

Relations:

PurchaseHistory(hID, pID, sID, Price, Quality, Date) //hID stands for history ID

Products(pID, pName)

Stores(sID, sName)

ShoppingList(pID, CheckMark)

Quality = {0, 1, 2} //0=low, 1=medium, 2=high

CheckMark = {0, 1} //0=false, 1=true

Foreign key constraints:

PurchaseHistory[pID] \subseteq Products[pID]

PurchaseHistory[sID] \subseteq Stores[sID]

ShoppingList[pID] \subseteq Products[pID]

SQLite:

```
CREATE TABLE PurchaseHistory (  
    hID PRIMARY KEY NOT NULL AUTOINCREMENT,  
    pID INT NOT NULL,  
    sID INT NOT NULL,  
    Price DOUBLE NOT NULL,  
    Quality INT NOT NULL DEFAULT 0, //default as high quality  
    Date TEXT NOT NULL //as ISO8601 strings ("YYYY-MM-DD HH:MM:SS.SSS")
```

```
);
```

```
CREATE TABLE Products(  
    pID INT PRIMARY KEY NOT NULL AUTOINCREMENT,  
    pName VARCHAR NOT NULL UNIQUE  
);
```

```
CREATE TABLE Stores(  
    sID INT PRIMARY KEY NOT NULL AUTOINCREMENT,  
    sName VARCHAR NOT NULL UNIQUE  
);
```

```
CREATE TABLE ShoppingList(  
    pID INT PRIMARY KEY NOT NULL,  
    CheckMark BOOLEAN NOT NULL DEFAULT 0 //default as not checked  
);
```

//SQLite does not have a separate Boolean storage class, it uses 0 for false, 1 for true