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### Mission:

The purpose of the Upward Outfitters' database is to maintain a catalog of climbing and general outdoors gear; and to provide a system for fast customer services. It will maintain both information about the state of all products and details about customer transactions and services. It will link to a website where customers will shop for their needs and use services to maximize their satisfaction.

### Objectives:

1. Provide an online catalog of both in-stock and upcoming gear.
2. Record and manage transactions, exchanges, and returns.
3. Provide a discounting system.
4. Provide a pre-ordering system.
5. Record and manage customer warranty claims.
6. Allow easy expansion of the catalog to new types of outdoors-y products.
7. Ensure any customer data is well recorded, robust, and easy to access and modify to better support efficient customer service.
8. Provide a system of discontinuing / end-of-life-ing products.

## Table List:

- Catalog - data table:
  - Each record holds information about the item it represents in the inventory, such as its name, category, price, stock, etc. Uniquely identified by its catalogId.
  
  - PK catalog\_catalogId
  - catalog\_itemName
  - catalog\_category
  - catalog\_currentPrice
  - catalog\_dateFirstAvailable
  - catalog\_numberInStock
  - catalog\_manufacturer
  
- Categories - verification table:
  - Holds the list of categories we currently recognize.
  
  - catalog\_category
  
- Descriptions - subtable of Catalog:
  - An optional text description for an item in the Catalog.
  
  - FK/CPK catalog\_catalogId
  - CPK description\_Text
  
- Discounts - subtable of catalog:
  - An optional discount which can be applied to a given item.
  
  - FK/CPK catalog\_catalogId

- discount\_priceOffPercent
  - CPK discount\_startDate
  - CPK discount\_endDate
  
- EOLItems - subtable of Catalog:
  - Way to mark END OF LIFE, or EOL items; items that will soon no longer / will not come into stock.
  
  - FK/CPK catalog\_catalogId
  - CPK EOLItem\_dateDiscontinued
  
- Accounts - verification table:
  - A User Account for customers, which is necessary to purchase items.
  
  - PK account\_accountId
  - account\_accountEmail
  - account\_userName
  - account\_phone
  
- Transactions - Catalog <-> Accounts linking table:
  - A record describing a transaction, which is a combination of an item from the catalog, and a user from the accounts list. A given transaction can only have one item and one user. Purchasing multiple things at once is internally modeled as multiple transactions.
  
  - PK transaction\_transactionId
  - FK catalog\_catalogId
  - FK account\_accountId
  - transaction\_dateMade
  - transaction\_originalPriceAtTransaction
  - transaction\_currentAmountOwed

- transaction\_currentAmountPaid
  - transaction\_transactionCompleteBool
  - transaction\_onHold
  
- Warranties - subtable of Transactions:
  - An optional warranty a user may buy for an item, if offered.
  
  - PK warranty\_warrantyId
  - FK transaction\_transactionId
  - warranty\_warrantyCost
  - warranty\_warrantyDate
  - warranty\_lengthInDays
  
- WarrantyClaims - subtable of Transactions:
  - A record describing if a warranty has been claimed. At present, this is only for warranty claims which have been reported, and which the company feels are valid. Invalid claims will not be entered.
  
  - FK/CPK warranty\_warrantyId
  - CPK warrantyClaim\_claim
  
- FinancialData - subtable of Transactions:
  - A record contains the financial data of a purchase: the amount of the purchase, the last 4 digits of the bank card, billing address, date, ect.
  
  - PK financialDatum\_financialId
  - FK transaction\_transactionId
  - financialDatum\_amountOwedAtPayment
  - financialDatum\_amountPayedAtPayment
  - financialDatum\_last4digitsOfCard

- financialDatum\_billingAddress
- financialDatum\_datePaid
  
- Exchanges - subtable of Transactions:
  - Each record contains the details of an exchange: what transaction did the exchange credits go to, what transaction was exchanged, and the tracking ID of the label sent for the return.
  
  - exchange\_amountOwedAtExchange
  - FK/PK transaction\_transactionId
  - exchange\_idOfExchangedTransaction
  - exchange\_returnTrackingId
  
- Returns - subtable of Transactions:
  - A record links to a specific transaction to indicate that it was returned, and what the date was.
  
  - FK/PK transaction\_transactionId
  - return\_dateReturned
  
- ShippingData - subtable of Transactions:
  - A record contains data about shipping for a transaction; it is assumed a separate company manages the shipping of the item.
  
  - FK/CPK transaction\_transactionId
  - shippingDatum\_destinationAddress
  - shippingDatum\_shippingCost
  - shippingDatum\_shippingService
  - CPK shippingDatum\_trackingId
  - shippingDatum\_itemArrivedBool

## Business Rules

- The date that an item is returned must be after the date of the original.
  - When a return is made, the date of the original transaction will be checked, and if that date is somehow in the future, then the return will not be processed.
- the `currentAmountOwed.transactions` record is dynamically incremented and decremented by `shippingData.shippingCost`
  - When new shipping cost entries are made, they will change the value of the current amount owed.
- the `currentAmountOwed.transactions` record is dynamically incremented and decremented by `financialData`
  - When new financial data entries are made, they will change the value of the current amount owed.
- if `currentAmountOwed` is 0, then no more payments (positive `financialData`) can be created.
  - When a new positive financial data record is created, we will check the how much the customer currently owes. If they do not owe anything, then the transaction will be denied.
- the `currentAmountOwed` in transactions is dynamically incremented and decremented by exchanges
  - When a new exchange is made, it's value will effect the amount the current customer owes.
- if `currentAmountOwed` is 0, then no more exchanges can be created.
  - When an exchange is made, the amount that is currently owed to the customer will be checked. If that amount is zero, then the exchange will be denied.
- the `currentAmountOwed` in transactions is dynamically incremented and decremented by warranties
  - When a new warranty is created, it's cost will will be added to it's associated transaction.
- `Current_amount_paid` is dynamically incremented and decremented by `financialData`
  - When new financial data is entered, it's value will increment/decrement the record of the amount that has been paid so far.
- `Current_amount_paid` is dynamically incremented and decremented by exchanges
  - When a new exchange is created, it's value will increment/decrement the record of the amount that has been paid so far.
- return row cannot be created if the `transactionComplete` bool is not True

- When a new return is created, we will check to ensure that the transaction has already been completed. If it has not, then the return will be denied.
- When a return happens, if it wasn't shipped (bought in store/digital/preorder yet to be shipped or instock) then financialData putting the money back on a chosen card is made; if it was shipped, then only when the shipping back to the store is done is money put back on the card.
  - When a return happens, a new financial record will be created, which will document returning money to the customer in question. If the return requires shipping time, then this refund will not be paid out until the item reaches the store.
- warranty claim -> a replacement item is shipped out, Catalog.numberInStock-
  - When a new warranty claim is entered into the database, the quantity in stock of the associated item will be reduced by 1.
- A transaction is not complete while there is a unpaid cost or the shipped item has not arrived
  - When a transaction is updated, we check if the item has finished shipping, and if there are any unpaid costs. If the item has finished shipping, and there are no unpaid costs, then the transaction will be marked as complete.
- It is impossible to return a item before it is bought.
  - When a return is made, we compare its date to the date of the original order. If the return date is before the date of the original order, we deny it.
- financialData.datePaid is after transaction.dateMade
  - When new financial data is entered, we compare it's date to the date that the associated purchase was made. If the date is before the transaction was made, we reject it.
- the creation of a transaction results in respective Catalog.numberInStock-
  - When a transaction is made, the quantity in stock of the associated item will be reduced by 1.
- if a transaction is made for a catalog with numberInStock = 0 or dateFirstAvailable, then the transaction cannot be complete, and a shippingData cannot be made (the purchase is put on hold / inqueue).
  - When a transaction is made, we check the quantity of the item in stock. If there are no items in stock, then the purchase cannot be completed, and no shipping data will be recorded, but the transaction will still be recorded.
- Transactions on hold are given priority based on dateMade.
  - When the number of items in stock changes from 0, we search for incomplete transactions for the item in question. Those transactions are then completed in order of their date.



