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<u>Entities</u>

- Customer – contains the exchange account bank account and ID to determine the customer who they are and be able to access their data
- Exchange this holds the information for the stocks as well as the database within the exchange it holds userInfo the limit and market orders
- database this is a weak entity as it wouldn't exist without the exchange this entity is meant to hold all the information for the exchange and what goes on within it
- stock this entity simply allows the stock to exist with it using a symbol and a company name it is also a weak entity as it wouldn't exist without the exchange

<u>Relationships</u>

- Links, this attaches the user to the exchange allowing them to interact with the stock and database this relationship says only one links to the exchange and the exchange can link to many customers
- Has – this connects the customer to the stock and determines what they're doing with the stock many customers can have many stocks many stocks can belong to many customers
- Contains – this relationship allows the stock to be contained within the exchange where there is one type of stock to an exchange with an exchange containing many stocks
- Reports- this relationship allows the database to communicate with the exchange to report to the user one database reports to one exchange one exchange reports to one database

<u>Attributes</u>

- DataBase
  - o Bought – this contains what stocks are bought
  - o Sold – this contains what stocks are sold
  - o TransHis - this contains a users transaction history allowing reports to generate and keep track of profit and loss as well as money sent and received
  - o orderInfo – this holds information on if the order has been cancelled, filled, partially filled, pending, and state the status of the order
  - o stockPrice – holds and reports the price of the stocks within the exchange
  - o userBal – different from user info as it contains what is transferred into the exchange not the login info
- Exchange
  - o Userinfo – contains user login information when they create the account allowing them to access their accounts
  - o limitOrders – option with in exchange that allows limitOrders to be placed
  - o marketOrder – option within exchange that allows marketOrders to be places
  - o name – identifier for the specific exchange
- Stock
  - o Company- holds the company name so the customer knows the company

- o Symbol – what allows the user to search for the stock and is the identifier for the stock
- Customer
  - o – ExcAccount – for the customer to allow them to access the exchange account
  - o BankAcc – allows the customer to send money to exchange to be stored in userBal
  - o ID- identifier for customer
  - o firstName – holds customer first name
  - o lastName holds customer last name
- Has
  - o Sold – contains if stock is sold per customer
  - o Held – contains if stock is held per customer
  - o Bought – contains what stock is bought per customer