

HWK 4: IEOR 215

Exercise 1:

1. STATE(Name, Region)
2. CONGRESS_PERSON(Party, Start_date, Name, District, State_Name)
3. BILL(Bill_Name, Date_of_vote, Passed_or_fail)
4. VOTES(Bill_Name_Voted³, Congress_Name², Congress_State_Name², Vote)
5. SPONSORS(Bill_Name_Voted³, Congress_Name², Congress_State_Name²)

Exercise 2:

1. ITEM(Item_title, Description, Starting_Bid_Price, Bidding_Increment, Start_Date_of_Auction, End_date_of_Auction),
Item_id)
2. MEMBER(Member_Number, Home_address, Phone_Number, Password, Name, Email_address)
3. SELLER(Bank_account_number, Routing_number, Member_Number²)
4. BUYER(Shipping_address, Member_Number²)
5. TRANSACTION(Comments, Feedback, Buyer_Member_Number⁴, Seller_Member_Number³,
Transaction_Id)
6. BIDS(Bid_Price, Time_of_Bid, Buyer_Member_Number⁴, Item_Number¹)
7. SELLS(Seller_Member_Number³, Item_Number²)

8. CLASSIFICATION_HIERARCHY (Item_id⁴, Subclass 1, Subclass 2, Subclass 3, ..., Subclass N)

Assumptions: - a same buyer and a same seller can do multiple transaction that's why I introduced transaction-id as a primary key for TRANSACTION table.

- For the classification hierarchy table, I supposed there were N level of abstraction, for example a modem is classified as COMPUTER in subclass 1, HARDWARE in subclass 2, MODEM in subclass 3 and a soccer ball which belong to Neymar is classified as SPORT MATERIAL, SOCCER and BALL. Only 3=N is needed in these examples but maybe N can be bigger and just replace unused attributes with NULL for the ball or the modem.

- For the bids table, I supposed that no two bid can be made at the same time for the same item, that's why (Item Number, Time-of-Bid) is the PK.

Exercise 1:

Assumptions: No two congress men can have same name coming from the same state.