

Aaron Wendt, Alex Meng, Fangzhou Cheng
Comp Sci 564 PP1
Design of the scheme

Item (Item_ID, Name, Current_Bid, First_Bid, Number_Bids, Start_Time, Description, Buy price, Ends)

The item table includes all the surface information of the bidding item, everything from the name, the current bidding price, the first bid, total numbers of bids, to the description of the item. And within the keys, Item_ID is the unique one to tell each bidding item apart from the other.

Primary Key: **Item_ID**

Foreign Key: location

Bidder (Bidder_ID, Rating, location, country)

The bidder table includes all the IDs of the bidders, which are unique, and their ratings. The location key serves to associate with the location from the location table. There exists cases where the bidder does not possess a location.

Seller (Item_ID, Rating, Seller_ID)

The Seller table includes all the IDs of the bidders, which are unique, and their ratings. The location key serves to associate with the location from the location table.

Primary Key: **Item_ID**

Location (Item_ID, Location, Country)

The location table includes both the location and the country of a certain user. There exists cases where only the location was provided.

Primary Key: **Item_ID**

Category (Item_ID, Category)

The category table includes all of the categories presented in the dataset, in which the category id created a link between the category and the item table.

Primary Key: **Item_ID**

Bids (Item_ID, Bidder_ID, Bid_Amount, Time)

The bids table includes all of the bids presented within the table, while the bidder ID is unique to represent each individual bid.

Primary Key: **Item_ID**

Foreign Key: Bidder_ID

The ER diagram is as follows.