- if a catalog item reaches its EOL date, then it can no longer be used in a transaction.
  - When a transaction is made, we check the item's EOL date. If the EOL date is in the past, then the transaction is denied, as that item is no longer available.
- warrantyClaim\_claim can only be created when the current date  $\leq$  warrantyDate + lengthInDays
  - When a warranty claim is created, we use the date the warranty was issued and its length to check if it is still in-period. If it is not, then the claim cannot be entered.
  - Note that we assume all warranty claims in the database have been approved by store staff. This rule is simply an additional check.
- warranty.warrantyDate  $\geq$  transaction.dateMade
  - When a warranty is purchased, we check the current date, and the date that the associated transaction was made. If the current date is before the transaction date, we
- If currentAmountOwed is  $< 0$ , then a exchange overpayed, and money is put back on a chosen card

## Field Specification Forms:

### FIELD SPECIFICATIONS

#### GENERAL ELEMENTS

Field Name: account\_accountEmail  
 Parent Table: Accounts  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒ X  
   Generic: ☐ \_  
   Replica: ☐ \_  
 Source Specification: ☐ \_  
 Shared By: ☐ \_  
 Description: Email for a given user account. Multiple users cannot use the same email.

#### PHYSICAL ELEMENTS

Data Type: VARCHAR  
 Length: 80  
 Decimal Places: ☐ \_  
 Character Support:  
   Letters (A-Z): ☒ X  
   Numbers (0-9): ☒ X  
   Keyboard (./,\$#%): ☒ X  
   Special (©®™Σπ): ☐ \_

#### LOGICAL ELEMENTS

Key Type: Non: ☒ X  
           Primary: ☐ \_  
           Foreign: ☐ \_  
           Alternate: ☐ \_  
  
 Key Structure: Simple: ☐ \_  
                   Composite: ☐ \_  
  
 Uniqueness: Non-unique: ☐ \_  
               Unique: ☒ X  
  
 Null Support: Nulls OK: ☐ \_  
               No nulls: ☒ X  
  
 Values Entered By: User: ☒ X  
                       System: ☐ \_  
  
 Required Value: No: ☐ \_  
                   Yes: ☒ X

Range of Values: All valid characters

#### Edit Rule:

Enter now, edits allowed: ☒ X  
 Enter now, edits not allowed: ☐ \_  
 Enter later, edits allowed: ☐ \_  
 Enter later, edits not allowed: ☐ \_  
 Not determined at this time: ☐ \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: account\_accountId  
 Parent Table: Accounts  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The unique ID generated for each user account

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: 9  
 Decimal Places: 0  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☒  
   Keyboard (./,\$#%): ☐  
   Special (@®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
           Primary: ☒  
           Foreign: ☐  
           Alternate: ☐

Key Structure: Simple: ☒  
                   Composite: ☐

Uniqueness: Non-unique: ☐  
               Unique: ☒

Null Support: Nulls OK: ☐  
               No nulls: ☒

Values Entered By: User: ☐  
                           System: ☒

Required Value: No: ☐  
                   Yes: ☒

Range of Values: 1 to MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☒  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: account\_phone  
 Parent Table: Accounts  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: The phone number associated with an account. One phone number can be shared between multiple accounts.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: 12  
 Decimal Places: 0  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): X  
   Keyboard (.,/\$#%): \_  
   Special (©®™ΣΠ): \_

## LOGICAL ELEMENTS

Key Type: Non: X  
           Primary: \_  
           Foreign: \_  
           Alternate: \_

Key Structure: Simple: \_  
                   Composite: \_

Uniqueness: Non-unique: X  
               Unique: \_

Null Support: Nulls OK: X  
               No nulls: \_

Values Entered By: User: X  
                       System: \_

Required Value: No: X  
                   Yes: \_

Range of Values: all valid phone numbers for the range of relevant countries.

Edit Rule:  
   Enter now, edits allowed: X  
   Enter now, edits not allowed: \_  
   Enter later, edits allowed: \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: account\_userName  
 Parent Table: Accounts  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: \_ The username for a given account. Unlike email, it does not need to be unique.

## PHYSICAL ELEMENTS

Data Type: VARCHAR  
 Length: 30  
 Decimal Places: \_  
 Character Support:  
   Letters (A-Z): X  
   Numbers (0-9): X  
   Keyboard (./,\$#%): X  
   Special (©®™Σπ): \_

## LOGICAL ELEMENTS

Key Type:       Non:   X  
           Primary: \_  
           Foreign: \_  
           Alternate: \_  
  
 Key Structure: Simple: \_  
                   Composite: \_  
  
 Uniqueness:     Non-unique: X  
                   Unique: \_  
  
 Null Support: Nulls OK: \_  
                   No nulls: X  
  
 Values Entered By: User: X  
                           System: \_  
  
 Required Value: No:       \_  
                   Yes:     X

Range of Values: All valid characters

Edit Rule:  
   Enter now, edits allowed:       X  
   Enter now, edits not allowed: \_  
   Enter later, edits allowed:     \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalogId  
 Parent Table: Catalog  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒  
   Generic: ☐  
   Replica: ☐  
 Source Specification: Unique  
 Shared By: ☐  
 Description: ☐ Automatically generated unique ID for each item of equipment.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: -  
 Decimal Places: -  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                 Primary: ☒  
                 Foreign: ☐  
                 Alternate: ☐  
  
 Key Structure: Simple: ☒  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐  
                   Unique: ☒  
  
 Null Support: Nulls OK: ☐  
                 No nulls: ☒  
  
 Values Entered By: User: ☐  
                           System: ☒  
  
 Required Value: No: ☐  
                   Yes: ☒  
  
 Range of Values: 1-MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☒  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_category  
 Parent Table: Catalog  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: Description  
 Shared By: ☐  
 Description: ☐ The category of goods to which this item belongs.

## PHYSICAL ELEMENTS

Data Type: VARCHAR  
 Length: 100  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☒  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☒  
   Special (©®™ΣΠ): ☒

## LOGICAL ELEMENTS

Key Type:           Non: ☒  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☒  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐  
                   Unique: ☒  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☒  
  
 Values Entered By: User: ☐ ☒  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☒  
  
 Range of Values: All valid inputs

Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_currentPrice  
 Parent Table: Catalog  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: N/A  
 Shared By: N/A  
 Description: The base price in dollars of a given item in the catalog.

## PHYSICAL ELEMENTS

Data Type: DECIMAL  
 Length: 7  
 Decimal Places: 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:       Non: ☒  
               Primary: ☐  
               Foreign: ☐  
               Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:    Non-unique: ☒  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☒  
  
 Values Entered By: User: ☒  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☒  
  
 Range of Values: 1-9,999,999  
  
 Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐  
  
 NOTES: ☐



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_dateFirstAvailable  
 Parent Table: Catalog  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: \_ The date that a given item is made visible to customers and can be purchased.

## PHYSICAL ELEMENTS

Data Type: DATE  
 Length: \_  
 Decimal Places: \_  
 Character Support: \_  
   Letters (A-Z): \_  
   Numbers (0-9): \_  
   Keyboard (.,/\$#%): \_  
   Special (©®™Σπ): \_

## LOGICAL ELEMENTS

Key Type:       Non:   X  
           Primary: \_  
           Foreign: \_  
           Alternate: \_  
  
 Key Structure: Simple: \_  
                   Composite: \_  
  
 Uniqueness:    Non-unique: X  
                 Unique: \_  
  
 Null Support: Nulls OK: \_  
                 No nulls: X  
  
 Values Entered By: User: X  
                           System: \_  
  
 Required Value: No:     \_  
                   Yes:    X

Range of Values: All valid future dates

Edit Rule:  
   Enter now, edits allowed:       X  
   Enter now, edits not allowed:   \_  
   Enter later, edits allowed:     \_  
   Enter later, edits not allowed:  \_  
   Not determined at this time:   \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_dateFirstAvailable  
 Parent Table: Catalog  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: \_ The date that a given item is made visible to customers and can be purchased.

