BADM 554_Team21

1) Given that brief and incomplete description of operations for RC_ Models Company, write entities, attributes and all applicable business rules to establish relationships. Write the Entities/attributes in the format below.

Entity (Attribute1, Attribute2, …)

Customer (Customer_ID, Customer_Name, Email, …)

Product (Product_ID, Manufacturer_ID, Product_Type, Unit_Price, Min_Order_Quantity,...)

Invoice (Invoice_ID, Order_ID,Customer_ID, Invoice_Date, …)

Invoice_Line (Invoice_Line_ID, Invoice_ID, Product_ID, Quantity, Unit_Price, ...)

Manufacturer (Manufacturer_ID, Manufacturer_Name, Contact_info,...)

Purchase (Purchase_ID, Purchase_date, Payment_method, …)

Purchase_Line(Purchase_Line_ID, Purchase_ID, Product_ID, Unit_Cost, Qty_Ordered,...)

Inventory?

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2) Write Business Rules for the relationships : Use the following three business rules as examples, writing the business rules for relationships in the same format. Requirements/rules that don't specific entities, attributes, relationships, constraints should be written separately.

Relationships (one to one, one to many, many to many)

   1:M

       Manufacturer (one) -> Purchase (many)

       Purchase (one) -> Purchase_line (many)

       Purchase_Line (one) -> Product (many)***

       Customer (one) -> Invoices_Line (Many)

       Invoice (one) -> Invoice_Line (many)

       Product (one) -> Invoice_Line (many)

       Product (one) -> Purchase_Line (many)***

Constraints

   Customer - Invoice

- A customer may generate one or many invoices
- Each invoice is generated by only one customer
- Some customers may not (yet) generated an invoice

   Invoice - Line

- One invoice may contain one or many lines
- Each line belongs to exactly one invoice

   Line - Product

- Each line refers to exactly one product
- One product may appear on one or many lines

   Product/Inventory - Manufacturer

- Each product is supplied by exactly one manufacturer
- One manufacturer may supply one, or more than one products
- This tracks products available

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Procurement - Manufacturer

- Each purchase is made from exactly one manufacturer
- One manufacturer may correspond to zero or many purchases
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3) Document any assumptions you need to make in a section called assumptions

 Invoice is only for products that been shipped to customers.

We assume Invoice_Line tracks orders that have been made but not necessarily shipped

4) Create a draft ER model in https://www.drawio.com/ . Dont worry about filling in all attributes. Just entities and relationships. This is a draft, you will work on it

Our Diagram *<- Click this link to see the diagram*