GROUP MIND MAP

C H A P T E R 7
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NETWORK DATABASE

- Hierarchical node arrangement
- Each child node may have more than one
  parent
- node (many-to-many relationship)
- Pointers
  - (1) Additional connections between parent
    and child
  - (1) Nodes can be reached through multiple
    paths

DATA

- A database is an electronic system that allows data to be easily accessed, manipulated and updated
- Like a library, secondary storage is designed to store information and an organized collection of data
- Examples of data include:
  - (1) Facts or observations about people, places
  - (2) Audio, music, photographs, and video

Data Organization

Unique identifier also known as primary key
- Common examples:
  - Social Security Numbers
  - Student Identification Numbers
  - Employee Identification Numbers
  - Part Numbers
  - Inventory Numbers

CHAPTER 5

DATA BASES & DATA ANALYTICS

DATABASE

DBMS Structure
- Database model:
DBMS programs work with data that is logically structured or arranged
- Model defined rules and standards for data in a database
- Five common data models:
  1. Hierarchical database
  2. Network database
  3. Relational database
  4. Multidimensional database
  5. Object-oriented database

DBMS Structure
- Works with unstructured data
  - (1) