

items : itemID , genre , itemName , author , publishDate , status .

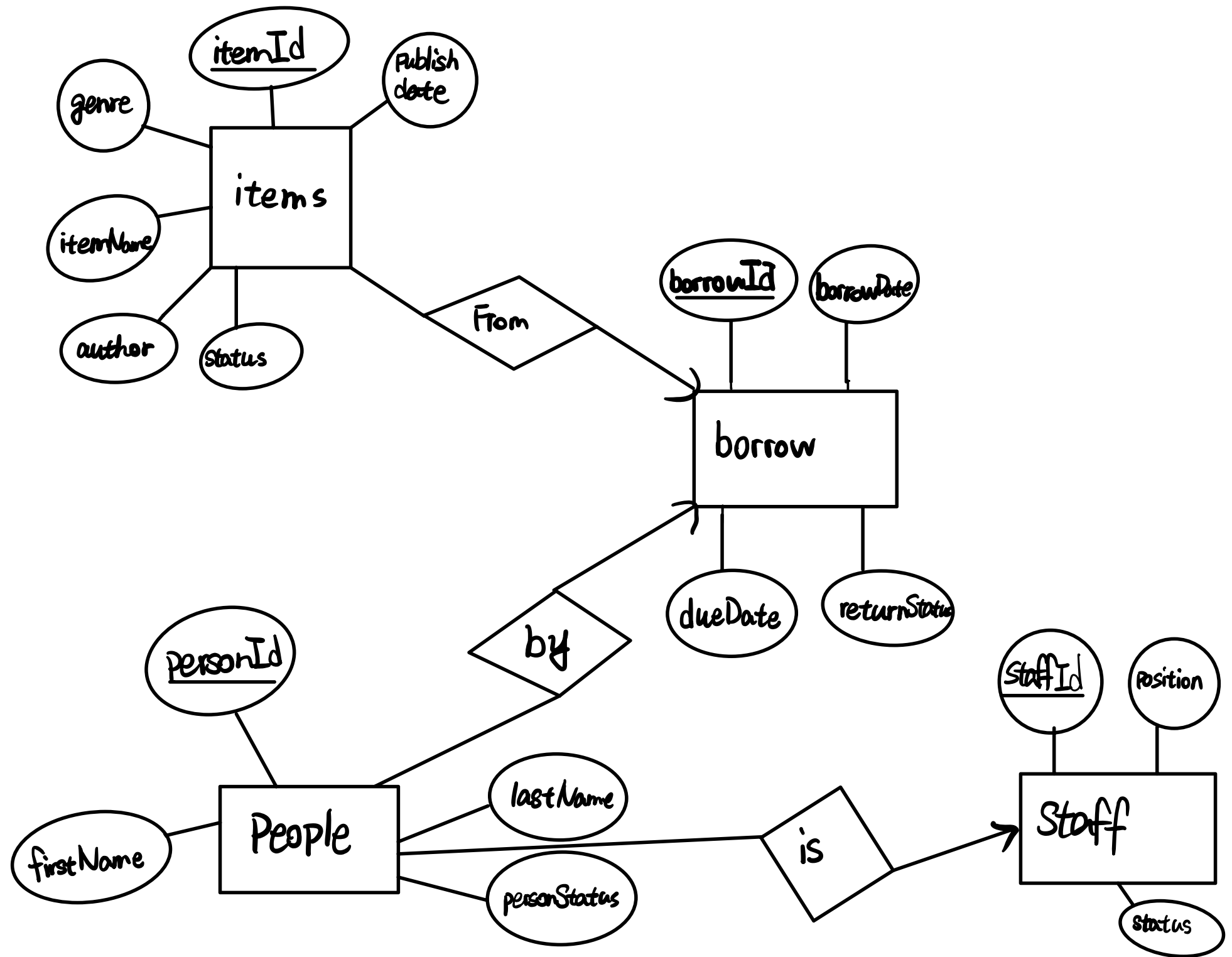
borrow : borrowID , itemI<sup>Fk-items</sup> , personId<sup>Fk-People</sup> , borrowDate ,  
dueDate , returStatus .