## PHYSICAL ELEMENTS

Data Type: DATE  
 Length: \_  
 Decimal Places: \_  
 Character Support: \_  
   Letters (A-Z): \_  
   Numbers (0-9): \_  
   Keyboard (.,/\$#%): \_  
   Special (©®™Σπ): \_

## LOGICAL ELEMENTS

Key Type:       Non:   X  
           Primary: \_  
           Foreign: \_  
           Alternate: \_  
  
 Key Structure: Simple: \_  
                   Composite: \_  
  
 Uniqueness:    Non-unique: X  
                 Unique: \_  
  
 Null Support: Nulls OK: \_  
                 No nulls: X  
  
 Values Entered By: User: X  
                           System: \_  
  
 Required Value: No:     \_  
                   Yes:    X

Range of Values: All valid future dates

Edit Rule:  
   Enter now, edits allowed:       X  
   Enter now, edits not allowed: \_  
   Enter later, edits allowed:     \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: Catalog\_itemName  
 Parent Table: Catalog  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: Source: N/A  
 Shared By: ☐  
 Description: ☐ The human-readable name of a particular item in the catalog

## PHYSICAL ELEMENTS

Data Type: VARCHAR  
 Length: 150  
 Decimal Places: N/A  
 Character Support:  
   Letters (A-Z): ☒  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☒  
   Special (©®™ΣΠ): ☒

## LOGICAL ELEMENTS

Key Type: Non: ☒  
   Primary: ☐  
   Foreign: ☐  
   Alternate: ☐

Key Structure: Simple: ☐  
   Composite: ☐

Uniqueness: Non-unique: ☒  
   Unique: ☐

Null Support: Nulls OK: ☐  
   No nulls: ☒

Values Entered By: User: ☒  
   System: ☐

Required Value: No: ☐  
   Yes: ☒

Range of Values: Any valid character

Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_manufacturer  
 Parent Table: Catalog  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: N/A  
 Shared By: ☐  
 Description: ☐ The brand of the item.

## PHYSICAL ELEMENTS

Data Type: VARCHAR  
 Length: 80  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☒  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☒  
   Special (©®™Σπ): ☒

## LOGICAL ELEMENTS

Key Type:       Non: ☒  
           Primary: ☐  
           Foreign: ☐  
           Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:    Non-unique: ☒  
                 Unique: ☐

Null Support: Nulls OK: ☐  
                 No nulls: ☒

Values Entered By: User: ☒  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☒

Range of Values: All valid inputs

Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_numberInStock  
 Parent Table: Catalog  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: N/A  
 Shared By: ☐  
 Description: ☐ The quantity of a given item that is currently in stock.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: 5  
 Decimal Places: 0  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☒  
   Primary: ☐  
   Foreign: ☐  
   Alternate: ☐

Key Structure: Simple: ☐  
   Composite: ☐

Uniqueness: Non-unique: ☒  
   Unique: ☐

Null Support: Nulls OK: ☐  
   No nulls: ☒

Values Entered By: User: ☒  
   System: ☐

Required Value: No: ☐  
   Yes: ☒

Range of Values: 0-99999

Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_catalogId  
 Parent Table: Descriptions  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒  
   Generic: ☐  
   Replica: ☐  
 Source Specification: Catalog  
 Shared By: ☐  
 Description: ☐ Automatically generated unique ID for each item of equipment.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: -  
 Decimal Places: -  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (./\$#%): ☐  
   Special (©®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
           Primary: ☐  
           Foreign: ☒  
           Alternate: ☐

Key Structure: Simple: ☒  
                   Composite: ☐

Uniqueness: Non-unique: ☐  
               Unique: ☒

Null Support: Nulls OK: ☒  
               No nulls: ☐

Values Entered By: User: ☐  
                           System: ☒

Required Value: No: ☐  
                   Yes: ☒

Range of Values: 1-MAXINT

Edit Rule:

Enter now, edits allowed: ☐  
 Enter now, edits not allowed: ☒  
 Enter later, edits allowed: ☐  
 Enter later, edits not allowed: ☐  
 Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: description\_Text  
 Parent Table: Descriptions  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ A text description of the associated product

## PHYSICAL ELEMENTS

Data Type: VARCHAR  
 Length: 5000  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☒  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☒  
   Special (©®™ΣΠ): ☒

## LOGICAL ELEMENTS

Key Type: Non: ☐  
   Primary: ☒  
   Foreign: ☐  
   Alternate: ☐

Key Structure: Simple: ☐  
   Composite: ☒

Uniqueness: Non-unique: ☒  
   Unique: ☐

Null Support: Nulls OK: ☐  
   No nulls: ☒

Values Entered By: User: ☒  
   System: ☐

Required Value: No: ☐  
   Yes: ☒

Range of Values: All valid characters

Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_catalogId  
 Parent Table: Discounts  
 Alias(es): N/A  
 Specification Type:  
   Unique: X  
   Generic: \_  
   Replica: \_  
 Source Specification: Catalog  
 Shared By: \_  
 Description: Automatically generated unique ID for each item of equipment.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: -  
 Decimal Places: -  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): -  
   Keyboard (./\$#%): \_  
   Special (©®™Σπ): \_

## LOGICAL ELEMENTS

Key Type: Non: \_  
           Primary: \_  
           Foreign: X  
           Alternate: \_

Key Structure: Simple: X  
                   Composite: \_

Uniqueness: Non-unique: \_  
               Unique: X

Null Support: Nulls OK: X  
               No nulls: \_

Values Entered By: User: \_  
                       System: X

Required Value: No: \_  
                   Yes: X

Range of Values: 1-MAXINT

## Edit Rule:

Enter now, edits allowed: \_  
 Enter now, edits not allowed: X  
 Enter later, edits allowed: \_  
 Enter later, edits not allowed: \_  
 Not determined at this time: \_

NOTES: \_



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: discount\_endDate  
 Parent Table: Discounts  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The date that a given discount stops being active

## PHYSICAL ELEMENTS

Data Type: DATE  
 Length: N/A  
 Decimal Places: N/A  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
   Primary: X  
   Foreign: ☐  
   Alternate: ☐

Key Structure: Simple: ☐  
   Composite: X

Uniqueness: Non-unique: X  
   Unique: ☐

Null Support: Nulls OK: ☐  
   No nulls: X

Values Entered By: User: X  
   System: ☐

Required Value: No: ☐  
   Yes: ☒

Range of Values: All valid dates later than the entry's discount\_startDate

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: X ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: discount\_startDate  
 Parent Table: Discounts  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The date that a given discount becomes active

## PHYSICAL ELEMENTS

Data Type: DATE  
 Length: N/A  
 Decimal Places: N/A  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
           Primary: X  
           Foreign: ☐  
           Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: X

Uniqueness: Non-unique: X  
               Unique: ☐

Null Support: Nulls OK: ☐  
               No nulls: X

Values Entered By: User: X  
                       System: ☐

Required Value: No: ☐  
                   Yes: ☒

Range of Values: All valid future dates

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: X ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: discount\_priceOffPercent  
 Parent Table: Discounts  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ A discount applied to a specific item in the inventory, represented as a percentage to take off the price.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: 3  
 Decimal Places: 0  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☒  
   Keyboard (.,/\$#%): ☐  
   Special (©®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☒  
   Primary: ☐  
   Foreign: ☐  
   Alternate: ☐  
  
 Key Structure: Simple: ☐  
   Composite: ☐  
  
 Uniqueness: Non-unique: ☒  
   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
   No nulls: ☒  
  
 Values Entered By: User: ☒  
   System: ☐  
  
 Required Value: No: ☐  
   Yes: ☒

Range of Values: 1-100

Edit Rule:  
   Enter now, edits allowed: ☒  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: EOLItem\_dateDisctoninued  
 Parent Table: EOLItems  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The date that an item in the inventory will reach end of life and no longer be sold.

