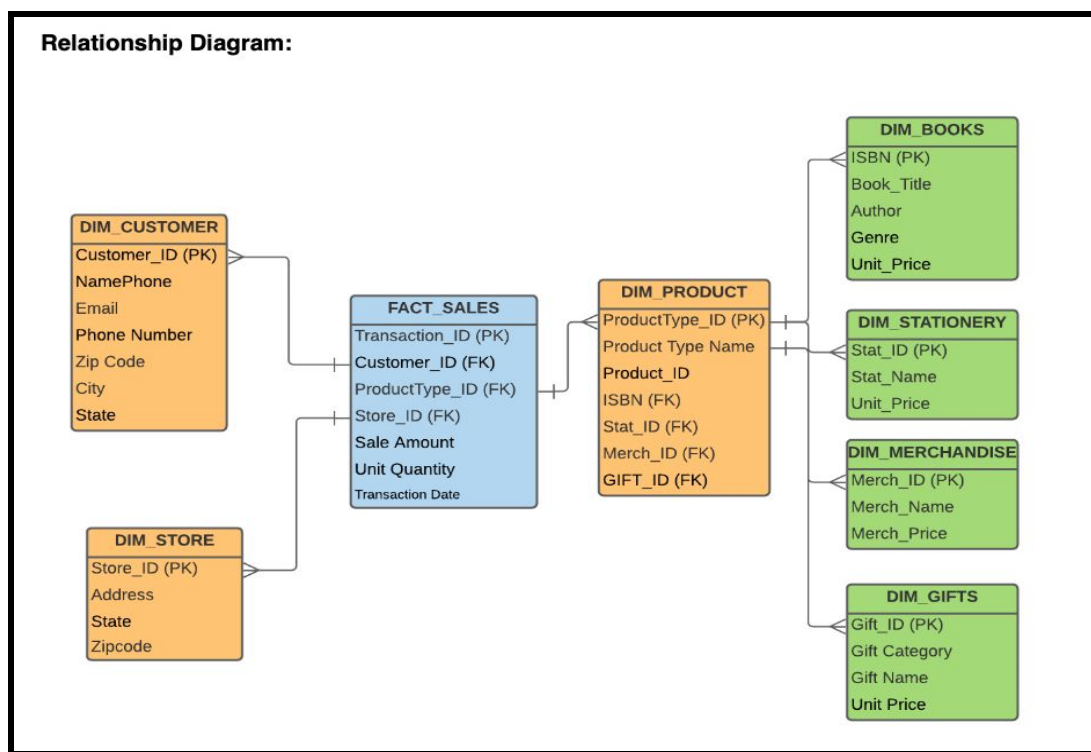


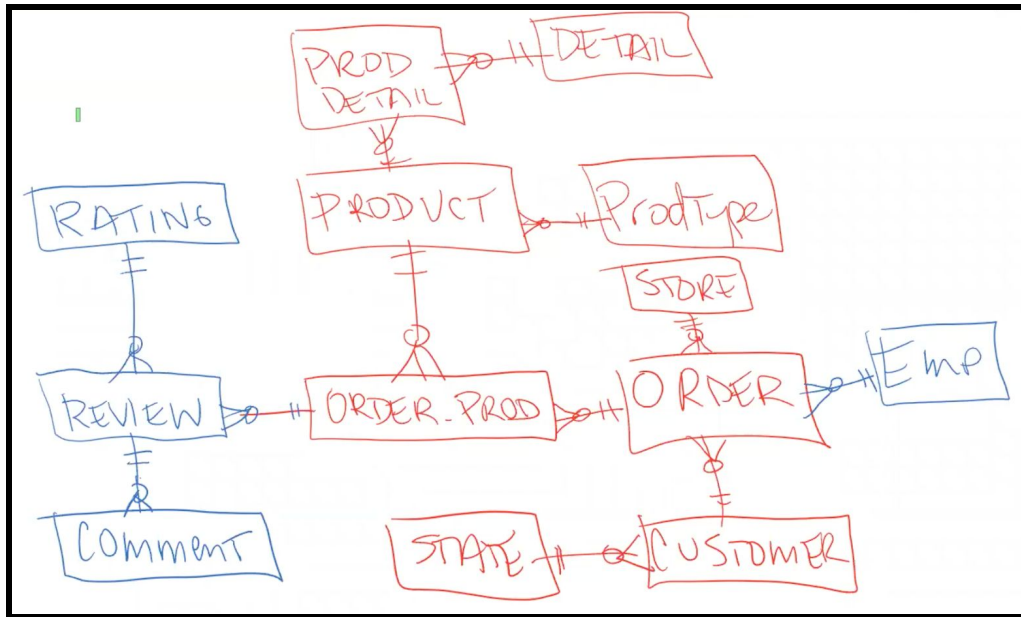
Book Store Database Design -Phase - II  
IMT-543A- Relational Database Management Systems  
Team 4  
Vishwa Kirti, Amruta Jadhav, Priyanka Saraf, Aditya Challa  
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Our project is currently focussed on designing a database for a college book store such as University of Washington Seattle bookstore. For this class project, we have created the Entity Relationship Diagram for the Seattle Bookstore, whose business is to sell books and merchandise in the state. We have created a schema that stores information about daily transactions of the Bookstore at the various locations.

