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Lab 04 – Normalization

# Part 1:

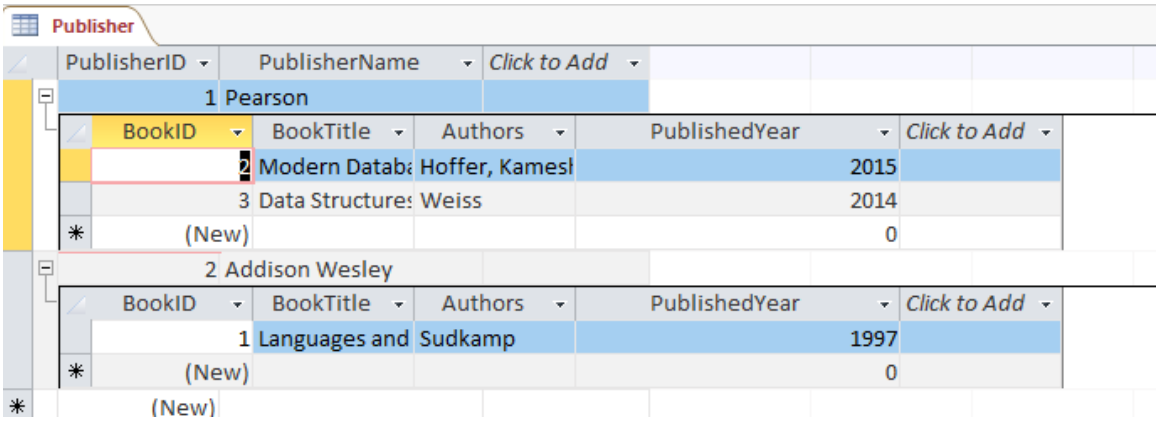
## Case Study 2:

Because description and price each is functionally dependent on order_number via item_number it was normalized to 3NF as ItemData. Therefore, the answer is:

OrderData (Order_Num, Line, *Item_Number*, Qty Ordered)
ItemData (Item_Number, Description, Price Each)

## Case Study 3:

1. Screenshot of MS Access Table:




2. The Table is in 2NF:
    a. Taking a look at the Book table, it is clear that it violates 1NF due to the fact the attribute values in the authors column are not single. Currently, the authors Hoffer, Kamesh, and Topi are all grouped together. To first make the table in 1NF, we would first have to make two new rows and repeat the other column information (Book ID, Book Title, Published Year, PublisherName) for each author. By listing the authors out, we can see that the Author column is a unique value (thereby the PK of the BookInfo table and FK of the Book table). BookTitle, Published Year, and BookID are all dependent upon Author.
    Book (BookID, BookTitle, *Authors*, PublishedYear, PublisherName)
    BookInfo (Authors, BookID,BookTitle, PublishedYear)

# Part 2:

VideoInfo(*VideoID*, VideoTitle, StreamStart, VideoDuration)
UserInfo (Username, *VideoTitle*, *UserTier*)
TierLevel (UserTier, MinTierFollowers)
ContentLevel (VideoID, ContentRating, Rating Description)