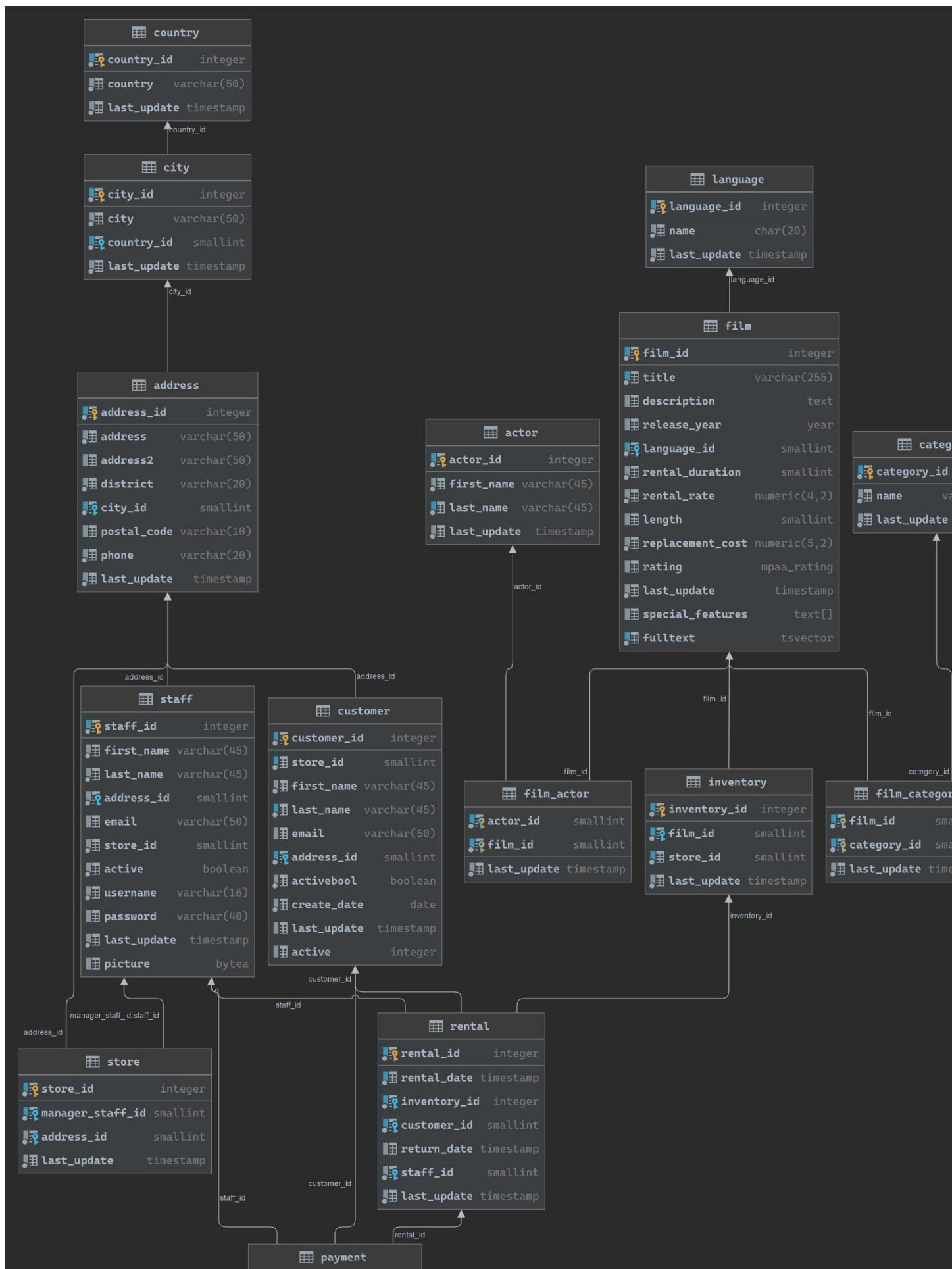1- Use dbdiagram.io or draw.io to propose a new structure for the `Sakila` database.

This is a database entity-relationship diagram (ERD) for a DVD rental database schema.

country
🔑 country_id	integer
country	varchar(50)
last_update	timestamp

city
🔑 city_id	integer
city	varchar(50)
country_id	smallint
last_update	timestamp

language
🔑 language_id	integer
name	char(20)
last_update	timestamp

address
🔑 address_id	integer
address	varchar(50)
address2	varchar(50)
district	varchar(20)
city_id	smallint
postal_code	varchar(10)
phone	varchar(20)
last_update	timestamp

actor
🔑 actor_id	integer
first_name	varchar(45)
last_name	varchar(45)
last_update	timestamp

film
🔑 film_id	integer
title	varchar(255)
description	text
release_year	year
language_id	smallint
rental_duration	smallint
rental_rate	numeric(4,2)
length	smallint
replacement_cost	numeric(5,2)
rating	mpaa_rating
last_update	timestamp
special_features	text[]
fulltext	tsvector

categor... (category)
🔑 category_id	
name	va...
last_update	

staff
🔑 staff_id	integer
first_name	varchar(45)
last_name	varchar(45)
address_id	smallint
email	varchar(50)
store_id	smallint
active	boolean
username	varchar(16)
password	varchar(40)
last_update	timestamp
picture	bytea

customer
🔑 customer_id	integer
store_id	smallint
first_name	varchar(45)
last_name	varchar(45)
email	varchar(50)
address_id	smallint
activebool	boolean
create_date	date
last_update	timestamp
active	integer

film_actor
🔑 actor_id	smallint
🔑 film_id	smallint
last_update	timestamp

inventory
🔑 inventory_id	integer
film_id	smallint
store_id	smallint
last_update	timestamp

film_categor... (film_category)
🔑 film_id	sma...
🔑 category_id	sma...
last_update	time...

store
🔑 store_id	integer
manager_staff_id	smallint
address_id	smallint
last_update	timestamp

rental
🔑 rental_id	integer
rental_date	timestamp
inventory_id	integer
customer_id	smallint
return_date	timestamp
staff_id	smallint
last_update	timestamp

payment

2-Define primary keys and foreign keys for the new database.

Answer: primary keys and foreign keys are shown by yellow and blue color keys in ER diagram.

Country → country_id (PK) and no FK

City → city_id (PK) and country_id (FK)

address → city_id (PK) and country_id (FK)

staff→ staff_id (PK) and no FK

customer → customer_id (PK) and address_id (FK)

store→ store_id (PK) and manager_staff_id and address_id (FK)

rental→ rental_id (PK) and inventory_id and customer_id (FK)

payment→ payment_id (PK) and customer_id, staff_id and rental_id (FK)

actor → actor_id (PK) and no FK

film → film_id (PK) and language_id (FK)

language → language_id (PK) and language_id (FK)

film_actor → actor_id (PK) and film_id (PK)

category → category_id (PK) and no FK

film_category → film_id and category_id (PK) and no FK

inventory →inventory_id (PK) and film_id (FK)