

BUS 362

Assignment 07 - Normalization

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Normalization

Purpose

- Minimal repetition of data
- Lossless joins - when two tables are connected, only the data you want is returned

1NF

- Maintain all the data in one table but remove repeating groups
- Groups are removed by adding new rows for the repeated groups

Disadvantages

- Introduces redundancy
- Insert anomalies - can't insert with only partial information
- Delete anomalies - have to delete everything at once
- Update anomalies - many records need to be updated at once

2NF

- Multiple tables that are now connected through foreign keys
- Still has *partial key dependencies*

To Improve

- Remove partial key dependencies
- Each non-key attribute should be dependent on only one primary key
- Has some of the same anomalies of 1NF

3NF

- Has no partial key dependencies
- There are no delete, insert or update anomalies
- There is very little (or zero) redundancy

Beyond

- BCNF (functional dependencies)
- DKNF
- 4NF, 5NF, 6NF
- More!

Textbook Pages

- 5th Edition: p250 - 254
- 6th Edition: p211 - 216

Assignment

Instructions

- Finish two textbook normalization exercise
 - Wilcon Company: 5th edition p249, 6th edition p211
 - Your Turn: 5th edition p254, 6th edition p216