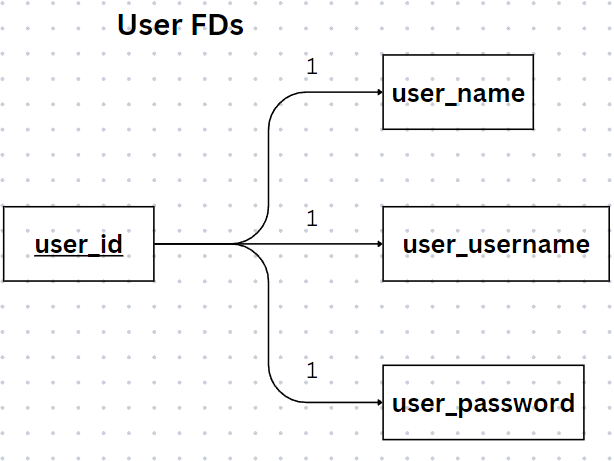
Assignment 7: Transitive Functional Dependency, Compound PK and Table Decomposition

**User**(user\_id, user\_name, user\_username, user\_passsword)

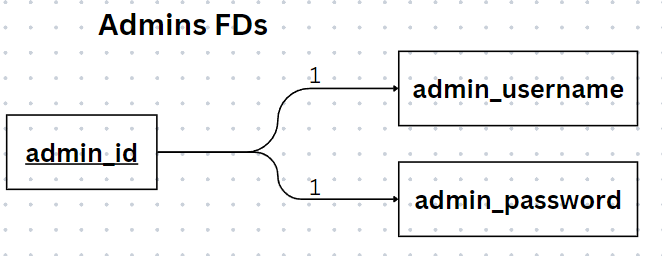


FD = {

1. user\_id → user\_name, user\_username, user\_password

}

**Admins**(admin\_id, admin\_username, admin\_password)

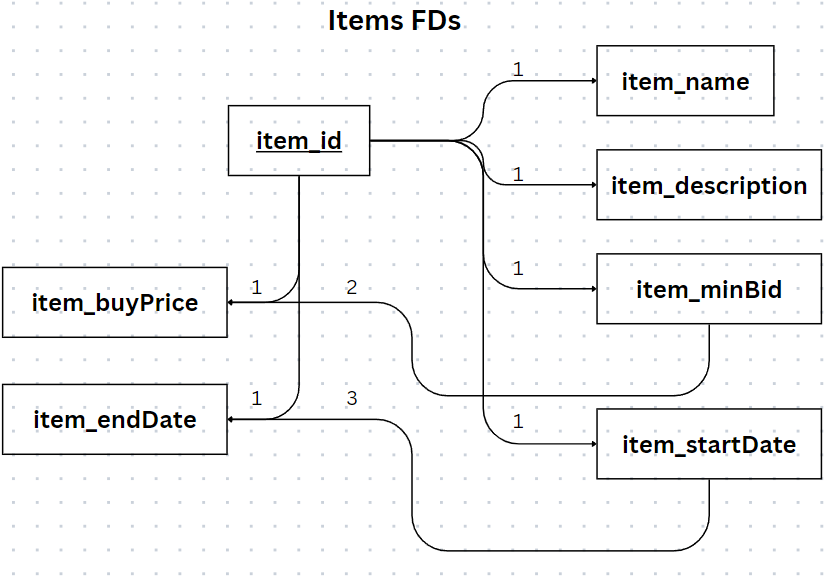


FD = {

