Task 3: Mapping

Step 1

These are strong entities with their own attributes and primary keys. These are mapped directly to the relations with their attributes. Each of these relations represents a distinct table.

Products

product_id	discount_price	title	price	image_url	rating	product_link	num_reviews	category	retailer_id

User

user_id	password_hash	first_name	last_name	cell_number	email_address

Watchlist

product_id	user_id	date_added

Step 2

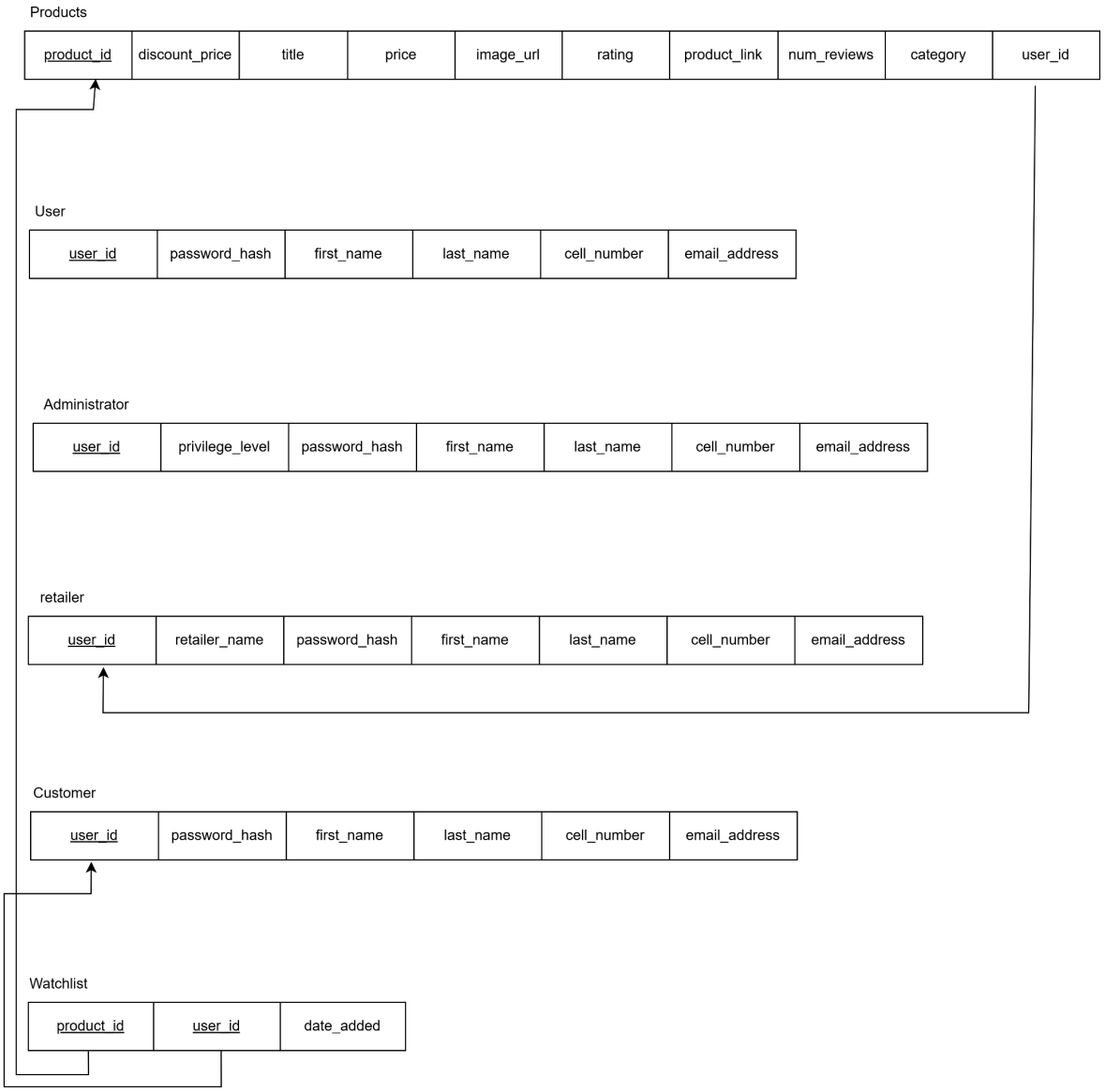
Our ER model does not contain weak entities, therefore we do not need this step.

