Food delivery management system (Karen Urbano)

The proposed system is a food delivery management platform that connects the gastronomic offer of restaurants with consumers, aiming to address potential issues that may arise in such an application, such as customer dissatisfaction with the delivered food or delays in the delivery process.

The system allows consumers to view the offer from different restaurants, see dish details, rate restaurants, filter results, save favorites, add to the shopping cart, apply discount coupons, pay for orders, and track their order status. In addition, consumers can file a claim against a restaurant or delivery person, and confirm the status of their claim.

Restaurant owners can create a restaurant, manage their personal and restaurant information, publish and edit its menu, receive orders, view order details, cancel orders, view sales and profits, file a claim against a delivery person, choose their favorite delivery persons as well as block them.

Delivery persons can view nearby orders, choose a shipment, and view their shipment history and their earnings.

Customer service personnel is the person in charge of resolving conflicts between the parties involved, can view the details of the claims assigned to them, send notifications to users, and update the status of the claims.

The platform administrator can manage content related to users, restaurants, and dishes, manage categories and attributes, view graphic reports, view earnings by period and region, send notifications, and manage the status of claims made by users.

1. FUNCTIONS AND USES CASES

CONSUMER

Register/Login: the consumer can register with the consumer role and log in with their credentials.

Manage your personal information: Consumers can save information on the platform such as basic data, location, telephone numbers, and credit cards, and set

preferences, such as preferred address and preferred means of payment. Also can change their password, email, phone, address, and status (unsubscribe).

Save preferences/restrictions: Consumers can establish what type of meals they prefer or the type of ingredients they do not want in their food, in this way the platform shows them the offer that meets their requirements.

See the offer: Consumers can see all the gastronomic offers offered by the different restaurants near their location.

View Dish Detail: Consumers can have a detailed description of a dish, including its ingredients and an estimated delivery time to their location.

See opinions: Consumers can see the opinions other consumers have left for a certain restaurant.

Rate restaurant: Consumers can rate the experience they have had being a customer of a certain restaurant.

Filter Results: Consumers can filter search results according to their preferences.

Save favorites: Consumers can mark a dish or a restaurant as a favorite.

Add to Shopping Cart: Consumers can add one or many dishes to the shopping cart that can generate orders to one or many restaurants.

Discount coupon: Consumers can obtain a discount coupon in a certain restaurant and use it during the purchase.

Pay purchase: Consumers can pay for their orders by different kinds of payment.

View order status: Consumers can see if their order has been dispatched and where it is on the way.

File a claim: Consumers can file a claim with the platform for the poor service of a restaurant or a delivery person.

Confirm claim status: Consumers can notify whether or not their claim has been completed satisfactorily.

Register on the platform: Restaurant owners can register and log in with the merchant role.

Manage their personal information: Restaurant owners can save information on the platform such as their basic data, location, telephone numbers, and ID. They can also change their password, email, phone, address, and status (unsubscribe).

Manage their restaurant information: Restaurant owners can create a restaurant, and add important information such as contact information, location, history, and business identification. They can also edit some of this information and inactivate the operation in the restaurant platform they created.

Manage their menu: Restaurant owners can publish dishes, as well as edit their description, price, and quantity available or change its status to inactivate a publication as long as it does not have pending orders for delivery.

Receive orders: Restaurant owners can receive orders from their customers.

View order information: Restaurant owners can see the list of orders that have been made to their restaurant, as well as detailed information on each order such as its status, delivery times, delivery person, and complaints if any.

Cancel an order: Restaurant owners can cancel an order if they have run out of stock.

Sales Dashboard: Restaurant owners can view detailed information on their sales and profits.

File a claim: Restaurant owners can file a complaint or claim against a delivery person.

Choose favorite couriers: Restaurant owners can choose the couriers who have provided the best services to give them priority when notifying when an order must be sent.

Block delivery drivers: Restaurant owners can decide not to use the services of a specific delivery driver.

Login: The administrator can log in with her credentials.

Change Password: The administrator can change your password.

Manage content: The administrator can create, edit and delete information related to users, restaurants, and dishes on the platform.

Manage Categories and Attributes: The administrator can create, edit and delete categories, subcategories, and attributes.

Reports: The administrator can see graphic pieces of all the information registered in the platform such as consumer trends, sales history, restaurants with a bad reputation, most sought-after dishes, total canceled orders, number of accounts created or deleted, and other reports of interest.

