Querying Relational Databases Part 1 Notes

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1 Why We Make Databases "Relational"

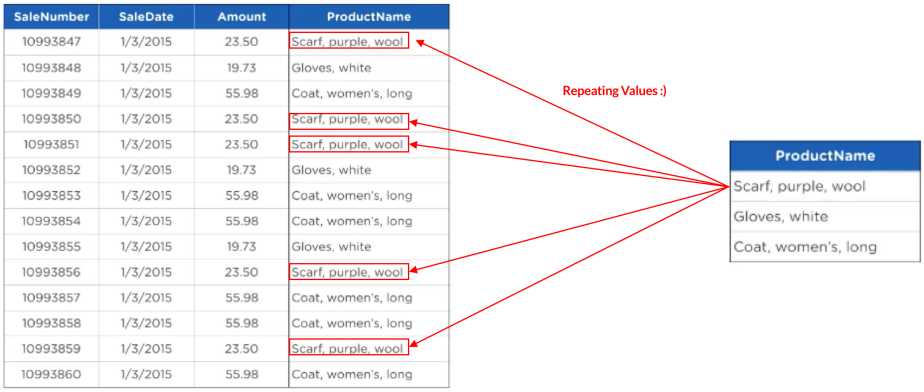
- Organizes data into related tables by their context and meaning
- Has benefits
  - Maximizes Storage
  - Better application functionality
  - Clenear, richer data for business reporting

2 Database Normalization

- **Normalization:** Is the process of eliminating redundant or repeating data in a database

3 How Normalization Helps Us

- Drastically reduces the amount of spaces required
  - Old days (And today too!!) $\rightarrow$ is crucial



- Reduces update time
  - Update affects millions

4 Quiz 1

1. Which of these is NOT a benefit of a relational database?

   A. Saves disk space as much as possible.
   B. Data conveniently stored in one table.
   C. Eliminates data modification anomalies and increases data integrity.

   Answer: B

2. What is Normalization?

   A. The process of writing queries against a relational database.
   B. The process of designing a relational database.
   C. The process of combining many tables into one.

   Answer: B

3. Which CRUD operation benefits most from a well normalized database design?

   A. INSERT
   B. UPDATE

C. DELETE

D. All of These

Answer: D

4. When were relational databases first conceptualized?

A. The 1990s

B. The 1970s

C. The 1950s

Answer: B

5. Where does the term "relational databases" come from?

A. A relational database is the best way for a computer system to "relate" to the outside world.

B. There is an implied inheritance between parent and child databases, thus the phrase "relational"

C. Tables in a relational database are linked – or "related" – via fields that they have in common.

Answer: C