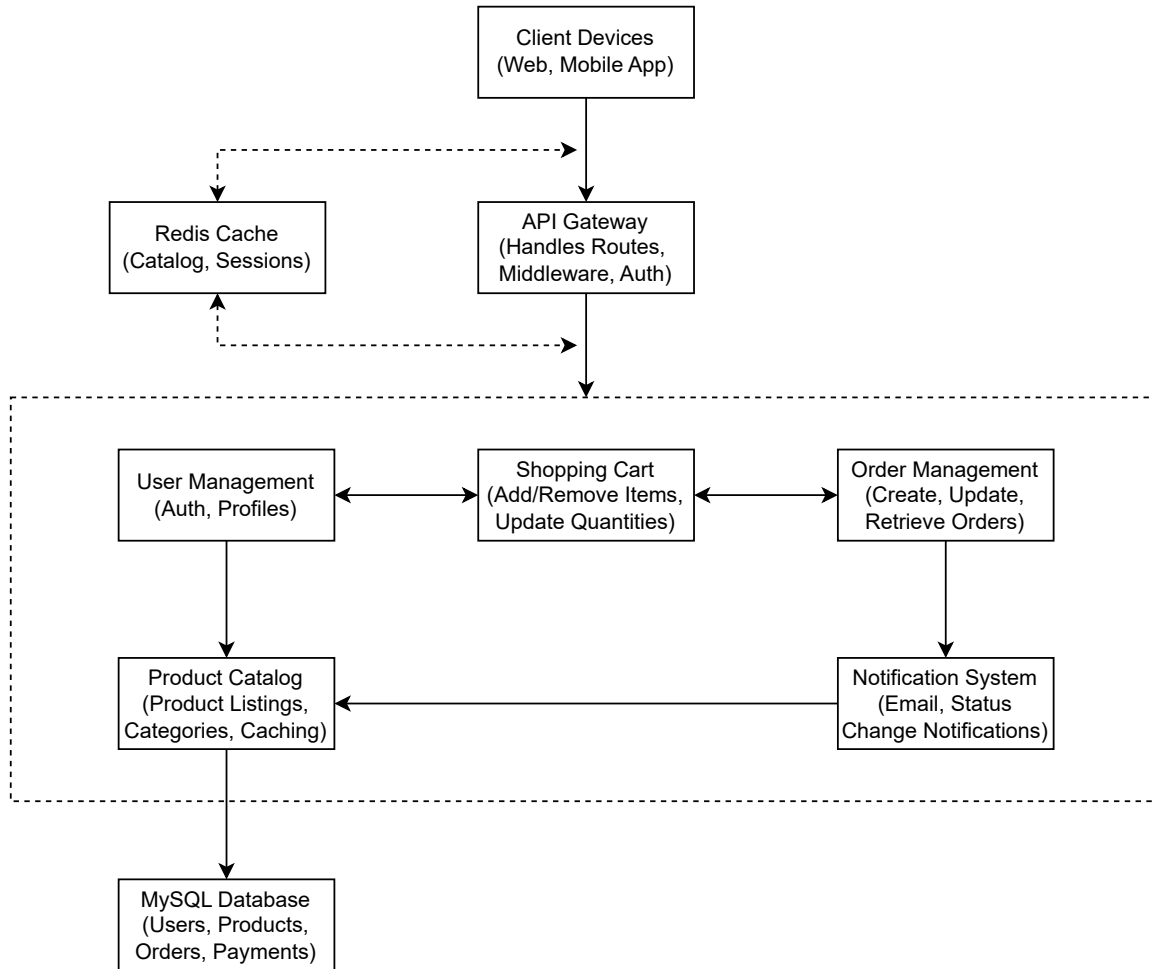## Scalable eCommerce Application

Architecture diagram [v1.0]

