Conceptual Model
For E-Shop

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1. Describe the database in text

We will develop an ecommerce system for coffee shop.
First, the database will handle a customer with contact details(like name, email, and address), and a product(with product code, name, short description and price) where each product is in one or more product categories.

The database also needs to contain a warehouse where you can see how many of each product are in the warehouse and a note about where the product is in the warehouse (which shelf). One and the same product can be spread over different shelves in the warehouse.

When the customer orders a product, an order is created that contains the customer's details together with which products have been ordered and its ordered number.

Based on the order, a pick list is created that can be sent to the warehouse for delivery. The pick list contains the same information as the order, but with the addition that each product line is mapped to a warehouse shelf so that the warehouse staff can see which shelf they can pick up the product on.

When the delivery is packed, an invoice is attached that has the same content as the order but now with the price per product line and the summed price.

There should be a log where you can see important events in the system, what happened, when it happened. This can be, for example, when an order / invoice was created or deleted.

2. All entities

We will have the entities as the following:

- Customer (id, name, email, address)
- Product (code, name, category, description, price)
- Category (type)
- Warehouse (name, shelf, product code, number of product)
- Order (id, date, customer, product, number of product, price)
- Invoice (id, date, order, summed price)
- Log (id, date, event type, event description)

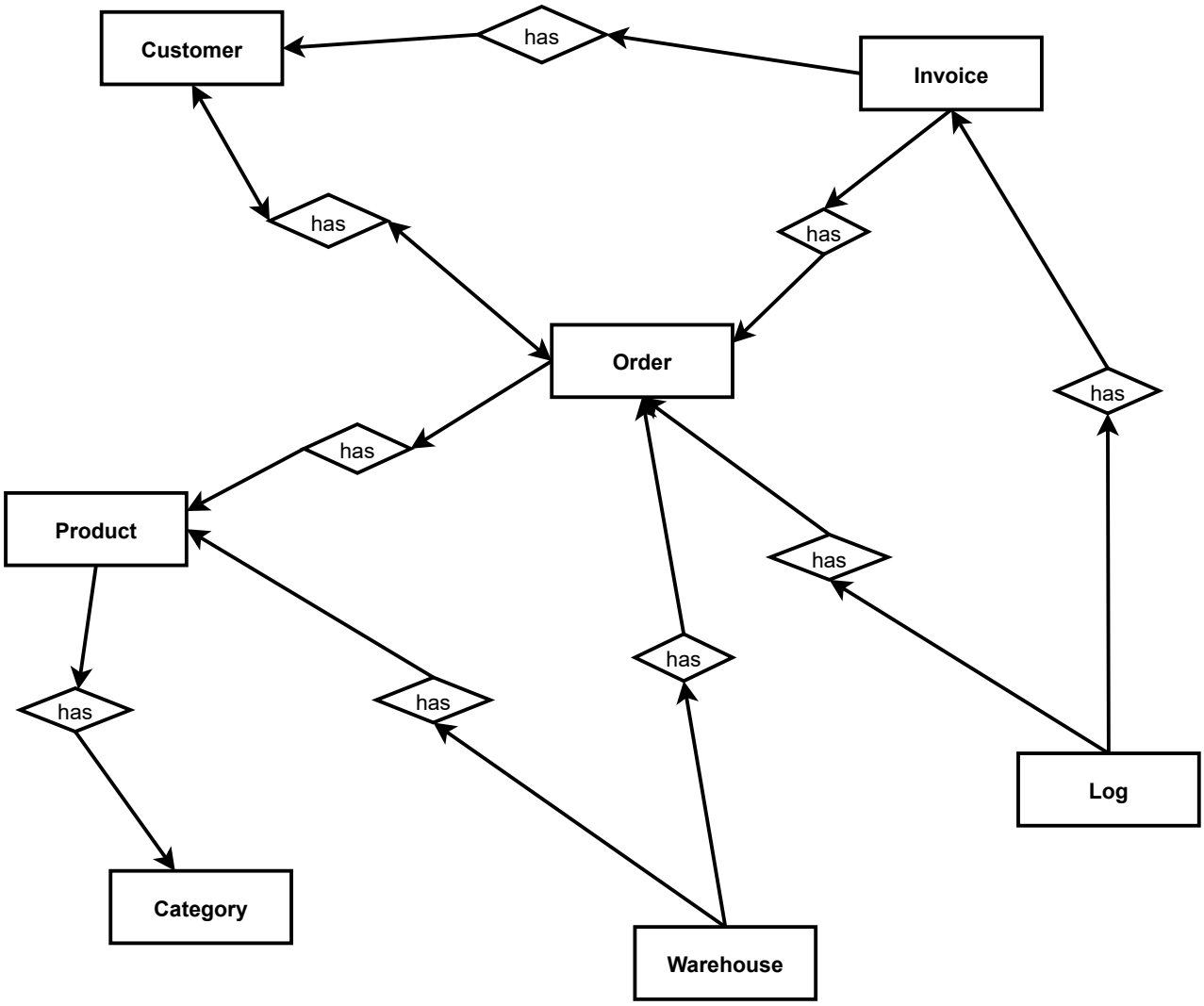
3. Matrix of relationships

We will have the entities as the following:

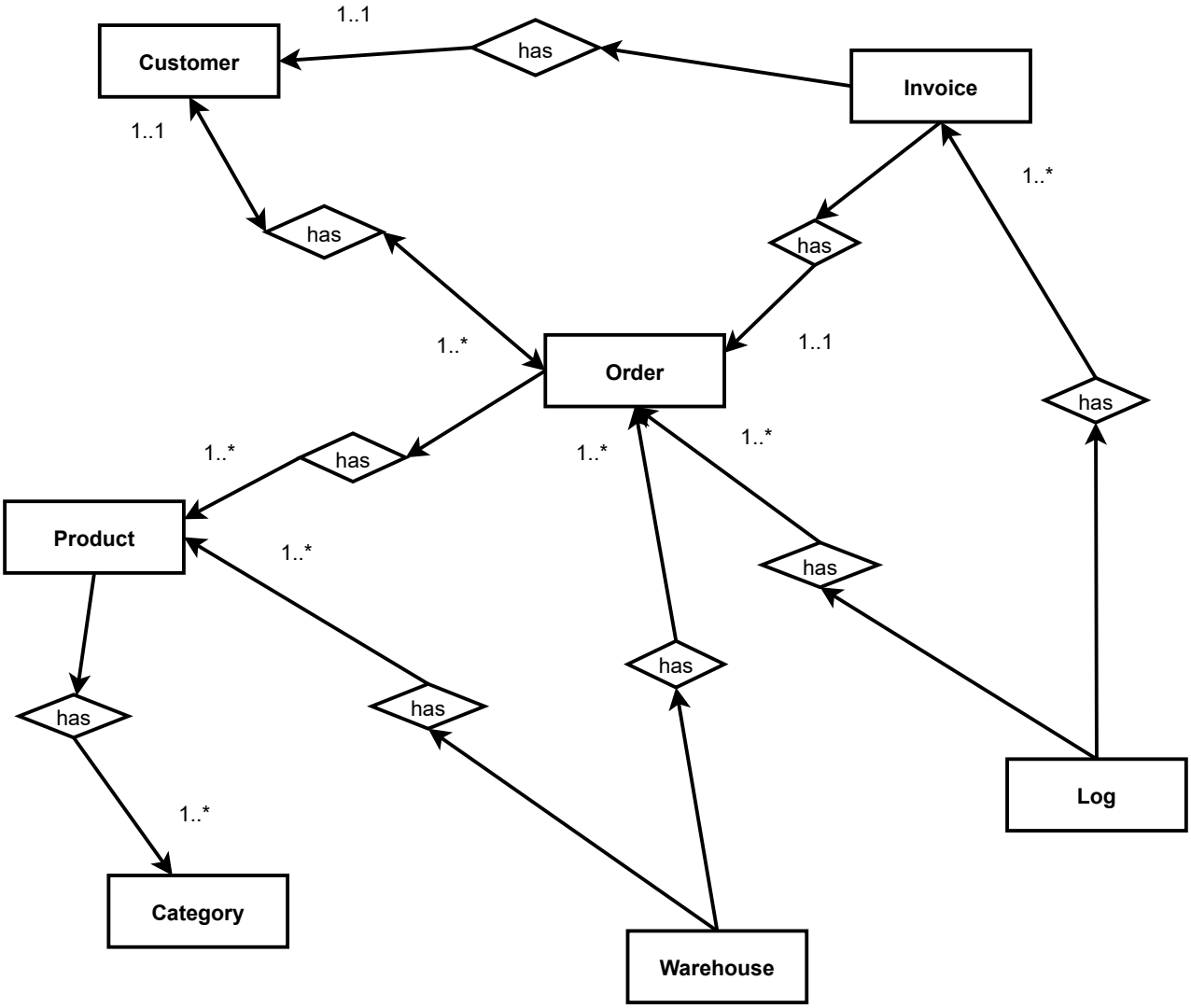
- All products are categorized by one category.
- One order has a number of products.
- One invoice has one order.
- All products are stored on warehouse shelves.
- A customer has several orders.
- All events are logged.

Entities	Customer	Product	Category	Warehouse	Order	Invoice	Log
Customer					has		
Product			has				
Category							
Warehouse		has			has		
Order	has	has					
Invoice	has				has		
Log					has	has	

4. ER diagram with entities and relationships



5. ER chart with cardinality



6. ER diagram with attributes and candidate keys