

```
CREATE TABLE portfolio_users (  
    username VARCHAR(64) NOT NULL PRIMARY KEY,  
    full_name VARCHAR(64) NOT NULL,  
    password VARCHAR(32) NOT NULL  
);
```

```
CREATE TABLE portfolio_portfolios (  
    id INT NOT NULL PRIMARY KEY,  
    name VARCHAR(64) NOT NULL,  
    cash_account DECIMAL(19, 4) NOT NULL,  
    CONSTRAINT positive_cash_account CHECK (cash_account >= 0),  
    username REFERENCES portfolio_users(username) NOT NULL  
);
```

```
ALTER TABLE portfolio_portfolios  
    ADD CONSTRAINT unique_portfolio_name_per_user UNIQUE (name, username);
```

-- Auto increment portfolio id. Solution from <http://stackoverflow.com/questions/11296361/how-to-create-id-with-auto-increment-on-oracle>

```
CREATE SEQUENCE portfolio_id_seq;
```

```
CREATE OR REPLACE TRIGGER portfolio_id_bir BEFORE INSERT ON portfolio_portfolios FOR EACH ROW
```

```
BEGIN
```

```
    SELECT portfolio_id_seq.NEXTVAL
```

```
    INTO :new.id
```

```
    FROM dual;
```

```
END;
```

/

-- symbol had initially referenced cs339.StocksSymbols, but frequent errors about "resource in use" when trying

-- to delete the table caused us to remove the reference.

```
CREATE TABLE portfolio_stock_holdings(  
    id INT NOT NULL PRIMARY KEY,  
    portfolio REFERENCES portfolio_portfolios(id) NOT NULL,  
    symbol VARCHAR2(16) NOT NULL,  
    shares INT NOT NULL  
    CONSTRAINT positive_shares CHECK (shares>=0)  
);
```

```
ALTER TABLE portfolio_stock_holdings  
    ADD CONSTRAINT unique_symbols_in_portfolio UNIQUE (portfolio, symbol);
```

-- auto increment stock holdings id

```
CREATE SEQUENCE stock_holdings_id_seq;
```

```
CREATE OR REPLACE TRIGGER stock_holdings_id_bir BEFORE INSERT ON portfolio_stock_holdings FOR  
EACH ROW
```

```
BEGIN
```

```
    SELECT stock_holdings_id_seq.NEXTVAL
```

```
    INTO :new.id
```

```
    FROM dual;
```

```
END;
```

/

--procedure to insert or update, from <http://stackoverflow.com/questions/237327/oracle-how-to-upsert-update-or-insert-into-a-table>

```
CREATE OR REPLACE PROCEDURE stock_transaction(p NUMBER, sym VARCHAR2, s NUMBER)
```

```
AS
```

```
BEGIN
```

```
    MERGE INTO portfolio_stock_holdings sh USING DUAL ON (portfolio=p AND symbol=sym)
```

```
        WHEN NOT MATCHED THEN INSERT (portfolio,symbol,shares) VALUES (p,sym,s)
```

```
        WHEN MATCHED THEN UPDATE SET sh.shares=sh.shares+s;
```

```
END stock_transaction;
```

/

```
CREATE TABLE portfolio_stocks_daily(
```

```
    symbol VARCHAR2(16) NOT NULL,
```

```
    timestamp NUMBER NOT NULL,
```

```
    open NUMBER NOT NULL,
```

```
    high NUMBER NOT NULL,
```

```
    low NUMBER NOT NULL,
```

```
    close NUMBER NOT NULL,
```

```
    volume NUMBER NOT NULL
```

```
);
```

```
ALTER TABLE portfolio_stocks_daily
```

```
    ADD CONSTRAINT unique_symbol_per_day UNIQUE (timestamp, symbol);
```

```
CREATE VIEW stocksdaily AS (SELECT * FROM portfolio_stocks_daily) UNION ALL (SELECT * FROM cs339.stocksdaily);
```

```
-- just stores which stocks have had their 'full' history pulled from quotehist
```

```
CREATE TABLE portfolio_stocks_fetched(  
    symbol VARCHAR2(16) NOT NULL PRIMARY KEY  
);
```

```
INSERT INTO portfolio_users (username,full_name,password) VALUES ('root','Root User','b4b8daf4b8ea9d39568719e1e320076f');
```

```
INSERT INTO portfolio_portfolios (name,cash_account,username) VALUES ('Default',2000.05,'root');
```

```
INSERT INTO portfolio_stock_holdings (portfolio,shares,symbol) VALUES (1,100,'AAPL');
```

L,