## PHYSICAL ELEMENTS

Data Type: DATE  
 Length: N/A  
 Decimal Places: N/A  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
           Primary: ☒ X  
           Foreign: ☐  
           Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☒ X

Uniqueness: Non-unique: ☒ X  
               Unique: ☐

Null Support: Nulls OK: ☐  
               No nulls: ☒ X

Values Entered By: User: ☒ X  
                       System: ☐

Required Value: No: ☐  
                   Yes: ☒ X

Range of Values: All valid future dates

Edit Rule:  
   Enter now, edits allowed: ☒ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_catalogId  
 Parent Table: EOLItems  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒  
   Generic: ☐  
   Replica: ☐  
 Source Specification: Catalog  
 Shared By: ☐  
 Description: ☐ Automatically generated unique ID for each item of equipment.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: -  
 Decimal Places: -  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (./\$#%): ☐  
   Special (©®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
           Primary: ☐  
           Foreign: ☒  
           Alternate: ☐

Key Structure: Simple: ☒  
                   Composite: ☐

Uniqueness: Non-unique: ☐  
               Unique: ☒

Null Support: Nulls OK: ☒  
               No nulls: ☐

Values Entered By: User: ☐  
                           System: ☒

Required Value: No: ☐  
                   Yes: ☒

Range of Values: 1-MAXINT

Edit Rule:

Enter now, edits allowed: ☐  
 Enter now, edits not allowed: ☒  
 Enter later, edits allowed: ☐  
 Enter later, edits not allowed: ☐  
 Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_transactionId  
 Parent Table: ☐ Exchanges  
 Alias(es): ☐  
 Specification Type:  
     Unique: ☐ X  
     Generic: ☐  
     Replica: ☐ X  
 Source Specification: ☐ Transactions  
 Shared By: ☐  
 Description: ☐ The transaction that the exchange is paying towards

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
     Letters (A-Z): ☐  
     Numbers (0-9): ☐  
     Keyboard (.,/\$#%): ☐  
     Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
     Primary: ☐ X  
     Foreign: ☐ X  
     Alternate: ☐  
  
 Key Structure: Simple: ☐ X  
     Composite: ☐  
  
 Uniqueness:       Non-unique: ☐  
     Unique: ☐ X  
  
 Null Support: Nulls OK: ☐  
     No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
     System: ☐  
  
 Required Value: No: ☐  
     Yes: ☐ X  
  
 Range of Values: ☐ 1 to MAXINT  
  
 Edit Rule:  
     Enter now, edits allowed: ☐  
     Enter now, edits not allowed: ☐ X ☐  
     Enter later, edits allowed: ☐  
     Enter later, edits not allowed: ☐  
     Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ exchange\_amountOwedAtExchange  
 Parent Table: ☐ Exchanges  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The amount owed in the transaction at the creation of the exchange record.

## PHYSICAL ELEMENTS

Data Type: ☐ DECIMAL  
 Length: ☐ 8  
 Decimal Places: ☐ 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐  
                           System: ☐ X  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ -99,999,999.99 to 99,999,999.99  
  
 Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ exchange\_idOfExchangedTransaction  
 Parent Table: ☐ Exchanges  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The id of the transaction being returned in the exchange.

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:       Non-unique: ☐  
                   Unique: ☐ X

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ 1 to MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ exchange\_returnTrackingId  
 Parent Table: ☐ Exchanges  
 Alias(es): ☐  
 Specification Type:  
     Unique: ☐  
     Generic: ☐  
     Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The tracking id provided by the shipping company for the item being returned to pay for the exchange.

## PHYSICAL ELEMENTS

Data Type: ☐ VARCHAR  
 Length: ☐ 128  
 Decimal Places: ☐  
 Character Support:  
     Letters (A-Z): ☐ X  
     Numbers (0-9): ☐ X  
     Keyboard (.,/\$#%): ☐ X  
     Special (©®™ΣΠ): ☐ X

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
     Primary: ☐  
     Foreign: ☐  
     Alternate: ☐

Key Structure: Simple: ☐  
     Composite: ☐

Uniqueness:       Non-unique: ☐  
     Unique: ☐

Null Support: Nulls OK: ☐ X  
     No nulls: ☐

Values Entered By: User: ☐ X  
     System: ☐

Required Value: No: ☐ X  
     Yes: ☐

Range of Values: ☐ Any valid string

Edit Rule:  
     Enter now, edits allowed: ☐ ☐  
     Enter now, edits not allowed: ☐ ☐  
     Enter later, edits allowed: ☐ ☐  
     Enter later, edits not allowed: ☐ ☐  
     Not determined at this time: ☐ ☐ X

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_transactionId  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The id of the transaction that the financial data is going to.

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☐  
                   Foreign: ☐ X  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ 1 to MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ financialDatum\_amountOwedAtPayment  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The amount owed at the creation of the financial data.

## PHYSICAL ELEMENTS

Data Type: ☐ DECIMAL  
 Length: ☐ 8  
 Decimal Places: ☐ 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐  
                           System: ☐ X  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ -99,999,999.99 to 99,999,999.99

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ financialDatum\_amountPaidAtPayment  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The amount paid in the financial transaction.

## PHYSICAL ELEMENTS

Data Type: ☐ DECIMAL  
 Length: ☐ 8  
 Decimal Places: ☐ 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ -99,999,999.99 to 99,999,999.99

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ financialDatum\_billingAddress  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The billing address for the transaction.

## PHYSICAL ELEMENTS

Data Type: ☐ VARCHAR  
 Length: ☐ 128  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☐ X  
   Numbers (0-9): ☐ X  
   Keyboard (.,/\$#%): ☐ X  
   Special (©®™ΣΠ): ☐ X

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ Any valid string

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ financialDatum\_datePaid  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The date and time the financial date was entered / the date and time the amount was paid

## PHYSICAL ELEMENTS

Data Type: ☐ DATETIME  
 Length: ☐  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ Any valid time  
  
 Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ financialDatum\_financialId  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☒ X  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The unique id marking each financial data entry.

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☒ X  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☒ X  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐  
                   Unique: ☒ X  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☒ X  
  
 Values Entered By: User: ☐  
                           System: ☒ X  
  
 Required Value: No: ☐  
                   Yes: ☒ X  
  
 Range of Values: ☐ 1 to MAXINT  
  
 Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☒ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ financialDatum\_last4digitsOfCard  
 Parent Table: ☐ FinancialData  
 Alias(es): ☐  
 Specification Type:  
     Unique: ☐  
     Generic: ☐  
     Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The last four digits of the card used to make the financial transaction.

## PHYSICAL ELEMENTS

Data Type: ☐ CHAR  
 Length: ☐ 4  
 Decimal Places: ☐  
 Character Support:  
     Letters (A-Z): ☐  
     Numbers (0-9): ☐ X  
     Keyboard (.,/\$#%): ☐  
     Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
     Primary: ☐  
     Foreign: ☐  
     Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ any 4 character permutation of the characters '0' to '9'

Edit Rule:  
     Enter now, edits allowed: ☐  
     Enter now, edits not allowed: ☐ X  
     Enter later, edits allowed: ☐  
     Enter later, edits not allowed: ☐  
     Not determined at this time: ☐

NOTES: ☐



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name:  transaction\_transactionId  
 Parent Table:  Returns  
 Alias(es):   
 Specification Type:  
     Unique:  X  
     Generic:   
     Replica:  X  
 Source Specification:  Transactions  
 Shared By:   
 Description:  The Transaction the return is associated with.

## PHYSICAL ELEMENTS

Data Type:  INT  
 Length:   
 Decimal Places:   
 Character Support:   
     Letters (A-Z):   
     Numbers (0-9):   
     Keyboard (.,/\$#%):   
     Special (©®™ΣΠ):

## LOGICAL ELEMENTS

Key Type:           Non:   
     Primary:  X  
     Foreign:  X  
     Alternate:   
  
 Key Structure: Simple:  X  
                   Composite:   
  
 Uniqueness:       Non-unique:   
                   Unique:  X  
  
 Null Support: Nulls OK:   
                   No nulls:  X  
  
 Values Entered By: User:  X  
                           System:   
  
 Required Value: No:   
                   Yes:  X  
  
 Range of Values:  1 to MAXINT  
  
 Edit Rule:  
     Enter now, edits allowed:   
     Enter now, edits not allowed:  X  
     Enter later, edits allowed:   
     Enter later, edits not allowed:   
     Not determined at this time:

NOTES:

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ return\_dateReturned  
 Parent Table: ☐ Returns  
 Alias(es): ☐  
 Specification Type:  
     Unique: ☐  
     Generic: ☐  
     Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The return date on which the transaction was returned.

## PHYSICAL ELEMENTS

Data Type: ☐ DATETIME  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
     Letters (A-Z): ☐  
     Numbers (0-9): ☐  
     Keyboard (.,/\$#%): ☐  
     Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
     Primary: ☐  
     Foreign: ☐  
     Alternate: ☐  
  
 Key Structure: Simple: ☐  
     Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
     Unique: ☐  
  
 Null Support: Nulls OK: ☐  
     No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
     System: ☐  
  
 Required Value: No: ☐  
     Yes: ☐ X  
  
 Range of Values: ☐ Any valid date after the the related Transaction.dateMade

Edit Rule:  
     Enter now, edits allowed: ☐  
     Enter now, edits not allowed: ☐ X ☐  
     Enter later, edits allowed: ☐  
     Enter later, edits not allowed: ☐  
     Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_transactionId  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐ X  
 Source Specification: ☐ Transactions  
 Shared By: ☐  
 Description: ☐ The id of the transaction that the shipping data record is associated with. Part of CPK

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☐ X  
                   Foreign: ☐ X  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐ X  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ 1 to MAXINT  
  
 Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐  
  
 NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ shippingDatum\_destinationAddress  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The destination address for the package.

