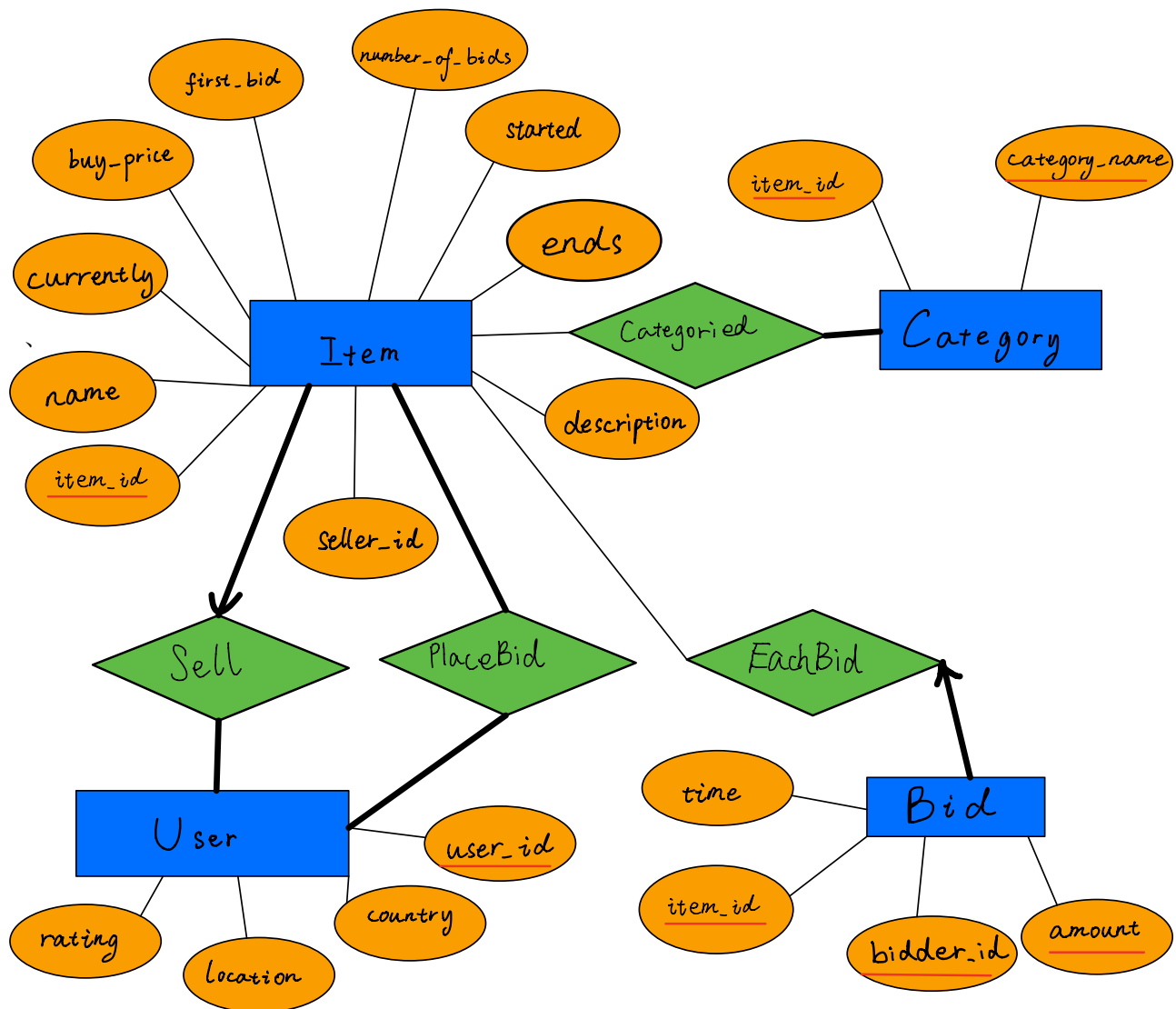


CS 564
PP1

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ER Diagram



Category(item_id, category_name)
 Bid(item_id, bidder_id, time, amount)
 User(user_id, rating, location, country)
 Item(item_id, name, currently, buy_price, first_bid, number_of_bids, started, ends, description, seller_id)

Relational Schema

#Category table includes all categories presented in the dataset. The item_id together with each category can be used to identify each item in Item table.

```
CREATE TABLE Category
(
  item_id      INT      NOT NULL,
  category_name VARCHAR(255) NOT NULL,
  PRIMARY KEY (item_id, category_name)
  FOREIGN KEY (item_id) REFERENCES Item
);
```

```
#Bid
CREATE TABLE Bid
(
  item_id      INT      NOT NULL,
  bidder_id    VARCHAR(255) NOT NULL,
  time         datetime NOT NULL,
  amount       DOUBLE    NOT NULL,
  PRIMARY KEY (item_id, bidder_id, amount),
  FOREIGN KEY (item_id) REFERENCES Item,
  FOREIGN KEY (bidder_id) REFERENCES User(user_id)
);
```

#User table have 4 attributes and the user including seller and bidder form other two table. The user_id is associate with Item table. If the User with user_id is deleted, the associated item is also deleted. One user can have many items for sell and bid many items with many bids.

```
CREATE TABLE User
(
```

```
user_id  VARCHAR(255) PRIMARY KEY NOT NULL ,
rating   INT          NOT NULL,
location VARCHAR(255),
country  VARCHAR(255),
UNIQUE (user_id,location,country)
);
```

#Item Table has a foreign key seller_id refer to user_id in User Table.

```
CREATE TABLE Item
(
item_id    INT          PRIMARY KEY NOT NULL ,
name       VARCHAR(255) NOT NULL,
currently  DOUBLE,
buy_price  DOUBLE,
first_bid  DOUBLE,
number_of_bids INT      NOT NULL,
started    datetime    NOT NULL,
ends       datetime    NOT NULL,
description VARCHAR(500),
seller_id  VARCHAR(255) NOT NULL,
FOREIGN KEY (seller_id) REFERENCES User(user_id)
);
```