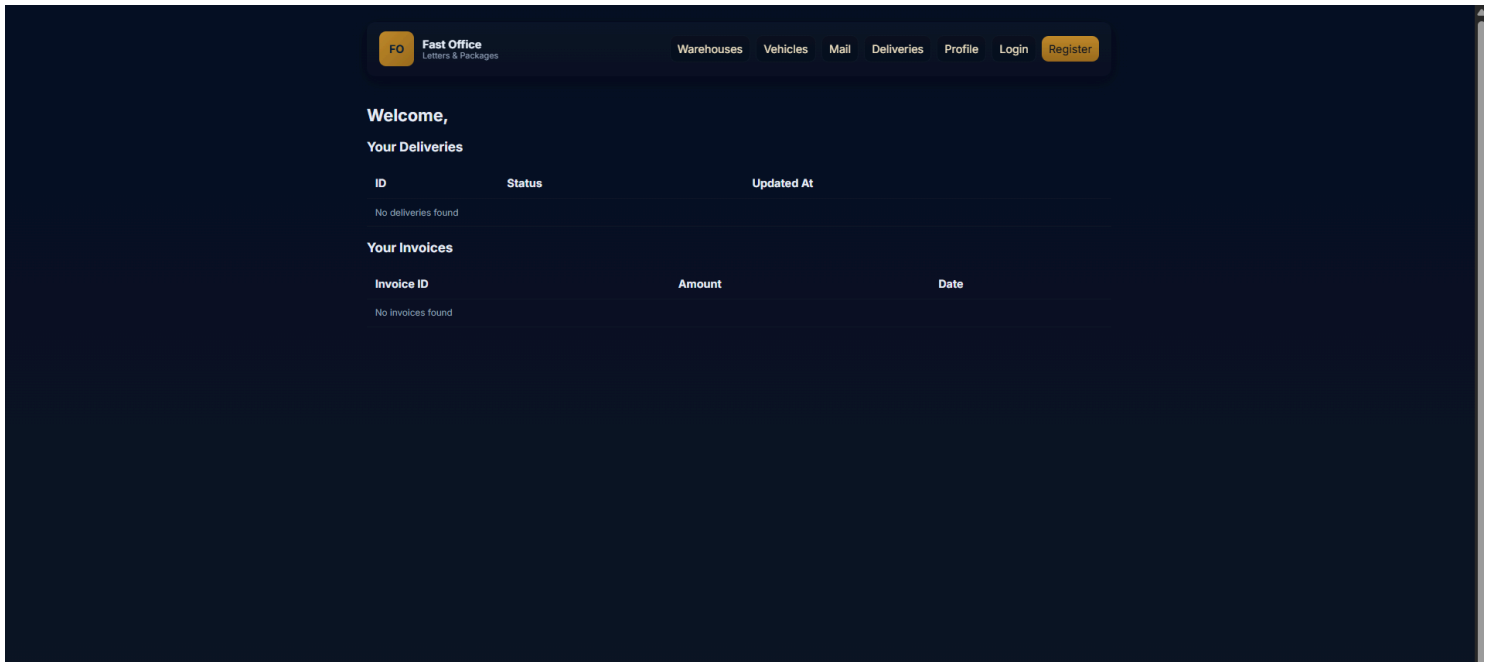
Register

Warehouses

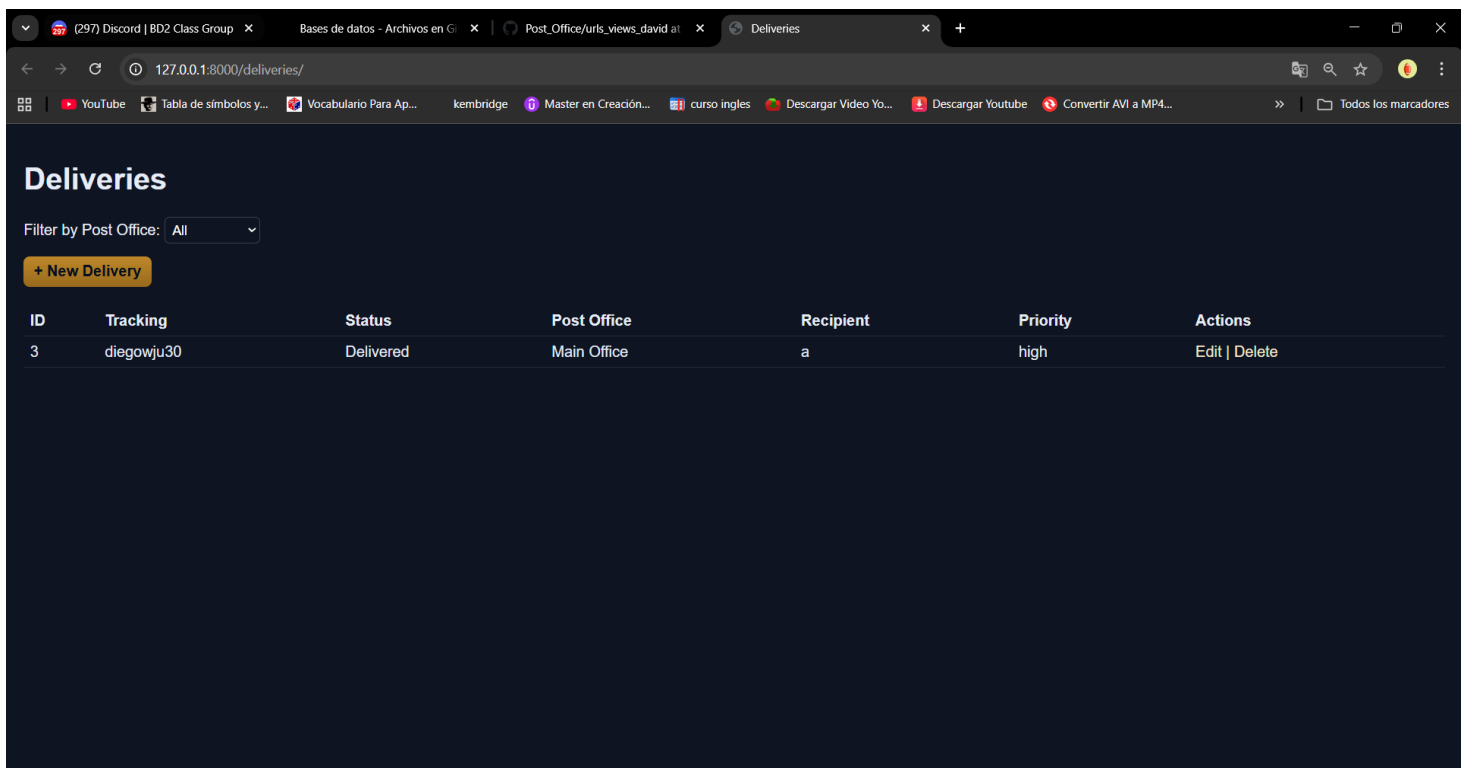
+ New Warehouse

Name	Contact	Address	Opening Time	Closing Time	Max Capacity	Actions
PO1	1234	1234567890	12:30	22:40	34342	<div>EditDelete</div>

Delivery Management - Deliveries List



Delivery Management - Deliveries List



Delivery Management - Deliveries Create

The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/deliveries/create/`. The page title is "New Delivery". The form contains the following fields:

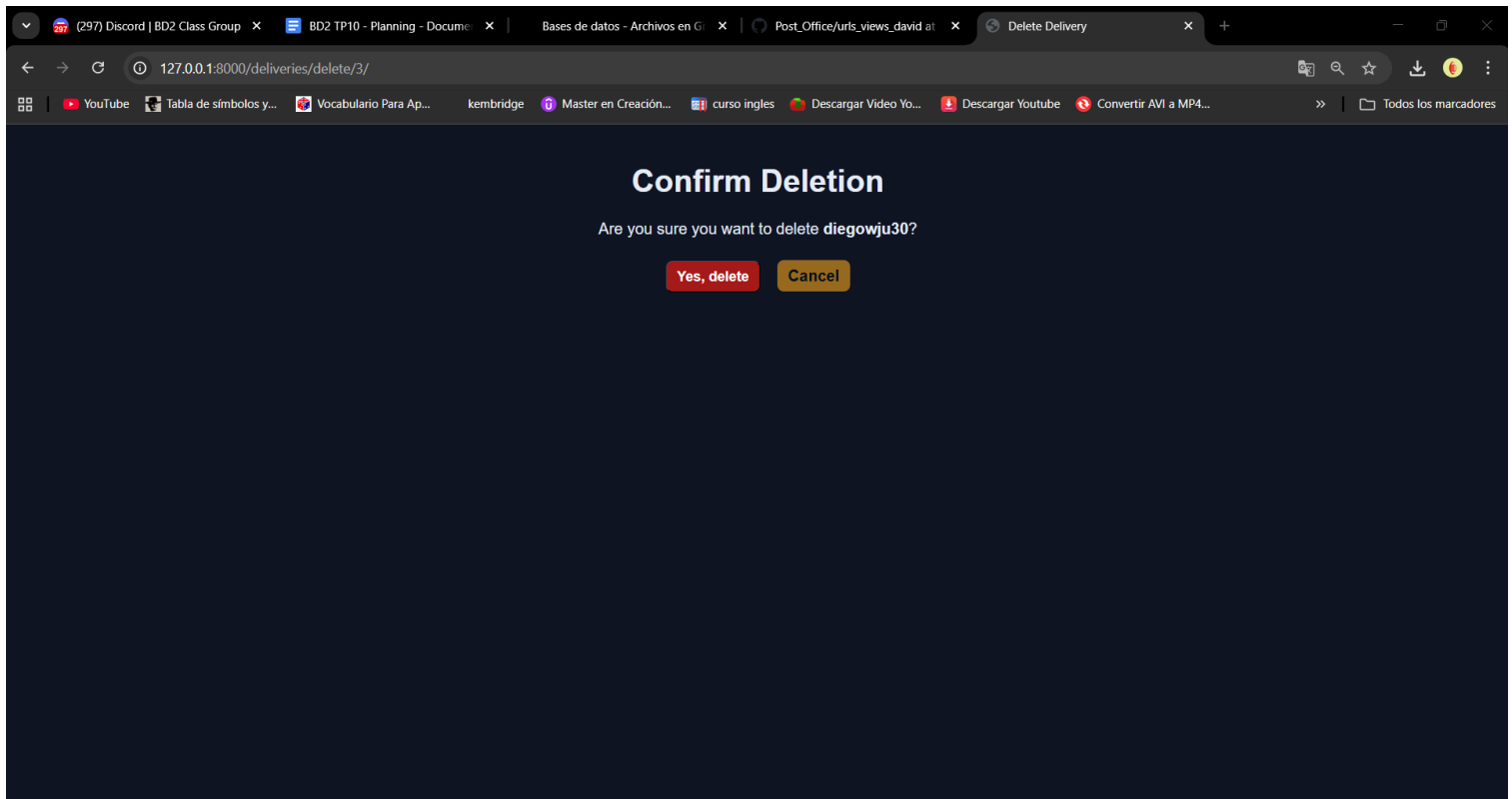
- Tracking number:** A text input field.
- Description:** A large text area.
- Sender name:** A text input field.
- Sender address:** A large text area.

Delivery Management - Deliveries Edit

The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/deliveries/update/3/`. The page title is "Edit Delivery". The form contains the following fields:

- Tracking number:** A text input field containing the value `dlegowju30`.
- Description:** A large text area containing the value `2a`.
- Sender name:** A text input field containing the value `a`.
- Sender address:** A large text area containing the value `a`.

Delivery Management - Deliveries Delete



Routes - Admin

Fast Office Letters & Packages							
Dashboard Warehouses Vehicles Routes Mail Deliveries Logout							
Routes							
ID	Description	Status	Vehicle	Driver	Origin	Destination	
2001	Lisbon North deliveries	NotStarted	4001	2	Central Lisbon Post Office	North Zone Distribution Center	View