A significant change in terms of entities and attributes have been made since our first submission. Our first submission was similar to a data warehouse model where books, merchandise, stationary, gifts, customers, stores and sales attributes. We had the sales table as a fact table and the rest of other tables as dimension tables. A snapshot of the our initial ERD is as follows:



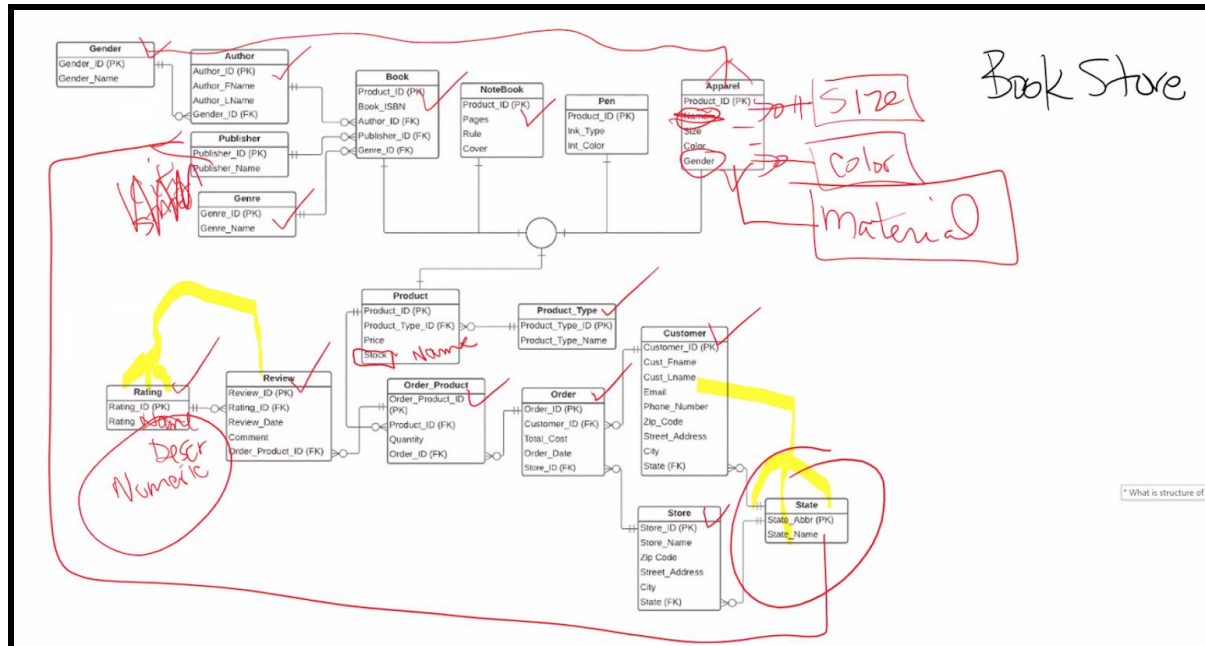
Our team scheduled a couple of review sessions with Prof.Greg and shifted our database project model from the warehouse model to the relational database model. We split the fact and dimension tables into various other tables. A rough sketch of the relational model of the bookstore database is as follows:



We created an Order and Order Product table in our final relational model and linked them to the customer table to keep a track of the sales. A major change that involved was to split the attributes in the Sales table from the first ERD into Order\_Product and Order tables respectively depending on the type of the attribute. We had multiple foreign keys in the wrong direction in the ERD. The foreign key relationship limited our orders and meant that only one order can be placed by a customer in the bookstore, which is technically wrong. We also rectified the foreign key relationship between the Review and Rating tables.

A multiple lookup tables are populated compared to the first ERD to minimize the errors for typo's and abbreviations. A couple of examples of the lookup tables that are populated in the final ERD are Gender, State, Rating, Store table etc.

For the items that are sold in the current bookstore, we initially had a many to many relationship between the Product Detail and Detail tables. To avoid confusion, we changed that structure to the super type and subtype under the product table. We also populated various look up tables in the subtype attributes wherever required to avoid typos and abbreviation errors. The following is the snippet of the changes made:



A final review with Prof.Greg highlighted and suggested populating a couple of additional look up tables in the products section and also highlighted add Product Name attribute in the product table, Numeric Description in the Rating table. Further, lookup tables for Apparel such as size, color and material were recommended to minimize the data entry errors. Working on the recommended changes, here is the final look at the ERD for the Bookstore database project:

