Description:

The project's data domain encompasses financial markets and brokerage firms operating within them. A brokerage firm facilitates customers' transactions involving securities such as stocks, bonds, options, and futures. The database supports brokerage firms in managing customer accounts and transactions, as well as providing information on the securities they offer for sale.

The relationships provided below keep track of customers, customer accounts, transactions, and stock data. Each customer may have more than one account. Each account consists of transactions that involve the exchange of stock. Additionally, there is information about stocks and their daily metrics.

Data Domain:

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| **Stock** | Stores information for stocks traded on an exchange. |
| *stock\_id* | Key for table entry. |
| *symbol* | The symbol that is associated with the company name. |
| *company\_name* | The name of the company that the stock represents |
| *stock\_exchange* | The stock exchange that the stock is publicly traded on. |

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| **DailyStockMetric** | Stores information about the trading day. |
| *metric\_id* | Key for table entry. |
| *stock\_id* | The stock associated with the metrics. Foreign key to Stock Table. |
| *date* | Date of the metric. Dates for an individual stock are unique. |
| *open\_price* | Price of the stock at market open. |
| *close\_price* | Price of the stock at market close. |
| *high\_price* | Highest price during the trading day. |
| *low\_price* | Lowest price during the trading day. |
| *volume* | Amount of shares traded during the trading day. |

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| **Customer** | An account holder. May hold one or more accounts. |
| *customer\_id* | Key for table entry. |
| *first\_name* | First name of customer. |
| *last\_name* | Last name of customer. |
| *email* | Email of customer. Every email is unique. |
| *date\_of\_birth* | Date of birth of customer. |
| *ssn* | Social Security Number for the customer. Every ssn is unique. |

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| **Transaction** | Stores every purchase or sell an account has made. |
| *transaciton\_id* | Key for table entry. |
| *stock\_id* | The stock being purchased or sold. Foreign key to the Stock table. |
| *account\_id* | The account making the transaction. Foreign key to the Account table. |
| *type* | An account can either buy or sell stock. |
| *date* | Date of the transaction |
| *stock\_price* | The price of one stock at the time of purchase. |
| *quantity* | Number of stocks purchased for this transaction. |

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| **Account** | Customers hold accounts that can store stock and/or currency. |
| *account\_id* | Key for table entry. |
| *date\_opened* | Date the account was opened. |
| *date\_closed* | Date the account was closed. Set to NULL if the account is open. |
| *customer\_id* | The owner of the account. Foreign key to the Customer table |
| *type* | There are three types of accounts, savings, checkings, and investment. All three accounts can store currency and/or stock. |
| *name* | The name given to the account by the Customer. |
| *balance* | The amount of currency in the account. |

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| **StockHolding** | The amount of one stock in one account. |
| *holding\_id* | Key for table entry. |
| *account\_id* | The account that holds this stock. |
| *stock\_id* | The stock that this account holds. |
| *quantity* | The amount of stock in this stock holding. |
| *total\_investment* | The total amount that has been paid for all stock in this account. In other words, the total cost of all transactions made for a specific account and specific stock. |

Relationships:

from Stock: stock\_id

to DailyStockMetric: stock\_id

relation One to Many

from Stock: stock\_id

to Transaction: stock\_id

relation One to Many

from Account: account\_id

to Transaction: account\_id

relation One to Many

from Customer: customer\_id

to Account: customer\_id

relation One to Many

from Account: account\_id

to StockHolding: account\_id

relation One to Many

from Stock: stock\_id

to StockHolding: stock\_id

relation One to Many