Explain the information about your schema :

The exact create sql code is in next page.

Below table is named Item.

Item is the most important entity which means auction.

Each tuple has 9 elements. ItemID is the primary key since it’s the only integer number to identify items.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ItemID | Name | Description | Started | Ends | First\_Bid | Currently | Number\_of\_Bids | Buy\_Price |
| INTEGER | TEXT | TEXT | TEXT | TEXT | REAL | REAL | INTEGER | REAL |

User table is another entity.

In fact, users are belong to two groups. One is seller and anther group is bidder. Rating, Country and Location may be missing for some tuples. But userID exists all the time. It’s the primary key for user.

|  |  |  |  |
| --- | --- | --- | --- |
| UserID | Rating | Country | Location |
| TEXT | INTEGER | TEXT | TEXT |

Category has only one attribute CategoryName. Category is also an entity.

|  |
| --- |
| CategoryName |
| TEXT |

Bid is a relationship between Item and User, which is to say user bid in an auction.

BTime(bid time), ItemID and UserID are primary keys of Bid table.

ItemID and UserID are key of Item and User in Bid relationship, thus they are FOREIGN KEY.

|  |  |  |  |
| --- | --- | --- | --- |
| BTime | ItemID | UserID | Amount |
| TEXT | INTEGER | TEXT | REAL |

belong\_to\_Cat is a relationship between Item and Category, which is to say one Item belong to categories. Item and Category are primary key and foreign key.

|  |  |
| --- | --- |
| ItemID | CategoryName |
| INTEGER | TEXT |

Final table Sell is relationship between Item and User, which means every item is sold by one seller. Here, UserID and ItemID are primary key and foreign key.

|  |  |
| --- | --- |
| ItemID | UserID |
| INTEGER | TEXT |

CREATE TABLE Item(

ItemID INTEGER PRIMARY KEY,

Name TEXT,

Description TEXT,

Started TEXT,

Ends TEXT,

First\_Bid REAL,

Currently REAL,

Number\_of\_Bids INTEGER,

Buy\_Price REAL

);

CREATE TABLE User(

UserID TEXT PRIMARY KEY,

Rating INTEGER,

Country TEXT,

Location TEXT

);

CREATE TABLE Category(

CategoryName TEXT PRIMARY KEY

);

CREATE TABLE Bid(

BTime TEXT,

ItemID INTEGER,

UserID TEXT,

Amount REAL,

PRIMARY KEY (BTime,ItemID,UserID),

FOREIGN KEY (ItemID) REFERENCES Item(ItemID),

FOREIGN KEY (UserID) REFERENCES User(UserID)

);

CREATE TABLE belong\_to\_Cat(

ItemID INTEGER,

CategoryName TEXT,

PRIMARY KEY (ItemID,CategoryName),

FOREIGN KEY (ItemID) REFERENCES Item(ItemID),

FOREIGN KEY (CategoryName) REFERENCES Category(CategoryName)

);

CREATE TABLE Sell(

ItemID INTEGER,

UserID TEXT,

PRIMARY KEY (ItemID,UserID),

FOREIGN KEY (ItemID) REFERENCES Item(ItemID),

FOREIGN KEY (UserID) REFERENCES User(UserID)

);

