

## DML:

- To Sign Up:
  - INSERT INTO portfolio\_users (username, full\_name, password) VALUES (:username, :full\_name, :password)
- To add a portfolio:
  - INSERT INTO portfolio\_portfolios (name, cash\_account, username) VALUES (:portfolio\_name, 0, :username)
- Update or insert stock holdings when buying shares (custom procedure)
  - CALL stock\_transaction(:portfolio, :symbol, :shares\_count)
- Update stock holdings when selling shares
  - UPDATE portfolio\_stock\_holdings SET shares=shares - :shares WHERE portfolio=:portfolio AND symbol=:symbol
- Remove shares from portfolio\_stock\_holdings
  - DELETE FROM portfolio\_stock\_holdings WHERE portfolio=:portfolio AND symbol=:symbol
- Update the Cash Account by adding or subtracting money from it
  - UPDATE portfolio\_portfolios SET cash\_account=cash\_account + :amount WHERE id=:portfolio
- Insert into the portfolio\_stocks\_daily table
  - INSERT INTO portfolio\_stocks\_daily (timestamp, symbol, open, high, low, close, volume) VALUES (:timestamp, :symbol, :open, :high, :low, :close, :volume)
- Insert into portfolio\_stocks\_fetched
  - INSERT INTO portfolio\_stocks\_fetched VALUES (:symbol)

## DQL:

- To login:
  - SELECT \* FROM portfolio\_users WHERE username=:username AND password=:password
- To obtain a portfolio:
  - SELECT \* FROM portfolio\_portfolios WHERE username=:username
- Grab all shares in a portfolio
  - SELECT shares FROM portfolio\_stock\_holdings WHERE portfolio=:portfolio AND symbol=:symbol
- Grab a list of the stock holdings in a portfolio
  - SELECT \* FROM portfolio\_stock\_holdings WHERE portfolio=:portfolio
- When selecting or fetching stock
  - SELECT \* FROM portfolio\_stocks\_daily WHERE symbol=:symbol AND timestamp=:timestamp
- Select stock symbols
  - SELECT DISTINCT symbol FROM cs339.StocksSymbols
- When grabbing the quote history:
  - SELECT symbol FROM portfolio\_stocks\_fetched WHERE symbol=:symbol
  - SELECT \* FROM StocksDaily WHERE symbol=:symbol ORDER BY timestamp
- Information needed to calculate variation, and beta
  - SELECT stddev(close) AS stddev, count(close) AS count, avg(close) AS avg FROM StocksDaily WHERE symbol = :symbol and timestamp >= :starttime and timestamp <= :endtime
  - SELECT stddev(close) AS stddev, count(close) AS count, avg(close) AS avg FROM StocksDaily WHERE timestamp >= :starttime and timestamp <= :endtime