1. admin\_id → admin\_username, admin\_password

}

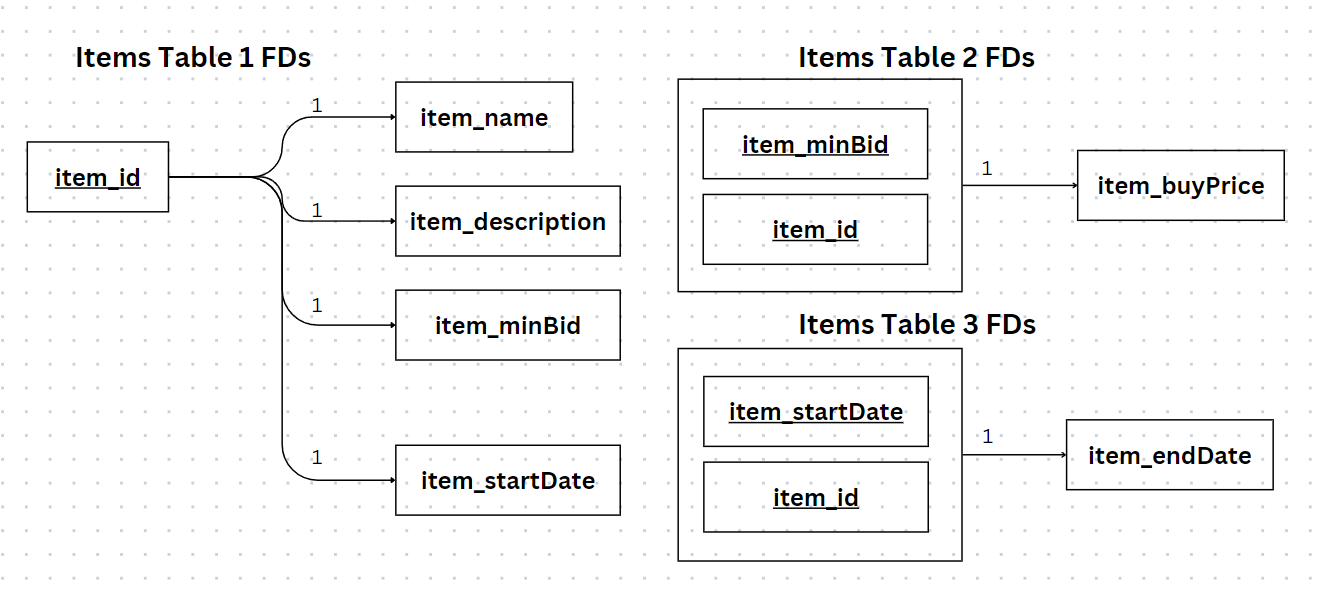
**Items**(item\_id, item\_name, item\_description, item\_minBid, item\_startDate, item\_endDate, item\_buyPrice)



FD = {

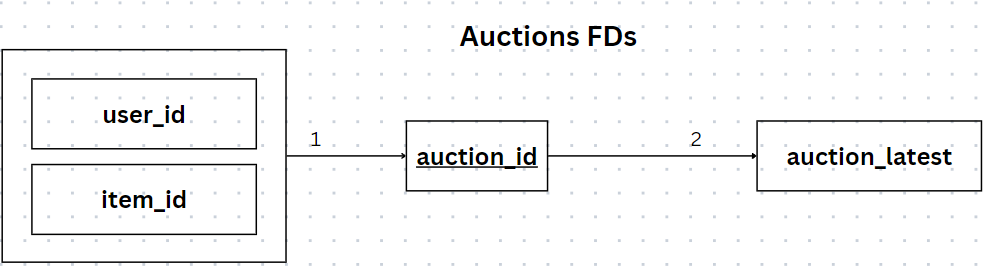
1. item\_id → item\_name, item\_description, item\_minBid, item\_buyPrice, item\_startDate, item\_endDate
2. item\_minBid → item\_buyPrice
3. item\_startDate → item\_endDate

