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IST 659 – Lab 04

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Case Study 2 – More Bikes

Start With:

OrderItem (***Order Num***, Line, Item Number, Description, Qty Ordered, Price Each)

Relations in 3NF:

We may wish to break Order Item into separate tables since an Order can have many lines and perhaps we would add Order Status and Tracking Number to the new Order table. We could create a surrogate key for Item Number in case we need to update the Item SKUs after migrating to a new system.

Order (***Order ID,*** *Order Num*)

OrderItem (***Order Num***, Line, *Item Number ID*, Qty Ordered)

Item (***Item Number ID,*** Item Number, Description, Price Each)

Case Study 3 – Books Again

Table

Description automatically generated

1. The Book table is currently in 2NF because we still have a transitive functional dependency between Book Title and Published Year. There may be a situation where the same book title is re-released as a new edition. Therefore, to make it 3NF, we could break the Book table down into two tables: one for BookID, BookTitle, and Authors and the other for Edition ID, Edition Number, and Published Year. Then we would need to add Book ID as a foreign key.

Publisher (***Publisher ID,*** Publisher Name)

Book (***Book ID***, *Publisher ID*,Book Title, Authors)

Edition (***Edition ID***, *Book ID*,Edition Number, Published Year)

Part 2 – Normalizing Video Data for Vidcast

Video (***Video ID,*** *User ID****,*** *Rating ID,* Video Title, Stream Start, Video Duration)

Rating (***Rating ID***, Content Rating, Rating Description)

User (***User ID***, User Name, *User Tier ID)*

User Tier (***User Tier ID****,* User Tier, Min Tier Followers)