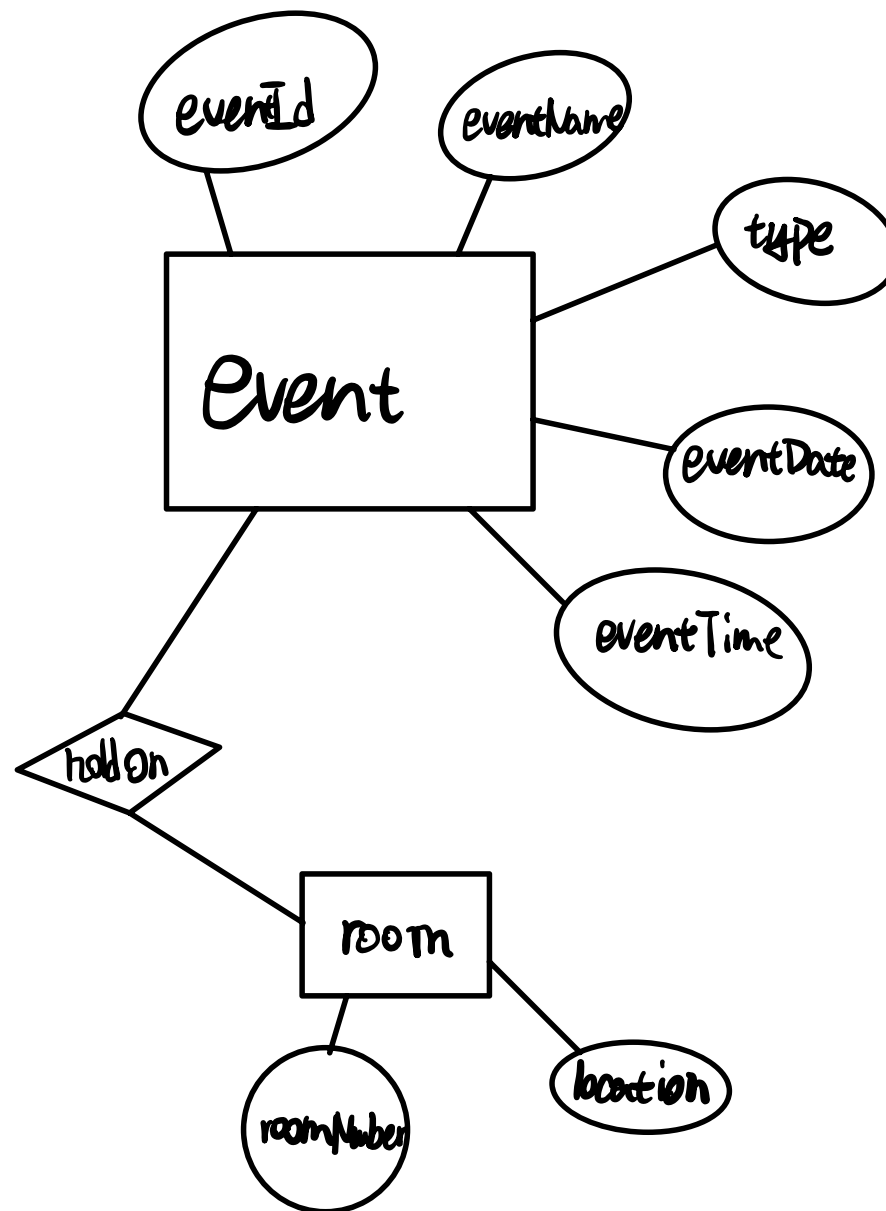
events: eventID , eventName , type , eventDate , eventTime ,  
roomNumber<sup>Fk-rooms</sup>

rooms: roomNumber , location

People : personID , firstName , lastName , personStatus .

Staff : staffID , personID<sup>Fk-People</sup> , position , status





items { itemId  $\rightarrow$  genre, itemName, author, publish date, status }

borrow { borrowId  $\rightarrow$  borrowDate, dueDate, returnStatus, itemId, personId }

people { personId  $\rightarrow$  firstName, lastName, personStatus }

events { eventId  $\rightarrow$  eventName, type, eventDate, eventTime }

rooms { roomNumber  $\rightarrow$  location }

staff { staffId  $\rightarrow$  position, status, personId }

All of our FD LHS are superkey, therefore they do not violate BCNF.

### Insertion Anomaly

If you want to add a new item to the database, but the item's itemName is not specified. Since the "itemName" attribute does not allow NULL values, you cannot insert the item without providing an itemName.

### Deletion Anomaly

Suppose you delete a person from the "people" table who has borrowed an item from the "borrow" table, the associated borrow records with that person's ID might still exist in the "borrow" table without a corresponding entry in the "people" table.

### Update Anomaly

If you update the "itemId" of an item in the "items" table, but forget to update the corresponding "itemId" in the "borrow" table, the database would have inconsistent data.