}



**Auctions**(auction\_id, user\_id, item\_id, auction\_latest)

1NF and Transitive and Compound



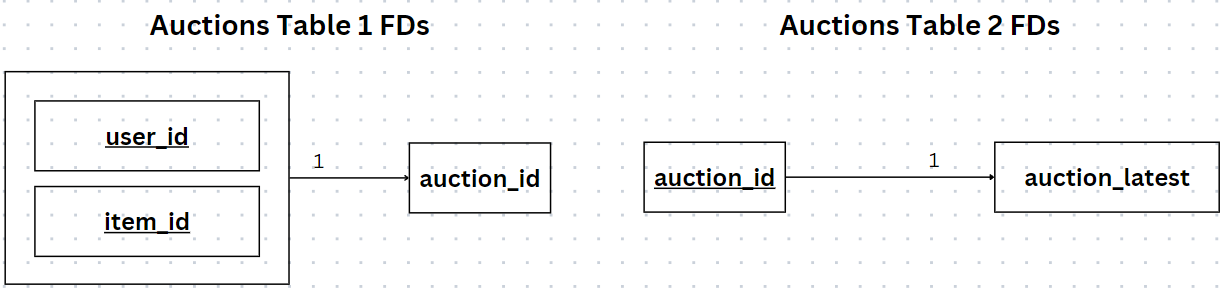
FD = {

1. user\_id, item\_id → auction\_id
2. auction\_id → auction\_latest

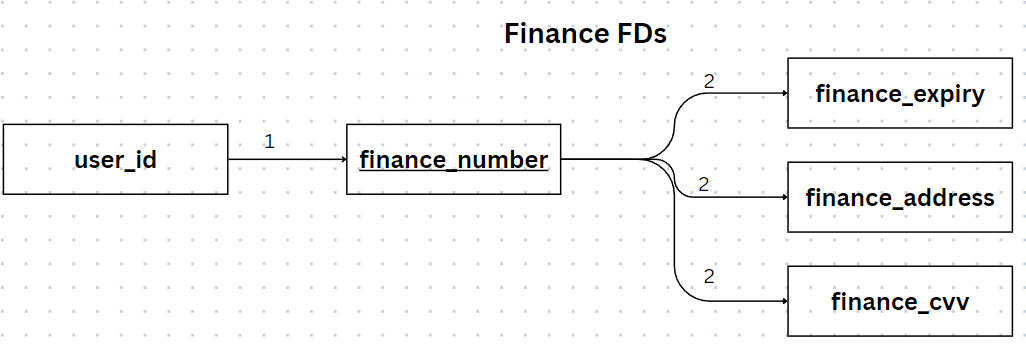
}

Decomposition from Compound FD -> 2NF

Decomposition from Transitive FD -> 3NF



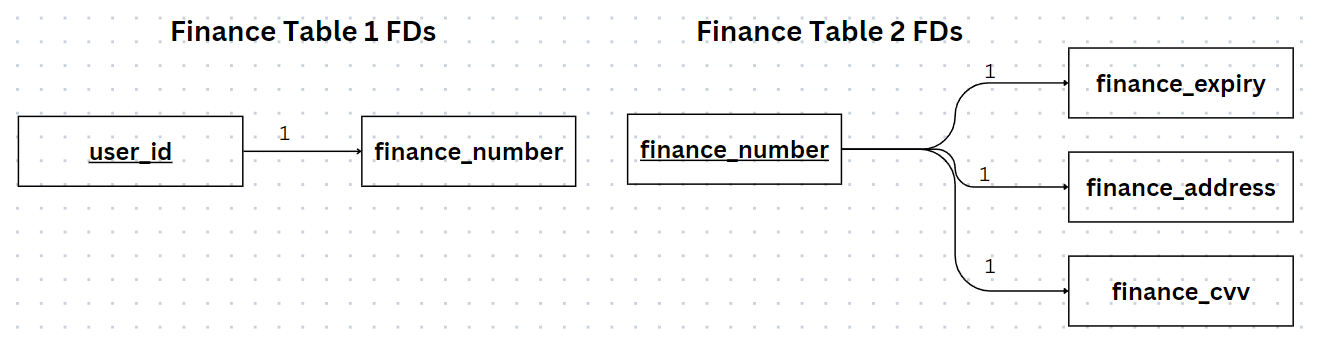
**Finance**(finance\_number, user\_id, finance\_expiry, finance\_address, finance\_cvv)



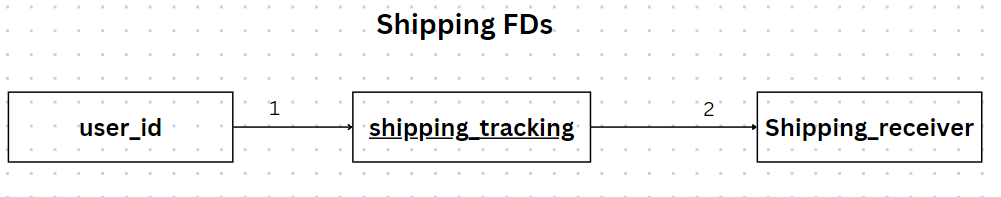
FD = {

1. user\_id → finance\_number
2. finance\_number → finance\_expiry, finance\_address, finance\_cvv