## PHYSICAL ELEMENTS

Data Type: ☐ VARCHAR  
 Length: ☐ 256  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☐ X  
   Numbers (0-9): ☐ X  
   Keyboard (.,/\$#%): ☐ X  
   Special (©®™ΣΠ): ☐ X

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ Any valid string  
  
 Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐  
  
 NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ shippingDatum\_itemArrivedBool  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ Boolean to mark if a package has arrived.

## PHYSICAL ELEMENTS

Data Type: ☐ Boolean  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ FALSE, TRUE  
  
 Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐  
  
 NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ shippingDatum\_shippingCost  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The cost of shipping the transaction item.

## PHYSICAL ELEMENTS

Data Type: ☐ DECIMAL(8,2)  
 Length: ☐ 10 place markers  
 Decimal Places: ☐ 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐ X  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ -99,999,999.99 to 99,999,999.99

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ shippingDatum\_shippingCost  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The cost of shipping the transaction item.

## PHYSICAL ELEMENTS

Data Type: ☐ DECIMAL(8,2)  
 Length: ☐ 10 place markers  
 Decimal Places: ☐ 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐ X  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ -99,999,999.99 to 99,999,999.99

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ shippingDatum\_shippingService  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The name of the chosen shipping company which will handle the package.

## PHYSICAL ELEMENTS

Data Type: ☐ VARCHAR  
 Length: ☐ 128  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☐ X  
   Numbers (0-9): ☐ X  
   Keyboard (.,/\$#%): ☐ X  
   Special (©®™ΣΠ): ☐ X

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ Any valid 128 character string

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ shippingDatum\_trackingId  
 Parent Table: ☐ ShippingData  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☒ X  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The tracking id provided by the shipping company, one part of the Compound Primary Key.

## PHYSICAL ELEMENTS

Data Type: ☐ VARCHAR  
 Length: ☐ 256  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☒ X  
   Numbers (0-9): ☒ X  
   Keyboard (.,/\$#%): ☒ X  
   Special (©®™ΣΠ): ☐ X

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☒ X  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☒ X

Uniqueness:       Non-unique: ☐  
                   Unique: ☒ X

Null Support: Nulls OK: ☒ X  
                   No nulls: ☐

Values Entered By: User: ☒ X  
                           System: ☐

Required Value: No: ☒ X  
                   Yes: ☐

Range of Values: ☐ Whatever the tracking id provided by the outside company is

Edit Rule:  
   Enter now, edits allowed: ☐ ☐  
   Enter now, edits not allowed: ☐ ☐  
   Enter later, edits allowed: ☐ ☐  
   Enter later, edits not allowed: ☐ ☐  
   Not determined at this time: ☐ ☒ X

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: account\_accountId  
 Parent Table: Transactions  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The unique ID generated for each user account

## PHYSICAL ELEMENTS

Data Type: INT  
 Length:  
 Decimal Places:  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (./,\$#%): ☐  
   Special (©®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type:       Non: ☐  
           Primary: ☐  
           Foreign: ☒  
           Alternate: ☐

Key Structure: Simple: ☒  
                   Composite: ☐

Uniqueness:     Non-unique: ☐  
                   Unique: ☒

Null Support: Nulls OK: ☐  
                   No nulls: ☒

Values Entered By: User: ☐  
                           System: ☒

Required Value: No: ☐  
                   Yes: ☒

Range of Values: 0-MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☒  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: catalog\_catalogId  
 Parent Table: Transactions  
 Alias(es): N/A  
 Specification Type:  
   Unique: X  
   Generic: \_  
   Replica: \_  
 Source Specification: Catalog  
 Shared By: \_  
 Description: Automatically generated unique ID for each item of equipment.

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: -  
 Decimal Places: -  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): -  
   Keyboard (./\$#%): \_  
   Special (©®™Σπ): \_

## LOGICAL ELEMENTS

Key Type: Non: \_  
   Primary: \_  
   Foreign: X  
   Alternate: \_

Key Structure: Simple: X  
   Composite: \_

Uniqueness: Non-unique: \_  
   Unique: X

Null Support: Nulls OK: X  
   No nulls: \_

Values Entered By: User: \_  
   System: X

Required Value: No: \_  
   Yes: X

Range of Values: 1-MAXINT

## Edit Rule:

Enter now, edits allowed: \_  
 Enter now, edits not allowed: X  
 Enter later, edits allowed: \_  
 Enter later, edits not allowed: \_  
 Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_onHold  
 Parent Table: ☐ Transaction  
 Alias(es): ☐  
 Specification Type:  
     Unique: ☐  
     Generic: ☐  
     Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ A boolean to mark if a transaction is on hold due to missing stock or a unreleased item.

## PHYSICAL ELEMENTS

Data Type: ☐ BOOLEAN  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
     Letters (A-Z): ☐  
     Numbers (0-9): ☐  
     Keyboard (.,/\$#%): ☐  
     Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
     Primary: ☐  
     Foreign: ☐  
     Alternate: ☐  
  
 Key Structure: Simple: ☐  
     Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
     Unique: ☐  
  
 Null Support: Nulls OK: ☐  
     No nulls: ☐ X  
  
 Values Entered By: User: ☐  
     System: ☐ X  
  
 Required Value: No: ☐  
     Yes: ☐ X  
  
 Range of Values: ☐ default: FALSE, can be updated to TRUE

Edit Rule:  
     Enter now, edits allowed: ☐ X  
     Enter now, edits not allowed: ☐  
     Enter later, edits allowed: ☐  
     Enter later, edits not allowed: ☐  
     Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: transaction\_currentAmountOwed  
 Parent Table: Transactions  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By:  
 Description: \_ The amount remaining to be owed on a given transaction - necessary because multiple transactions may be used for a single purchase, such as if multiple cards are used.

## PHYSICAL ELEMENTS

Data Type: DECIMAL  
 Length: 7  
 Decimal Places: 2  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): X  
   Keyboard (.,/\$#%): \_  
   Special (©®™ΣΠ): \_

## LOGICAL ELEMENTS

Key Type: Non: X  
   Primary: \_  
   Foreign: \_  
   Alternate: \_

Key Structure: Simple: \_  
   Composite: \_

Uniqueness: Non-unique: X  
   Unique: \_

Null Support: Nulls OK: \_  
   No nulls: X

Values Entered By: User: \_  
   System: X

Required Value: No: \_  
   Yes: X

Range of Values: 0-99999999.99

Edit Rule:  
   Enter now, edits allowed: \_  
   Enter now, edits not allowed: X \_  
   Enter later, edits allowed: \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: transaction\_currentAmountPaid  
 Parent Table: Transactions  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: \_ The amount being paid on a given transaction - necessary because multiple transactions may be used for a single purchase, such as if multiple cards are used.

## PHYSICAL ELEMENTS

Data Type: DECIMAL  
 Length: 7  
 Decimal Places: 2  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): X  
   Keyboard (.,/\$#%): \_  
   Special (©®™ΣΠ): \_

## LOGICAL ELEMENTS

Key Type: Non: X  
   Primary: \_  
   Foreign: \_  
   Alternate: \_

Key Structure: Simple: \_  
   Composite: \_

Uniqueness: Non-unique: X  
   Unique: \_

Null Support: Nulls OK: \_  
   No nulls: X

Values Entered By: User: \_  
   System: X

Required Value: No: \_  
   Yes: X

Range of Values: 0-9999999.99

Edit Rule:  
   Enter now, edits allowed: \_  
   Enter now, edits not allowed: X \_  
   Enter later, edits allowed: \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: transaction\_dateMade  
 Parent Table: Transactions  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: \_ The date that a given transaction was initiated

## PHYSICAL ELEMENTS

Data Type: DATE  
 Length: \_  
 Decimal Places: \_  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): \_  
   Keyboard (./,\$#%): \_  
   Special (©®™Σπ): \_

## LOGICAL ELEMENTS

Key Type: Non: X  
   Primary: \_  
   Foreign: \_  
   Alternate: \_

Key Structure: Simple: \_  
   Composite: \_

Uniqueness: Non-unique: \_  
   Unique: X

Null Support: Nulls OK: \_  
   No nulls: X

Values Entered By: User: \_  
   System: X

Required Value: No: \_  
   Yes: X

Range of Values: \_

Edit Rule:  
   Enter now, edits allowed: \_  
   Enter now, edits not allowed: X  
   Enter later, edits allowed: \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: transaction\_originalPriceAtTransaction  
 Parent Table: Transactions  
 Alias(es): \_  
 Specification Type:  
   Unique: \_  
   Generic: \_  
   Replica: \_  
 Source Specification: \_  
 Shared By: \_  
 Description: \_ The actual price that was received for an item.

