- 1. When a product is discontinued, it should no longer be allowed to place an order for more of that item from the supplier. Therefore, the database should prevent a new transaction from being made that has a listed partner that is the same as the partner that creates the product.
- 2. If a sale (adding in transactions table) would decrease the quantity of those products in inventory to a point that we can't fulfill all the preorders (preorders table) which require those products, prevent the sale to ensure there is enough inventory available in the inventory table.
- **3.** After we shipped the preorder (there will be an entry in the shipment table), it is now fulfilled and it is like a normal sale now. We don't have to store it as preorders table anymore. When this happens, we delete that entry from the preorders table for that transaction.
- **4.** The warranty period begins when a product is shipped. That means, warranty claims are valid from the day the product is shipped (recorded in shipments table) to the calculated expiration of the warranty period (which is the warranty period added to the shipment date). For example, a warranty claim of a product with a 6 month warranty will be valid only between the shipment date and the 6 months from the shipment date.
- 5. When a product is picked up in store, it is still necessary to timestamp when that pickup happened separate from the transaction. This is because with situations like preorders, the pickup time may be different from the purchasing date, and there should be some confirmation in the system that a product associated with a transaction was picked up. Therefore, any time an order is picked up, a record in the shipments table should be made and associated with the order's record in the transactions table. However, that shipment record will not be placed into internal or external shipments.
- **6.** Following the discontinuation of a product, its price will be decreased by the discount modifier (discount sale percentage). This ensures successful sale of the leftover stock of products after a product has been discontinued. Example: "Clearance Events, up to 50% off"
- 7. To claim a warranty, it must be requested within the specified time frame for the product. This timeframe is calculated by adding the duration of the warranty to the date the item was shipped. In other words, if an item was shipped on a certain day and has a one-year warranty, the warranty can only be claimed until that same day one year later. This ensures customers receive support within the promised protection period, providing them with peace of mind when purchasing products.

- **8.** Products involved in previous transactions or currently in stock cannot be deleted from our records. This is to prevent losing information about sales history and current inventory levels. If we need to remove a product, we can do so by deleting it from the transaction and inventory tables first.
- **9.** If a transaction (such as an order or payment) is removed from our system, we must automatically delete all related records in other tables, including sub-tables and linking tables. This avoids having outdated or irrelevant data lingering in our system, which could compromise its reliability.
- 10. Warranty claim timestamp must be after shipping timestamp. A customer can only claim for the warranty of a product after it's been shipped to the customer. Once the product has been shipped then the customer will be able to use the warranty.
- **11.** Return timestamp must be after shipping timestamp. A product can only be returned at a point in time that occurs after the shipment of the product, since a product cannot be received and returned before it has been shipped to its destination.
- **12.** A product should only be shipped after it is purchased. Therefore, any shipments records that are associated with a transaction (i.e. those not placed in internal shipments) should not have a shipment dispatch timestamp earlier than the timestamp for its associated transaction.