

Final project, ER Conversion/normalization

1. Handle all entities
 - a. strong entities that are not subtypes

CUSTOMER (Customer_ID, Customer_Name)

ORDER (Order_ID, Date, CC_Num, Shipping_Address, Tracking_Num, Order_Status, Total_Cost, Notes)

PRODUCT (Product_ID, Product_Name, Product_in_Stock, Product_Cost)

- b. no subtypes
 - c. no weak entities
 - d. Customer_ID†, Product_ID†
2. Handle all the relationships
 - a. Binary one-to-one relationships
 - i. There are none in the ER diagram.
 - b. Binary one-to-many relationships
 - i. **pays for** is a binary one-to-many relationship between **CUSTOMER** and **ORDER**

ORDER (Order_ID, Date, CC_Num, Shipping_Address, Tracking_Num, Order_Status, Total_Cost, Notes, Customer_ID†)

Customer_ID† is the foreign key that connects Order to Customer.
 - c. Binary many-to-many relationships
 - i. **has** is a binary many-to-many relationship between **PRODUCT** and **ORDER**

ORDER_PRODUCTS (Order_ID†, Product_ID†, quantity)
Order_ID†, Product_ID† are the foreign keys that point to **ORDER** and **PRODUCT** respectively.
 - d. No recursive relationships

3. RELATIONAL SCHEMA- COMPLETED

CUSTOMER (Customer_ID, Customer_Name)

PRODUCT (Product_ID, Product_Name, Product_in_Stock, Product_Cost)

ORDER (Order_ID, Date, CC_Num, Shipping_Address, Tracking_Num, Order_Status, Total_Cost, Notes, Customer_ID[†])

ORDER_PRODUCTS (Order_ID[†], Product_ID[†], QTY)