## PHYSICAL ELEMENTS

Data Type: DECIMAL  
 Length: 7  
 Decimal Places: 2  
 Character Support:  
   Letters (A-Z): \_  
   Numbers (0-9): X  
   Keyboard (./,\$#%): \_  
   Special (@®™Σπ): \_

## LOGICAL ELEMENTS

Key Type:       Non:   X  
               Primary: \_  
               Foreign: \_  
               Alternate: \_  
  
 Key Structure: Simple: \_  
                   Composite: \_  
  
 Uniqueness:    Non-unique: X  
                   Unique: \_  
  
 Null Support: Nulls OK: \_  
                   No nulls: X  
  
 Values Entered By: User: \_  
                           System: X  
  
 Required Value: No:       \_  
                   Yes:     X  
  
 Range of Values: 0-99999999.99

Edit Rule:  
   Enter now, edits allowed: \_  
   Enter now, edits not allowed: X \_  
   Enter later, edits allowed: \_  
   Enter later, edits not allowed: \_  
   Not determined at this time: \_

NOTES: \_



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_transactionCompleteBool  
 Parent Table: ☐ Transaction  
 Alias(es): ☐  
 Specification Type:  
     Unique: ☐  
     Generic: ☐  
     Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ A boolean to mark if a transaction has been fully paid for, and has finished shipping.

## PHYSICAL ELEMENTS

Data Type: ☐ BOOLEAN  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
     Letters (A-Z): ☐  
     Numbers (0-9): ☐  
     Keyboard (.,/\$#%): ☐  
     Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
     Primary: ☐  
     Foreign: ☐  
     Alternate: ☐  
  
 Key Structure: Simple: ☐  
     Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
     Unique: ☐  
  
 Null Support: Nulls OK: ☐  
     No nulls: ☐ X  
  
 Values Entered By: User: ☐  
     System: ☐ X  
  
 Required Value: No: ☐  
     Yes: ☐ X  
  
 Range of Values: ☐ default: FALSE, can be updated to TRUE

Edit Rule:  
     Enter now, edits allowed: ☐ X  
     Enter now, edits not allowed: ☐  
     Enter later, edits allowed: ☐  
     Enter later, edits not allowed: ☐  
     Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: transaction\_transactionID  
 Parent Table: Transactions  
 Alias(es): N/A  
 Specification Type:  
   Unique: ☒ X  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☒ A unique generated ID for a given transaction

## PHYSICAL ELEMENTS

Data Type: INT  
 Length: -  
 Decimal Places: -  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☒ X  
   Keyboard (./,\$#%): ☐  
   Special (@®™Σπ): ☐

## LOGICAL ELEMENTS

Key Type: Non: ☐  
           Primary: ☒ X  
           Foreign: ☐  
           Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness: Non-unique: ☐  
               Unique: ☒ X

Null Support: Nulls OK: ☐  
               No nulls: ☒ X

Values Entered By: User: ☐  
                           System: ☒ X

Required Value: No: ☐  
                   Yes: ☒ X

Range of Values: ☐ 1 to MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☒ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_transactionId  
 Parent Table: ☐ Warranties  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐ X  
 Source Specification: ☐ Transactions  
 Shared By: ☐  
 Description: ☐ The transaction that the warranty is covering.

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☐  
                   Foreign: ☐ X  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐ X  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ 1 to MAXINT  
  
 Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ warranty\_lengthInDays  
 Parent Table: ☐ Warranties  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The length of the Warranty in days.

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ 0 to MAXINT  
  
 Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐  
  
 NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ warranty\_warrantyCost  
 Parent Table: ☐ Warranties  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ The cost of the warranty itself.

## PHYSICAL ELEMENTS

Data Type: ☐ DECIMAL  
 Length: ☐ 8  
 Decimal Places: ☐ 2  
 Character Support:  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ -99,999,999.99 to 99,999,999.99

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ warranty\_warrantyDate  
 Parent Table: ☐ Warranties  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ Start date of the Warranty period.

## PHYSICAL ELEMENTS

Data Type: ☐ DATE  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
                   Primary: ☐  
                   Foreign: ☐  
                   Alternate: ☐  
  
 Key Structure: Simple: ☐  
                   Composite: ☐  
  
 Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐  
  
 Null Support: Nulls OK: ☐  
                   No nulls: ☐ X  
  
 Values Entered By: User: ☐ X  
                           System: ☐  
  
 Required Value: No: ☐  
                   Yes: ☐ X  
  
 Range of Values: ☐ Any valid date after the transaction.transaction\_dateMade

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ warranty\_warrantyld  
 Parent Table: ☐ Warranties  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☒ X  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ the unique id for each Warranty created

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☒ X  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☒ X  
                   Composite: ☐

Uniqueness:       Non-unique: ☐  
                   Unique: ☒ X

Null Support: Nulls OK: ☐  
                   No nulls: ☒ X

Values Entered By: User: ☐  
                           System: ☒ X

Required Value: No: ☐  
                   Yes: ☒ X

Range of Values: ☐ 1 to MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☒ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ warranty\_warrantyld  
 Parent Table: ☐ WarrantyClaims  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐ X  
 Source Specification: ☐ Warranties  
 Shared By: ☐  
 Description: ☐ The id of the warranty being claimed.

## PHYSICAL ELEMENTS

Data Type: ☐ INT  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☐ X  
                   Foreign: ☐ X  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐ X

Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ 1 to MAXINT

Edit Rule:  
   Enter now, edits allowed: ☐  
   Enter now, edits not allowed: ☐ X  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐



## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ warrantyClaim\_claim  
 Parent Table: ☐ WarrantyClaims  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ Text describing why the item was claimed.

## PHYSICAL ELEMENTS

Data Type: ☐ VARCHAR  
 Length: ☐ 1024  
 Decimal Places: ☐  
 Character Support:  
   Letters (A-Z): ☐ X  
   Numbers (0-9): ☐ X  
   Keyboard (.,/\$#%): ☐ X  
   Special (©®™ΣΠ): ☐ X

## LOGICAL ELEMENTS

Key Type:           Non: ☐  
                   Primary: ☐ X  
                   Foreign: ☐  
                   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐ X

Uniqueness:       Non-unique: ☐  
                   Unique: ☐ X

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐ X  
                           System: ☐

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ Any valid String up to 1024 chars

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

## FIELD SPECIFICATIONS

## GENERAL ELEMENTS

Field Name: ☐ transaction\_onHold  
 Parent Table: ☐ Transactions  
 Alias(es): ☐  
 Specification Type:  
   Unique: ☐  
   Generic: ☐  
   Replica: ☐  
 Source Specification: ☐  
 Shared By: ☐  
 Description: ☐ Boolean marking if a transaction is on hold

## PHYSICAL ELEMENTS

Data Type: ☐ BOOL  
 Length: ☐  
 Decimal Places: ☐  
 Character Support: ☐  
   Letters (A-Z): ☐  
   Numbers (0-9): ☐  
   Keyboard (.,/\$#%): ☐  
   Special (©®™ΣΠ): ☐

## LOGICAL ELEMENTS

Key Type:           Non: ☐ X  
   Primary: ☐  
   Foreign: ☐  
   Alternate: ☐

Key Structure: Simple: ☐  
                   Composite: ☐

Uniqueness:       Non-unique: ☐ X  
                   Unique: ☐

Null Support: Nulls OK: ☐  
                   No nulls: ☐ X

Values Entered By: User: ☐  
                           System: ☐ X

Required Value: No: ☐  
                   Yes: ☐ X

Range of Values: ☐ True or False

Edit Rule:  
   Enter now, edits allowed: ☐ X  
   Enter now, edits not allowed: ☐  
   Enter later, edits allowed: ☐  
   Enter later, edits not allowed: ☐  
   Not determined at this time: ☐

NOTES: ☐

**BUSINESS RULES:****BUSINESS RULE SPECIFICATIONS****RULE INFORMATION**

Statement: If an item is returned, the date must be after the date it was originally purchased.