Client - Deliveries

FO

Fast Office

Letters & Packages

Dashboard

Profile

Logout

Deliveries

Tracking

Driver

Vehicle

Delivery date

Status

TRK123456789

View

Edit

Client - Deliveries

FO

Fast Office

Letters & Packages

Dashboard

Profile

Logout

Deliveries

Tracking

Driver

Vehicle

Delivery date

Status

TRK123456789

View

Edit

Invoices.html

FO

Fast Office

Letters & Packages

Dashboard

Profile

Invoices

Logout

Invoices

Date	Client	Status	Amount (€)	Payment Method	Address
2025-11-01 09:45	admin	Pending	125.00	Transfer	Rua das Flores, Braga
2025-10-28 10:30	admin	Paid	32.50	Cash	Avenida Nova, Lisbon
2025-10-25 14:00	admin	Pending	45.75	Card	Rua Central, Porto
2025-10-22 17:10	admin	Paid	15.20	Card	Travessa do Sol, Coimbra

(b) Crie na base de dados todos os utilizadores (utilizadores do SGBD) necessários à aplicação.

localhost:27017 > PostOffice_Proj_MDB > users Open MongoDB shell

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#) Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 25 1 - 4 of 4 < > ≡ 🔍 🗑️

```
{
  "_id": 1,
  "username": "john_doe",
  "psswd_hash": "hashed_password",
  "name": "John Doe",
  "contact": "+123456789",
  "address": "123 Main St, City",
  "email": "john@example.com",
  "created_at": "2025-11-01T12:00:00Z",
  "updated_at": "2025-11-01T12:00:00Z",
  "role": "client",
  "tax_id": "TAX123456"
}
```

```
{
  "_id": 2,
  "username": "driver_mike",
  "psswd_hash": "hashed_password",
  "name": "Mike Driver",
  "contact": "+987654321",
  "address": "456 Elm St, City",
  "email": "mike@po.com",
  "created_at": "2025-10-30T09:00:00Z",
  "updated_at": "2025-11-01T10:00:00Z",
  "role": "driver",
  "employee": {
    "position": "Driver",
    "schedule": "08:00-16:00",
    "wage": 15.5,
    "is_active": true,
    "hire_date": "2023-03-15"
  },
  "driver_info": {
    "license_number": "DL-987654",
    "license_category": "C",
    "license_expiry_date": "2028-05-20",
    "driving_experience_years": 7,
    "driver_status": "Available"
  }
}
```

```
{
  "_id": 3,
  "username": "admin",
  "psswd_hash": "admin",
  "name": "Eu",
  "contact": "+123456789",
  "address": "123 Main St, City",
  "email": "john@example.com",
  "created_at": "2025-11-01T12:00:00Z",
  "updated_at": "2025-11-01T12:00:00Z",
  "role": "admin",
  "tax_id": "TAX123456"
}
```

```
{
  "_id": 4,
  "username": "staff_joe",
  "psswd_hash": "hashed_password",
  "name": "Joe Staff",
  "contact": "+911111111",
  "address": "654 Rio Sul, City",
  "email": "joe@po.com",
  "created_at": "2025-10-30T09:00:00Z",
  "updated_at": "2025-11-01T10:00:00Z",
  "role": "staff",
  "employee": {
    "position": "Staff",
    "schedule": "08:00-16:00",
    "wage": 15.5,
    "is_active": true,
    "hire_date": "2023-03-15"
  },
  "staff_info": {
    "department": "Customer_Service"
  }
}
```

(c) Identifique e caracterize as situações em que aplicação irá importar ou exportar dados em Json

Exportação de Dados

Deliveries and Invoices: INVOICE, DELIVERY, CLIENT , to accounting and external audit systems , ensure traceability and financial consistency.

Clients data: CLIENT, INVOICE , enable personalized campaigns, loyalty programs, and customer service improvement.

Operational Data: ROUTE, EMPLOYEE_DRIVER, VEHICLE, POST_OFFICE_STORE . to logistics monitoring systems , support decision-making and performance optimization.

Backup and NoSQL Storage: All core entities (USER, CLIENT, INVOICE, DELIVERY, ROUTE, etc.) to NoSQL databases in JSON format ensure redundancy and flexibility for large-scale data analysis.

Performance Reports: ROUTE, VEHICLE, EMPLOYEE_DRIVER, INVOICE , to analytics dashboards (Power BI, Tableau, Grafana) , provide productivity and service quality indicators.

Logs and Audits: USER, EMPLOYEE, INVOICE , to external JSON log files , maintain activity records and ensure legal compliance.

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