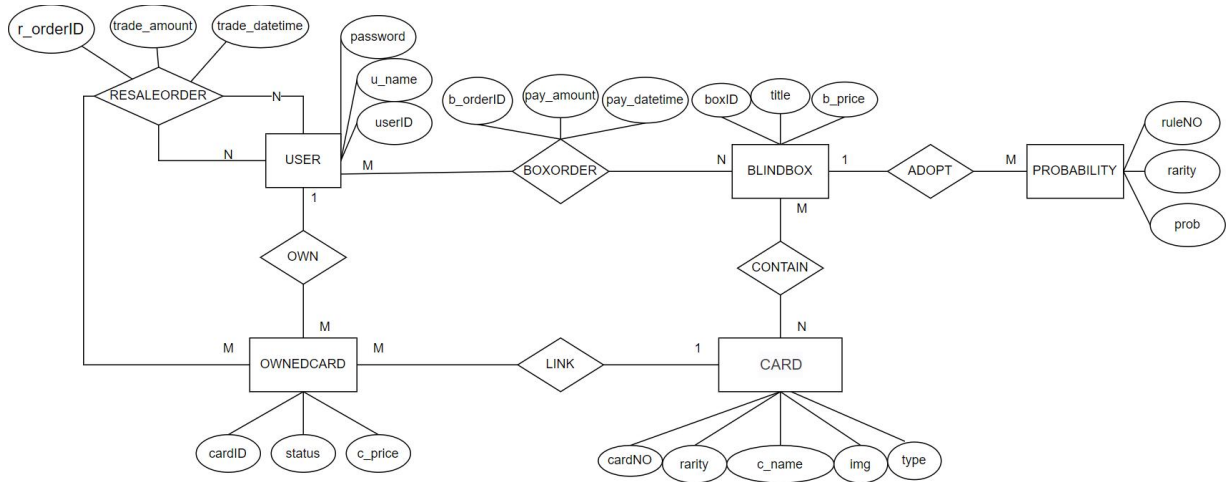


Group 40-Pokémon Trading Card system Stage 2

ER diagram



Schema

User(userID[PK], password, u_name)

Card(cardNO[PK], rarity, c_name, img, type)

BlindBox(boxID[PK], title, b_price)

BoxOrder(b_orderID[PK], userID[FK to User.userID], boxID[FK to BlindBox.boxID],
pay_datetime, pay_amount)

OwnedCard(cardID[PK], cardNO[FK to Card.cardNO], userID[FK to User.userID], status,
c_price)

ResaleOrder(r_orderID[PK], sellerID[FK to User.userID], buyerID[FK to User.userID],
cardID[FK to OwnedCard.cardID], trade_amount, trade_datetime)

Probability(ruleNO[PK], boxID[FK to BlindBox.boxID], rarity, prob)

Description:

The database should store information about Users, Cards, OwnedCards, BlindBoxes, BoxOrders, ResaleOrders, and Probabilities. There are 5 entities and 6 relationships, 2 of the relationships are relation tables.

Entities:

User: We assume each user is uniquely identified by its userID. Other attributes are password and u_name.

BlindBox: This entity aims to record the blindbox product. We assume each type of box is uniquely identified by its boxID. Other attributes are title and b_price. The boxes are sold by the website, user could get cards if they purchase and open a blindbox.

Card: This entity aims to record the card category information. We assume each card is uniquely identified by its cardNO. Other attributes are rarity, c_name, img, and type.

OwnedCard: This entity aims to record the cards belonging to the user. We assume each card is uniquely identified by its cardID. Other attributes are status and c_price. The entity also record the the userID specify which user own this card and cardNO to know about the card's information.

Probability: This entity aims to record the probability of different rarity of cards in different BlindBoxes. So it is uniquely identified by the ruleNO. It also has the attributes rarity, prob, and record the boxID specify which blind box this rule belongs to.

Relationships and Cardinality:

ResaleOrder: ResaleOrder is a relation table between User and OwnedCard, aims to record the resale order information. ResaleOrder is uniquely identified by the r_orderID, it has the other attributes trade_amount, trade_datetime, also record sellerID, buyerID from User and cardID from OwnedCard. We assume one user can place many orders to resell or buy multiple cards, and one card can be traded for many times in different orders.

BoxOrder: BoxOrder is a relation table between User and BlindBox, aims to record the order information when users purchased boxes. BoxOrder is uniquely identified by the b_orderID, it has the other attributes pay_datetime, pay_amount, also record userID from User and boxID from BlindBox. We assume one user can buy multiple Blindboxes, and one kind of Blindbox can be purchased by different users.

Own: This is a relationship between User and OwnedCard. We assume one user can own many cards (opened from Blindboxes or purchased from other users), and one card can be owned by exactly one user.

Contain: This is a relationship between BlindBox and Card. We assume one Blindbox can contain multiple kinds of cards, and one kind of card can be contained in multiple Blindboxes.

Link: This is a relationship between OwnedCard and Card. We assume one owned card can just be one kind of card, and one kind of card can have multiple owned cards.

Adopt: This is a relationship between Probability and BlindBox. We assume one blind_box can have multiple probabilities and each probability should be adopted in exactly one kind of BlindBox.