Constraint: The date in a given exchange's transaction\_datemade must be after the date of exchange's IdOfExchangedTransaction.

Type: Database Oriented: ☒ X  
 Application Oriented ☐ \_

Category: Field Specific: ☒ X  
 Relationship Specific: ☐ \_

Test On: Insert: ☒ X  
 Delete: ☐ \_  
 Update: ☐ \_

**STRUCTURES AFFECTED**

Field Names: transaction\_dateMade

Table Names: Transactions

**FIELD ELEMENTS AFFECTED**

Physical Elements: Data Type: ☐ \_  
 Length: ☐ \_  
 Character Support: ☐ \_

Logical Elements: Key Type: ☐ \_  
 Key Structure: ☐ \_  
 Uniqueness: ☐ \_  
 Null Support: ☐ \_  
 Values Entered By: ☐ \_  
 Range of Values: ☐ \_  
 Edit Rule: ☐ \_

**RELATIONSHIP CHARACTERISTICS AFFECTED**

Deletion rule: ☐ \_  
 Type of participation: ☐ \_  
 Degree of participation: ☐ \_

**ACTION TAKEN**

—

NOTES: \_

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: The amount that a customer owes is effected by their shipping cost

Constraint: When a shippingCost entry is made, the customer's amountOwed must be modified

Type: Database Oriented: ☐  
 Application Oriented: ☒

Category: Field Specific: ☐  
 Relationship Specific: ☒

Test On: Insert: ☒  
 Delete: ☒  
 Update: ☒

## STRUCTURES AFFECTED

Field Names: \_shippingData.shippingCost, transactions.ammountOwed.

Table Names: shippingData, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
 Length: ☐  
 Character Support: ☐

Logical Elements: Key Type: ☐  
 Key Structure: ☐  
 Uniqueness: ☐  
 Null Support: ☐  
 Values Entered By: ☐  
 Range of Values: ☐  
 Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
 Type of participation: ☒  
 Degree of participation: ☐

## ACTION TAKEN

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NOTES: \_

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: The amount that a customer owes is effected by their payments they make

Constraint: financialData.amountPaidAtPayment will decrease the related transactions.currentAmountOwed

Type: Database Oriented: ☐  
 Application Oriented ☒

Category: Field Specific: ☐  
 Relationship Specific: ☒

Test On: Insert: ☒  
 Delete: ☒  
 Update: ☒

## STRUCTURES AFFECTED

Field Names: amountPaidAtPayment, currentAmountOwed

Table Names: financialData, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
 Length: ☐  
 Character Support: ☐

Logical Elements: Key Type: ☐  
 Key Structure: ☐  
 Uniqueness: ☐  
 Null Support: ☐  
 Values Entered By: ☐  
 Range of Values: ☐  
 Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
 Type of participation: ☒  
 Degree of participation: ☐

## ACTION TAKEN

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NOTES: —

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: The amount that a customer owes is effected by exchanges they may make

Constraint: exchanges.amountOwedAtExchange will effect the related transactions.currentAmountOwed

Type: Database Oriented: ☐  
 Application Oriented ☒

Category: Field Specific: ☐  
 Relationship Specific: ☒

Test On: Insert: ☒  
 Delete: ☒  
 Update: ☒

## STRUCTURES AFFECTED

Field Names: amountPaidAtPayment, currentAmountOWed

Table Names: financialData, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
 Length: ☐  
 Character Support: ☐

Logical Elements: Key Type: ☐  
 Key Structure: ☐  
 Uniqueness: ☐  
 Null Support: ☐  
 Values Entered By: ☐  
 Range of Values: ☐  
 Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
 Type of participation: ☒  
 Degree of participation: ☐

## ACTION TAKEN

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NOTES: —

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: The amount that a customer owes is effected by the addition of a warranty

Constraint: warranties.warrantyCost will effect the related transactions.currentAmountOwed

Type: Database Oriented: ☐  
 Application Oriented ☒

Category: Field Specific: ☐  
 Relationship Specific: ☒

Test On: Insert: ☒  
 Delete: ☒  
 Update: ☒

## STRUCTURES AFFECTED

Field Names: warranties.warrantyCost currentAmountOWed

Table Names: warranties, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
 Length: ☐  
 Character Support: ☐

Logical Elements: Key Type: ☐  
 Key Structure: ☐  
 Uniqueness: ☐  
 Null Support: ☐  
 Values Entered By: ☐  
 Range of Values: ☐  
 Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
 Type of participation: ☒  
 Degree of participation: ☐

## ACTION TAKEN

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NOTES: \_

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: The amount that a customer has already paid is incremented and decremented by the payments that they make

Constraint: financialData.amountPaidAtPayment will effect the related transactions.currentAmountPaid

Type: Database Oriented: ☐  
Application Oriented: ☒

Category: Field Specific: ☐  
Relationship Specific: ☒

Test On: Insert: ☒  
Delete: ☒  
Update: ☒

## STRUCTURES AFFECTED

Field Names: financialData.amountPaidAtPayment transactions.currentAmountPaid

Table Names: financialData, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☒  
Degree of participation: ☐

## ACTION TAKEN

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NOTES: ☐



## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: The amount that a customer has already paid is incremented and decremented by exchanges

Constraint: exchanges.amountOwedAtExchange will effect the related transactions.currentAmountPaid

Type: Database Oriented: ☐  
 Application Oriented: ☒

Category: Field Specific: ☐  
 Relationship Specific: ☒

Test On: Insert: ☒  
 Delete: ☒  
 Update: ☒

## STRUCTURES AFFECTED

Field Names: exchanges.amountOwedAtExchange, transactions.currentAmountPaid

Table Names: exchanges, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
 Length: ☐  
 Character Support: ☐

Logical Elements: Key Type: ☐  
 Key Structure: ☐  
 Uniqueness: ☐  
 Null Support: ☐  
 Values Entered By: ☐  
 Range of Values: ☐  
 Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
 Type of participation: ☒  
 Degree of participation: ☐

## ACTION TAKEN

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NOTES: —

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: A return cannot be initiated until the transaction it seeks to undo has been completed.

Constraint: if transactions.transactionCompleteBool is false, then a Returns record cannot be made for that transaction.

Type: Database Oriented: X  
Application Oriented: \_

Category: Field Specific: \_  
Relationship Specific: X

Test On: Insert: X  
Delete: \_  
Update: \_

## STRUCTURES AFFECTED

Field Names: transactions.transactionCompleteBool

Table Names: returns, transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: \_  
Length: \_  
Character Support: \_

Logical Elements: Key Type: \_  
Key Structure: \_  
Uniqueness: \_  
Null Support: \_  
Values Entered By: \_  
Range of Values: \_  
Edit Rule: \_

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: \_  
Type of participation: \_  
Degree of participation: X

## ACTION TAKEN

\_

NOTES: \_

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: If an item is returned without having been shipped, the customer is immediately reimbursed. Otherwise, reimbursement waits until the company has recieved the item.

Constraint: if a return is initiated for a given transaction, and that transaction has an associated shipping data record associated with it, then a financialData record cannot be created for reimbursement until return.dateReturned has been filled.

Type: Database Oriented: X  
Application Oriented \_

Category: Field Specific: \_  
Relationship Specific: X

Test On: Insert: X  
Delete: \_  
Update: \_

## STRUCTURES AFFECTED

Field Names: returns.dateReturned,

Table Names: returns, transactions, financialData

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: \_  
Length: \_  
Character Support: \_

Logical Elements: Key Type: \_  
Key Structure: \_  
Uniqueness: \_  
Null Support: \_  
Values Entered By: \_  
Range of Values: \_  
Edit Rule: \_

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: \_  
Type of participation: \_  
Degree of participation: X

## ACTION TAKEN

\_

NOTES: \_

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: When a warranty claim is accepted, the associated item's inventory stock is reduced.

