

Assignment 2 - Part2: Normalization

Jiaxi Zhang

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Author: [Jiaxi Zhang]

Assignment: HW2

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I pledge that I have completed this assignment without collaborating with anyone else, in conformance with the NYU School of Engineering Policies and Procedures on Academic Misconduct.

This table does not satisfy 3NF because there is a transitive dependency between $\text{ISBN} \rightarrow \text{AuthorID} \rightarrow \text{AuthorName}$, also $\text{ISBN} \rightarrow \text{Publisher} \rightarrow \text{PublisherAddress}$. As a result, we need to decompose the table into 3 tables to satisfy 3NF and use foreign keys to link them together.

They are:

- Books(ISBN, Title, @AuthorID, @Publisher)
- Authors(AuthorID, AuthorName)
- Publishers(Publisher, PublisherAddress)

Example:

Books			
ISBN	Title	AuthorID	Publisher
978-1-234	Introduction to AI	A001	TechPress
978-1-235	Database Systems	A002	DataBooks
...

Authors	
AuthorID	AuthorName
A001	John Smith
A002	Jane Doe
...	...

Publishers	
Publisher	PublisherAddress
TechPress	100 Tech Lane
DataBooks	200 Data St.
...	...

Figure 1: Example