}



**Shipping**(user\_id, shipping\_receiver, shipping\_tracking)



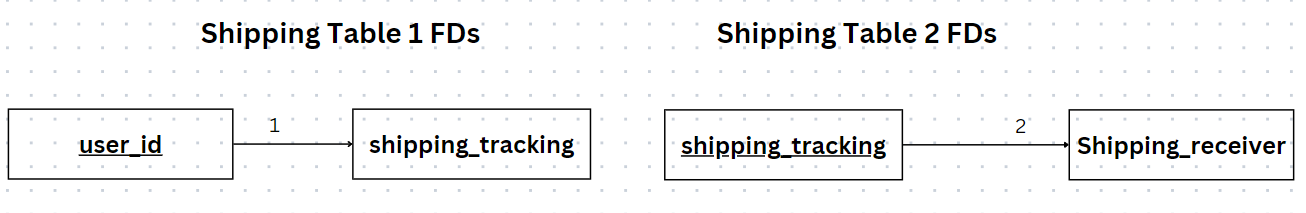
FD = {

1. user\_id → shipping\_tracking
2. shipping\_tracking → shipping\_receiver

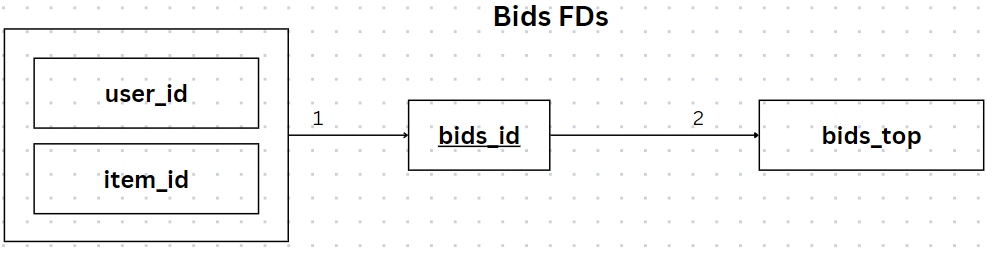
}

Decomposition from Compound FD -> 2NF

Decomposition from Transitive FD -> 3NF



**Bids**(bid\_id, item\_id, user\_id, bids\_top)



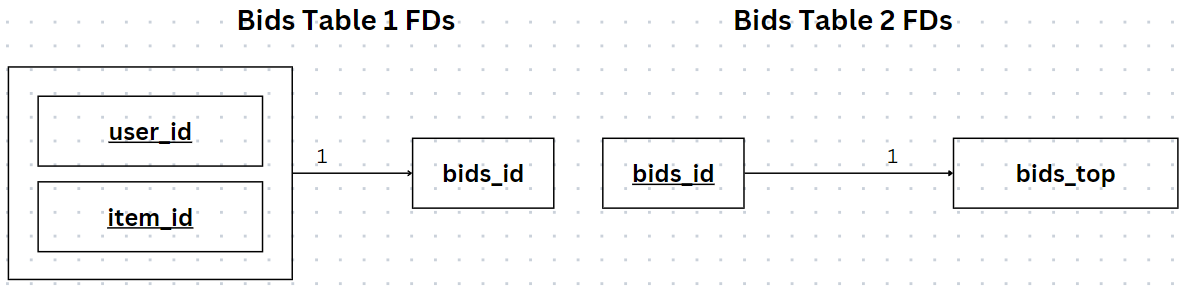
FD = {

1. user\_id, item\_id → bids\_id
2. bids\_id → bids\_top

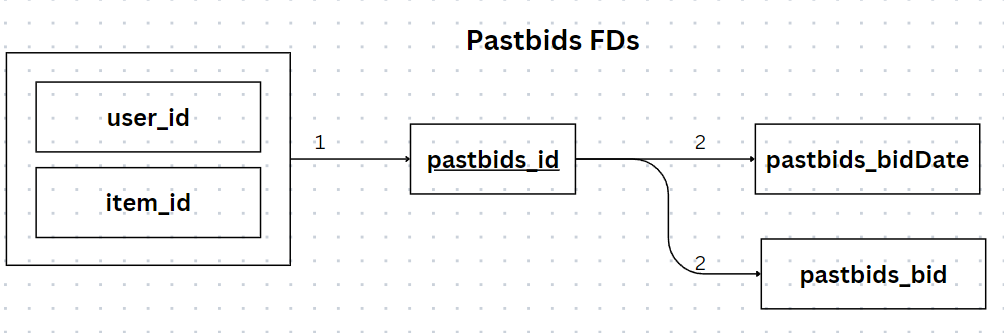
}

Decomposition from Compound FD -> 2NF

Decomposition from Transitive FD -> 3NF



**pastbids**(pastbids\_id, item\_id, user\_id, pastbid\_bidDate, pastbid\_bid)

****

FD = {

1. user\_id, item\_id → pastbids\_id
2. pastbids\_id → pastbids\_bidDate, pastbids\_bid

}