- **API Gateway:** Acts as the entry point for all requests and manages routing, JWT authentication, and rate limiting and interacts with all modules to route incoming requests.
- **Redis Cache:** Used for caching product catalogues and session data for improved performance.
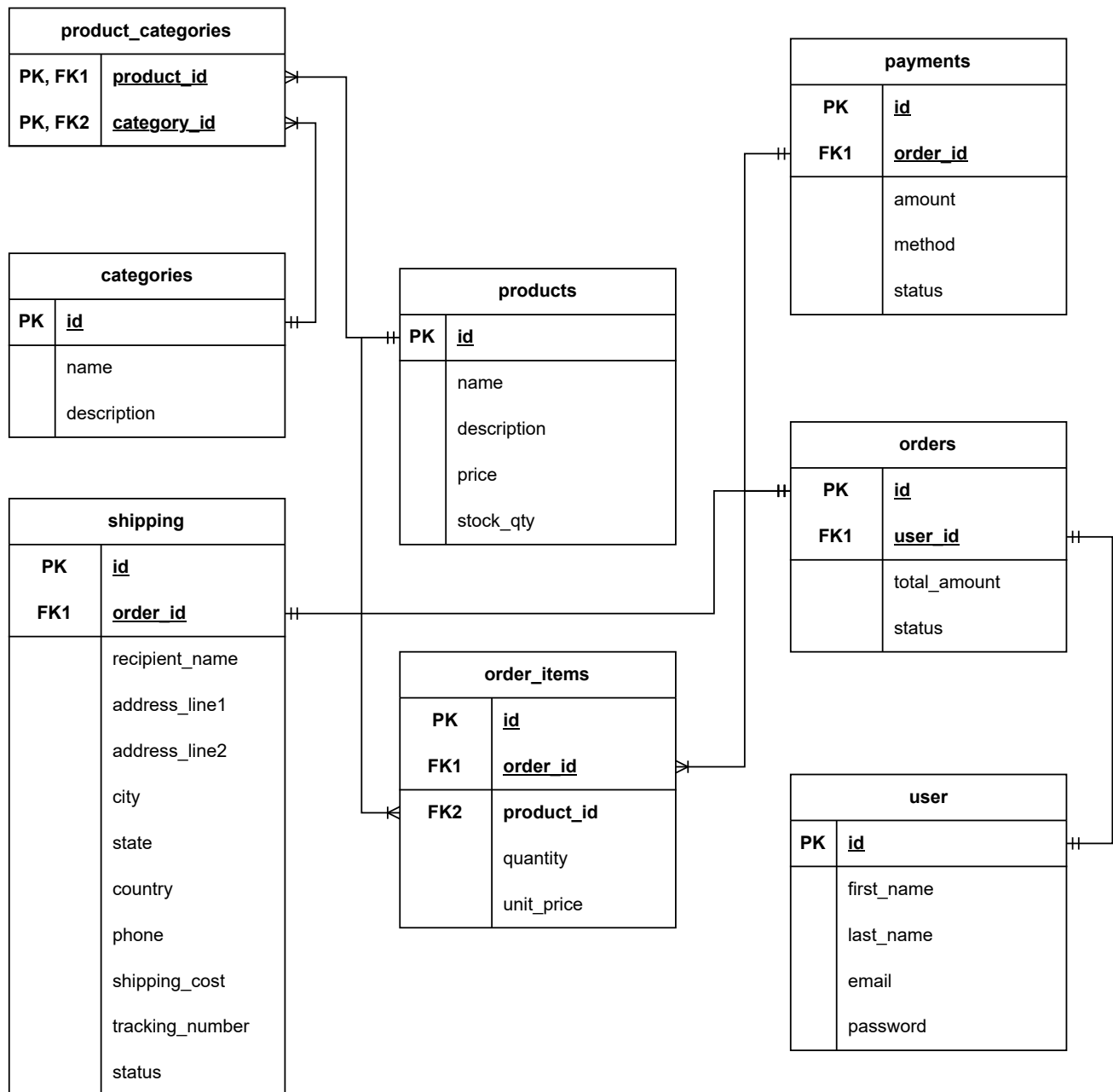- **MySQL Database:** Serves as the persistent storage for users, products, orders, and payments.

Scalable eCommerce Application

An Entity Relationship (ER) Diagram [v1.1]

product_categories

PK, FK1	product_id
PK, FK2	category_id

payments

PK	id
FK1	order_id
	amount
	method
	status

categories

PK	id
	name
	description

products

PK	id
	name
	description
	price
	stock_qty

orders

PK	id
FK1	user_id
	total_amount
	status

shipping

PK	id
FK1	order_id
	recipient_name
	address_line1
	address_line2
	city
	state
	country
	phone
	shipping_cost
	tracking_number
	status

order_items

PK	id
FK1	order_id
FK2	product_id
	quantity
	unit_price

user

PK	id
	first_name
	last_name
	email
	password

- All the tales will have the timestamp fields (created_at/updated_at)
- Tables will have the deleted_at field as well