Earnings by Period: The administrator can view an earnings report categorized by periods and regions.

Send Notifications: The administrator can send notifications to the different types of users registered on the platform in a group or individually.

Claims status: The administrator can see the status and detail of all the claims made by the users.

DELIVERY PERSON

Registration: A delivery person can log in to the platform with the courier role.

Manage their personal information: A delivery person can save information on the platform such as their basic data, location, telephone numbers, and ID. They can also change their password, email, phone, address, and status (unsubscribe).

Nearby Orders: A delivery person can view orders near their location.

Assign a shipment: A delivery person can choose the shipment that they will make as long as they do not have any restrictions from the restaurant.

List of shipments made: A delivery person can see the history of the orders they have delivered.

Customer service

Login: A customer service person can log in with the credentials that have been assigned to them.
Claims detail: A customer service person has access to detailed information on the claims that have been assigned to them.

Report Claim Status: A customer service person can change the status of a claim.

2. DESIGN OF ENTITIES, RELATIONSHIPS AND THEIR ATTRIBUTES.

The relationships within the system involve a series of interactions between the different roles. Consumers can place orders with restaurants, and delivery persons can deliver them. The platform administrator manages the platform and the data of all users, and customer service personnel handle claims made by consumers or restaurants. Restaurant owners can choose their favorite couriers or block those with poor performance. All users have access to their respective dashboards where they can manage their information and interact with the platform. The administrator has overall control of the platform and is responsible for managing and overseeing all activities that take place.

Links to the detailed design created in lucid.app:
https://lucid.app/documents/view/12ec13b7-3996-4bf5-9c6d-b49a18a9b6e1

https://lucid.app/publicSegments/view/35e55fd9-749d-421a-8c70-8adcef6c294b
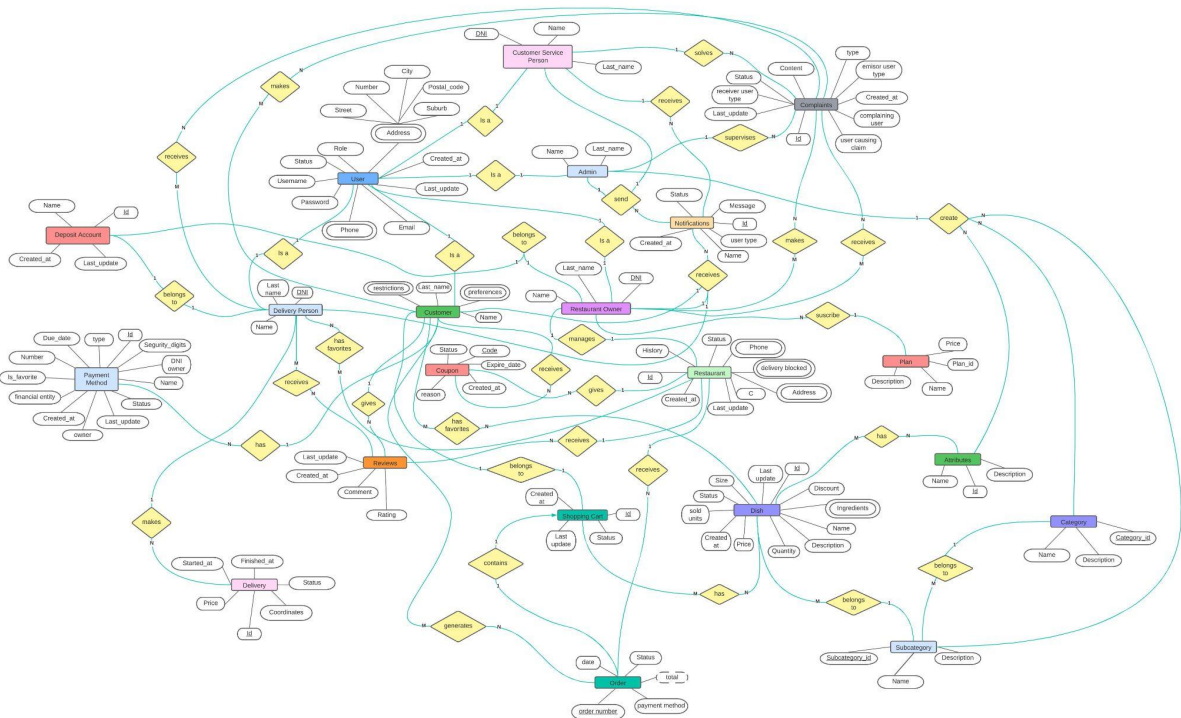
3. ER DIAGRAM