Step 3

Our ER model does not contain multiple attributes, therefore we do not need this step.

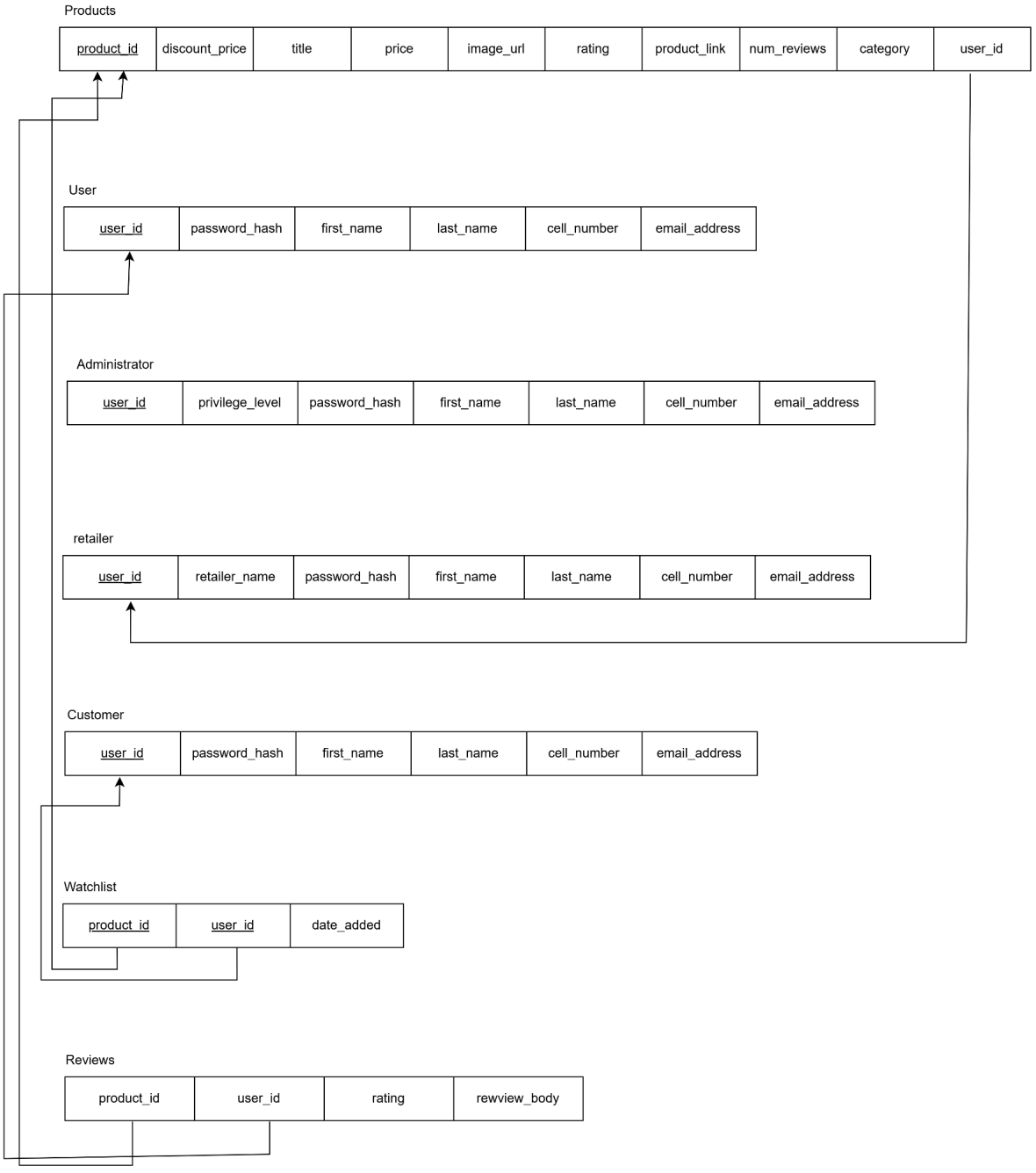
Step 4

Did step 8 before step 4 to account for the 1:N relation between WATCHLIST and CUSTOMER. A customer can watch multiple products on a watchlist.



Step 5

We made a reviews table including both foreign keys and any attributes of the relationship.



Step 6

We did not need multi-valued for our ER diagram and therefore did not need to do this step.

Step 7

Our ER diagram only had binary relations and therefore we do not use this step.

