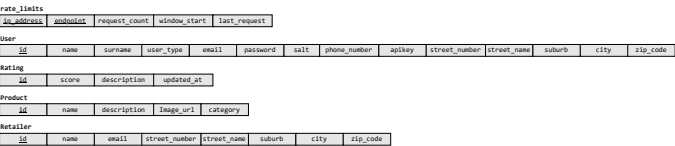
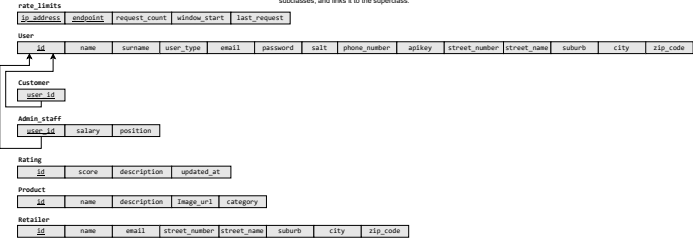


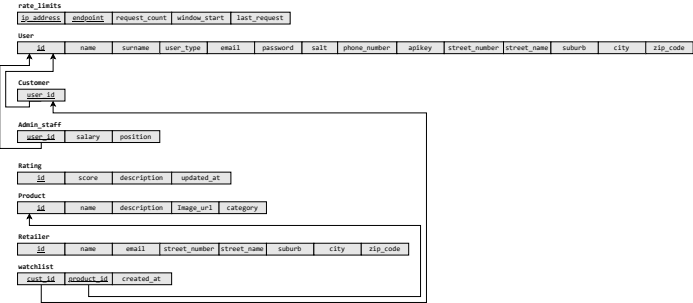
**Step 1: Mapping of regular entity types** Regular entities are mapped in this step.



**Step 8: Mapping specialisation and generalisation** We need to do this step early because we need to use CUSTOMER in the coming steps. User is totally different specialised into two types: CUSTOMER and ADMIN\_STAFF. We use approach BA in the slides of L14: That is, create a relation for each subclass (customer and admin\_staff with the key of the superclass (user) and the attributes of this subclass. The key of the superclass will be the key of the subclasses, and links it to the superclass.

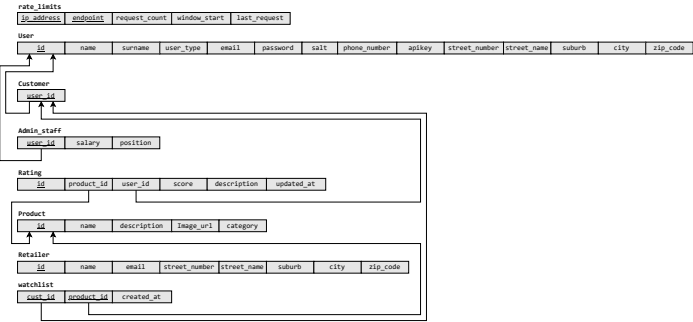


**Step 2: Mapping of weak entity types** We map weak entities in this step. WATCHLIST is the only weak entity in our EERD, since it depends on both a CUSTOMER and a PRODUCT to exist. Without them, the watchlist entry cannot exist. RATING is not a weak entity since ratings can be updated over time, ratings may need to be deleted, edited or moderated independently of the user or product that it is linked to.

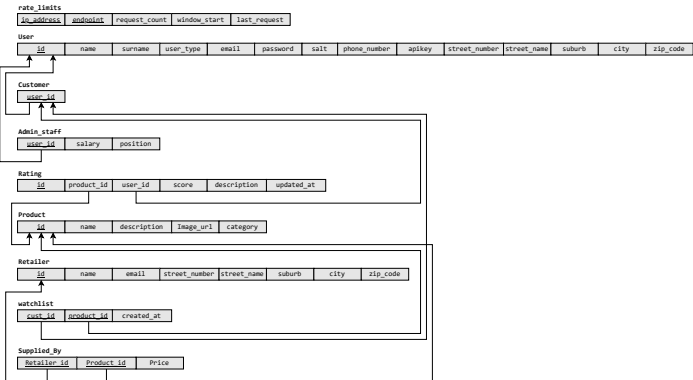


**Step 3: Mapping of Binary 1:1 relationships** We do not have binary 1:1 relationships in our EERD. We do nothing in this step

**Step 4: Mapping of Binary 1:M relationships** We have four 1:M relationships in our EERD: CUSTOMER creates WATCHLIST, PRODUCT is involved WATCHLIST (both of these are already mapped in Step 2), CUSTOMER writes a RATING and PRODUCT has RATING. We use Approach 1 in the slides of L14



**Step 4: Mapping of Binary N:M relationships** We have one binary N:M relationship in our EERD: PRODUCT supplied by RETAILER. We create a new relation called SUPPLIED\_BY to support this and we add a price attribute since it is an attribute that belongs to the supplied\_by relationship.



**Step 6: Mapping of multivalued attributes** We do not have multivalued attributes in our EERD. We do nothing in this step.

**Step 7: Mapping of N-ary relationships** We do not have N-ary relationships in our EERD. We do nothing in this step.

**Step 8: Mapping specialisation and generalisation** Step 8 was already done directly after step 1 to ensure that CUSTOMER exists before we map relationships. We do not have other specialisations in our EERD.

**Step 9: Mapping unions** We do not have unions in our EERD. We do nothing in this step.

**FINAL RELATIONAL MAPPING**