Constraint: When a new warrantyClaim record is created, it's associated catalog.numberInStock is reduced by 1

Type: Database Oriented: X  
Application Oriented \_

Category: Field Specific: \_  
Relationship Specific: X

Test On: Insert: X  
Delete: \_  
Update: \_

## STRUCTURES AFFECTED

Field Names: catalog\_numberInStock

Table Names: catalog, warrantyClaims

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: \_  
Length: \_  
Character Support: \_

Logical Elements: Key Type: \_  
Key Structure: \_  
Uniqueness: \_  
Null Support: \_  
Values Entered By: \_  
Range of Values: \_  
Edit Rule: \_

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: \_  
Type of participation: \_  
Degree of participation: \_

## ACTION TAKEN

\_

NOTES: \_

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ A transaction is not complete while there is a unpaid cost or the shipped item has not arrived

Constraint: ☐ Transactions.transactionCompleteBool is false while the respective Transaction.currentAmountOwed is greater than zero and any of the respective ShippingData.itemArrivedBool is false.

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐ X  
Relationship Specific: ☐ X

Test On: Insert: ☐  
Delete: ☐  
Update: ☐ X

## STRUCTURES AFFECTED

Field Names: ☐ transactionCompleteBool currentAmountOwed itemArrivedBool

Table Names: ☐ Transactions ShippingData

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐ X, ONLY FALSE IS VALID IN THIS CASE  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐ X  
Degree of participation: ☐

## ACTION TAKEN

☐ Under any attempt to update Transactions.transactionCompleteBool to true, check that if the respective Transaction.currentAmountOwed is greater than zero or if any of the respective ShippingData.itemArrivedBool is false, if either of these are true, then Transactions.transactionCompleteBool remains false.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ It is impossible to return a item before it is bought.

Constraint: ☐ returns.dateReturned must be after transaction.dateMade

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐ X  
Relationship Specific: ☐

Test On: Insert: ☐ X  
Delete: ☐  
Update: ☐

## STRUCTURES AFFECTED

Field Names: ☐ dateReturned dateMade

Table Names: ☐ Returns Transactions

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐ X  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐

## ACTION TAKEN

☐ On insertions of a Returns row, thest that Returns.dateReturned is after the respective Transaction.dateMade, else fail.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ The a payment record cannot be dated as happening before the item it's related to was purchased.

Constraint: ☐ FinancialData.datePaid is after Transaction.dateMade.

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐ X  
Relationship Specific: ☐ X

Test On: Insert: ☐ X  
Delete: ☐  
Update: ☐

## STRUCTURES AFFECTED

Field Names: ☐ datePaid dateMade

Table Names: ☐ FinancialData Transaction

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐ X  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐

## ACTION TAKEN

☐ On insertion into FinancialData, if FinancialData.datePaid is before the related Transaction.dateMade, fail, else succeed.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ The catalog follows the conservation of matter.

Constraint: ☐ The creation of a Transaction row results in the respective Catalog row's Catalog.numberInStock decrementing.

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐ X  
Relationship Specific: ☐

Test On: Insert: ☐ X  
Delete: ☐  
Update: ☐

## STRUCTURES AFFECTED

Field Names: ☐ numberInStock

Table Names: ☐ Catalog Transaction

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐ X  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐

## ACTION TAKEN

☐ On the creation of a Transaction row; the respective Catalog row's Catalog.numberInStock is decremented.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS



## RULE INFORMATION

Statement: ☐ If a transaction is made for a unavailable catalog item, then the transaction cannot be complete, and the purchase is put on hold / inqueue. Transactions on hold are then given priority based on the date they were made; once the item back in stock; this achieves preorders.

Constraint: ☐ If a Transaction row is made for a Catalog item with catalog.numberInStock = 0 or it's dateFirstAvailable if after today, then the Transaction.transactionCompleteBool is forced to false, Transaction.onHold is set to true, and a respective ShippingData row cannot be made. Transactions in this state are given priority based on dateMade.

Type: Database Oriented: ☒ X  
Application Oriented ☐

Category: Field Specific: ☒ X  
Relationship Specific: ☐ X

Test On: Insert: ☐  
Delete: ☐  
Update: ☒ X

## STRUCTURES AFFECTED

Field Names: ☐ numberInStock dateFirstAvailable transactionCompleteBool dateMade onHold

Table Names: ☐ Catalog Transactions ShippingData

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☒ X  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☒ X

## ACTION TAKEN

☐ If a Transaction row is inserted and references a Catalog item with catalog.numberInStock = 0 or catalog.dateFirstAvailable if after today, then the Transaction.transactionCompleteBool is forced to false. On insertion of a respective ShippingData row, if the same conditions are detected, it will fail. On update of the respective Catalog row's Catalog.number in stock, Transactions that reference are checked to see if they where in this state, if so, Transactions.onHold is set to false, and Transactions in this state are given priority based on dateMade as towards being updated.

NOTES: ☐  
BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ If a catalog item reaches it's eol date, then it can no longer be used in a it can no longer be bought nor ordered.

Constraint: ☐ If a Catalog item's respective EOLItems.EOLdate is before today, then Transaction rows referencing it can no longer be inserted.

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐  
Relationship Specific: ☐ X

Test On: Insert: ☐ X  
Delete: ☐  
Update: ☐

## STRUCTURES AFFECTED

Field Names: ☐ EOLdate

Table Names: ☐ Transaction EOLItems

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐ X

## ACTION TAKEN

☐ On the insertion of a Transaction row, it is tested to see if the referenced Catalog item is referenced in EOLItems, if so, and the EOLItems.EOLdate is before today, then the insertion fails.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ Warranties can only be claimed when they're still active, or  
current date <= warranty start date + lenght in days.

Constraint: ☐ A warrantyClaim record can only be inserted when  
the current date <= the referenced warranty's .warrantyDate  
+ the referenced warranty's .lenghtInDays

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐  
Relationship Specific: ☐ X

Test On: Insert: ☐ X  
Delete: ☐  
Update: ☐

## STRUCTURES AFFECTED

Field Names: ☐ warrantyDate lenghtInDays

Table Names: ☐ Warranties WarrantyClaims

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐ X

## ACTION TAKEN

☐ On a WarrantyClaim record's insertion, the referenced Warranty is tested as  
to the following: the current date must be <= (Warranties.warrantyDate + Warranties.lenghtInDays);  
if this is not true, the insertion fails.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ Warranties can only begin after the Transaction has been made.

Constraint: ☐ warranty.warrantyDate must be after or on the same day as transaction.dateMade.

Type: Database Oriented: ☐ X  
Application Oriented ☐

Category: Field Specific: ☐ X  
Relationship Specific: ☐

Test On: Insert: ☐ X  
Delete: ☐  
Update: ☐

## STRUCTURES AFFECTED

Field Names: ☐ warrantyDate dateMade

Table Names: ☐ Warranty Transaction

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐ X  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐

## ACTION TAKEN

☐ On Warranty insertion if warranty.warrantyDate < the referenced transaction.dateMade then the insertion fails.

NOTES: ☐

## BUSINESS RULE SPECIFICATIONS

## RULE INFORMATION

Statement: ☐ If the current amount owed on the transaction is <0, then a exchange overpayed, and money is put back on a chosen card.

Constraint: ☐ if currentAmountOwed on a Transaction row is <0, then a exchange overpayed, and a incomplete FinacialData row is inserted so the client can select the card to put money back on.

Type: Database Oriented: ☐ X  
Application Oriented ☐ X

Category: Field Specific: ☐  
Relationship Specific: ☐ X

Test On: Insert: ☐  
Delete: ☐  
Update: ☐ X

## STRUCTURES AFFECTED

Field Names: ☐ currentAmountOwed amountPayedAtPayment amountOwedAtPayment

Table Names: ☐ FinancialData Transaction

## FIELD ELEMENTS AFFECTED

Physical Elements: Data Type: ☐  
Length: ☐  
Character Support: ☐

Logical Elements: Key Type: ☐  
Key Structure: ☐  
Uniqueness: ☐  
Null Support: ☐  
Values Entered By: ☐  
Range of Values: ☐ X  
Edit Rule: ☐

## RELATIONSHIP CHARACTERISTICS AFFECTED

Deletion rule: ☐  
Type of participation: ☐  
Degree of participation: ☐ X

## ACTION TAKEN

☐ During a update on a Transaction row if currentAmountOwed on a Transaction row is <0, then a exchange overpayed, and a incomplete FinacialData row is inserted, with amountPayedAtPayment amountOwedAtPayment updated accordingly, but all else null. Next time the client is on the website, this impcomplete record will prompt them to enter the card to put the money back on. Once this record is completed, then the currentAmountOwed is returned to zero.

NOTES: ☐