Step 8

Added these specializations, to reflect the generalisation of the USER into subtypes. THe primary key of USER is used as the primary key in each new relation as it is disjoint, as each user can only be one subtype (e.g. a retailer cannot be an administrator)

Subtypes shown below:

Administrator

user_id	privilege_level	password_hash	first_name	last_name	cell_number	email_address

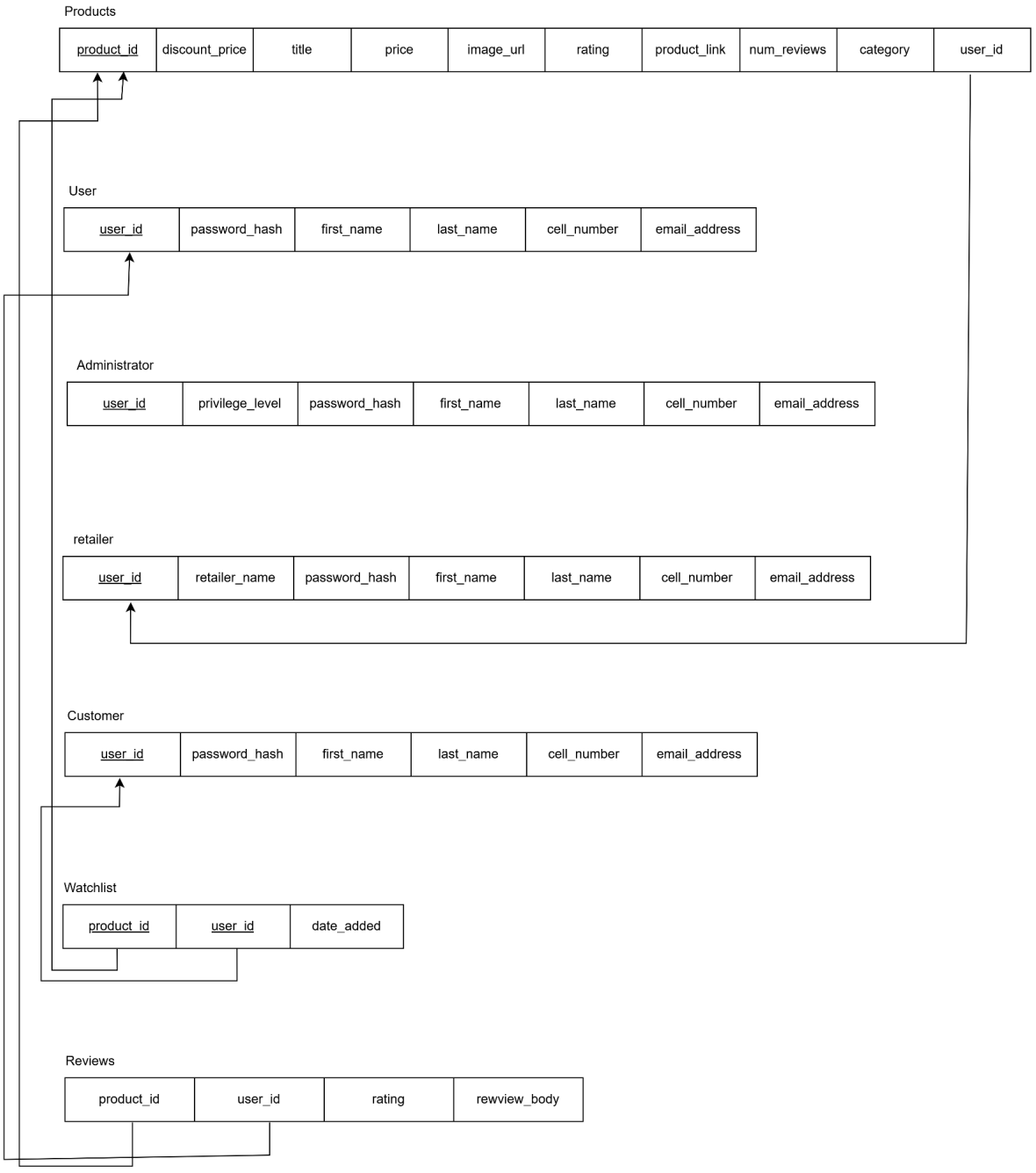
retailer

user_id	retailer_name	password_hash	first_name	last_name	cell_number	email_address

Customer

user_id	password_hash	first_name	last_name	cell_number	email_address

Full mapping:



Step 9

We did not have unions and therefore did not need this step.

Final mapping