

INTRODUCTION TO DATABASES



Database

2

- Generally:
 - ▣ An organized collection of logically related information
- Computer science:
 - ▣ An organized collection of logically related information that is
 - Persistent
 - Often accessed by multiple users

Databases in Scripture

3

- Genealogies
- Census records
- Book of Life

“... He that overcometh, the same shall be clothed in white raiment; and I will not blot out his name out of the book of life, but I will confess his name before my Father, and before his angels.”

~ Revelation 3:3-5

Basic Terms

4

- Database Management System (DBMS)
 - ▣ Software that manages databases
- Database Application
 - ▣ Program that provides end users access to information in a database via a custom interface
 - ▣ Interacts with DBMS “behind the scenes”

DBMS Categories

5

- Enterprise DBMS
- Desktop DBMS
- Embedded DBMS

DBMS Technologies

6

- Relational
 - ▣ Data organized using a collection of tables
 - ▣ Query and manipulate data using SQL
 - ▣ Dominant DBMS technology
- NoSQL
 - ▣ Data organized using collections of documents
 - ▣ Powers many web applications, document management systems
 - ▣ More specialized than relational

Database User Categories

7

- End Users
- Application Programmers
- Database Admins

Life Without Databases

8

- Many people store collections of data in Word Documents and Spreadsheets
- Case study: Fundraiser
 - ▣ See class examples: fundraiser.xlsx
- Problems with the spreadsheet solution?

Why do people store data in Word/Excel docs?

9

- Databases require more training/effort