

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.

Customer (Cust\_Id,Cust\_Name ..... ) Do not spend too much time on attributes now.

Customer
PK: CUS_ID

Product
PK: PRODUCT_ID

Invoice
PK:INVOICE_ID

Line
PK: LINE_ID

Manufacturer
PK:MANUFACTURE_ID

Purchase
PK: PURCHASE_ID

## Entity

## Attributes

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

Manufacturer (one) -> Purchases (many)

Purchases (one) -> Product (many)

## Constraints

<https://drive.google.com/file/d/1y1M-OT4P7yzFw7CmBaKdOUt2GWq0RvC1/view?usp=sharing>

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.

- a) A customer may generate many invoices.
- b) Each invoice is generated by only one customer.
- c) Some customers have not (yet) generated an invoice.

customer - invoice

A customer may generate one or many invoices. Each invoice is generated by only one customer.

Invoice - line

One invoice can have multiple lines. One line can only belong to one invoice.

Line - product

One line can have one and only one product. One product can appear on one or many lines.

Purchase - manufacturer

One purchase can be made to one and one manufacturer. One manufacturer can correspond to zero or many purchases.

Purchase - product

One purchase can include one or many products. One product can be shown in one or many purchases.

3) Document any assumptions you need to make in a section called assumptions

Invoice is only for products that have enough inventory that has shipped to customers.

[Pending/Inventory] is for products that should be sold but don't have enough inventory.

(↑ the table name is still under consideration)

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

5) submit one document PDF (business rules) and one ER model from Draw.io, Individually.

Submit at <https://canvas.illinois.edu/courses/60366/assignments/1440586>