* Databases
  + They utilize C++
  + Early systems
    - Data redundancy and inconsistency – data stored in multiple file formats
    - Difficulty in accessing data – Need to write a new program act out each new task
    - Data isolation – multiple files and formats
    - Integrity problems – multiple people using the same account
    - Atomicity – databases is in an inconsistent state of partial updates
  + Atomicity – composed of indivisible units
  + Schema – design of the database
  + Logical Schema – overall logical structure of the database (relationships within the database)
  + Physical Schema – overall physical structure of the database
  + Instance – the actual content of the database at a particular point in time
  + Data Definition Language (DDL) – specification notation for defining the database schema; accessing data; Schema
  + Data Manipulation Language (DML) – accessing and updating the data organized by the appropriate data model; modifying or query data; data dictionary; Instance
  + Host language – language that has embedded SQL queries that access the database
  + Logical Design – business relations
  + Physical Design – the setup of table
  + Database Engine – database system is partitioned into modules that deal with each of the responsibilities of the overall system
    - Storage manager
    - Query Processor
    - Transaction Management
    - Database Architecture