Links to lucid.app:
https://lucid.app/lucidchart/907dacc6-601c-43c1-887f-51b7b0caa392/edit?viewport_loc=891%2C-190%2C2385%2C786%2C0_0&invitationId=inv_293c5295-61ae-4ade-8973-cefab506b59b

https://lucid.app/publicSegments/view/b0f032b4-885c-4b3b-b0da-bc29701f16df

Categories

PK	id	varchar
	name	varchar
	description	varchar
	Image	varchar

Photos

PK	id	varchar
FK	dish_id	varchar
	name	varchar
	url	varchar

Reviews

PK	id	varchar
FK	emisor_id	varchar
FK	receiver_id	varchar
	emisor_role	tinyint
	receiver_role	tinyint
	rating	tinyint
	content	varchar
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP

Complaints

PK	id	varchar
FK	emisor_id	varchar
FK	receiver_id	varchar
	emisor_user_type	tinyint
	receiver_user_type	tinyint
	type	varchar
	content	varchar
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP

Notifications

PK	id	varchar
FK	receiver_id	varchar
FK	admin_id	varchar
	receiver_role	tinyint
	name	varchar
	message	varchar
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP

Subcategories

PK	id	varchar
FK	category_id	varchar
	name	varchar
	description	varchar
	Image	varchar

Attributes

PK	id	varchar
	name	varchar
	description	varchar

Dishes_attributes

PK	id	varchar
FK	dish_id	varchar
FK	attribute_id	varchar

Dishes

PK	id	varchar
FK	subcategpry_id	varchar
FK	restaurant_id	varchar
	name	varchar
	description	varchar
	ingredients	varchar
	price	decimal
	discount	float
	quantity	int
	size	varchar
	created_at	DATETIME
	last_update	TIMESTAMP
	sold_units	varchar
	status	tinyint

Restaurants

PK	id	varchar
FK	created_by	varchar
	name	varchar
	history	varchar
	photo	varchar
	logo	varchar
	email	varchar
	delivery_blocked	Tipo
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP

Addresses

PK	id	varchar
FK	user_id	varchar
FK	city_id	varchar
FK	restaurant_id	varchar
	address	varchar
	suburb	varchar
	type	varchar

Countries

PK	id	varchar
	name	varchar

Cities

PK	id	varchar
FK	country_id	varchar
	name	varchar

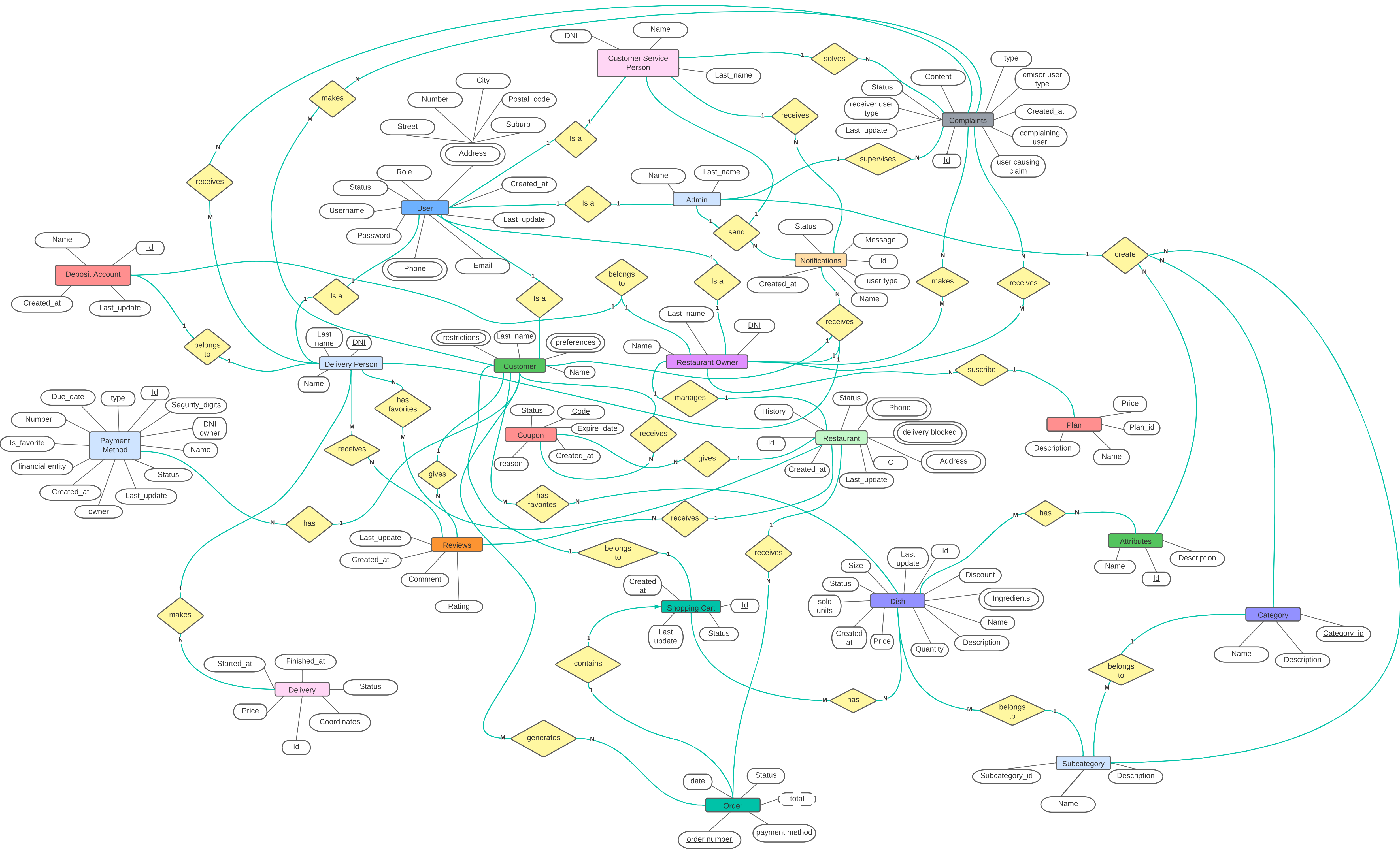**Phones**

PK	id	varchar
FK	user_id	varchar
FK	restaurant_id	varchar
	phone	varchar
	type	varchar

Coupons

PK	id	varchar
FK	consumer_id	varchar
FK	resttaurant_id	varchar
	code	varchar
	reason	varchar
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP

Users

PK	username	varchar
FK	plan_id	varchar
	password	varchar
	name	varchar
	last_name	varchar
	email	varchar
	role	tinyint
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP
	DNI	varchar
	food_preferences	varchar
	food_restrictions	varchar

Plans

PK	id	varchar
	name	varchar
	description	varchar
	price	decimal
	Image	varchar

Deposit_accounts

PK	id	varchar
FK	user_id	varchar
	number	int
	financial_entity	varchar
	name	varchar
	created_at	DATETIME
	last_update	TIMESTAMP
	type	varchar

Dishes_in_cart

PK	id	varchar
FK	cart_id	varchar
FK	dish_id	varchar

favorite_dishes

PK	id	varchar
FK	customer_id	varchar
FK	dish_id	varchar

Deliveries

PK	id	varchar
FK	delivery_person_id	varchar
	started_at	TIMESTAMP
	finished_at	TIMESTAMP
	price	decimal
	coodinates	varchar
	status	tinyint

Cart

PK	customer_id	tinyint
	status	DATETIME
	created_at	DATETIME
	last_update	TIMESTAMP

Orders

PK	id	varchar
FK	cart_id	varchar
FK	payment_method	varchar
FK	delivery_id	varchar
	date	DATETIME
	total	decimal
	status	tinyint
	products	varchar

Payment_methods

PK	id	varchar
FK	customer_id	varchar
	name	varchar
	financial_entity	varchar
	type	varchar
	number	varchar
	segurity_digits	varchar
	status	tinyint
	created_at	DATETIME
	last_update	TIMESTAMP
	is_favorite	tinyint
	due_date	DATETIME
	owner_name	varchar
	owner_DNI	VARCHAR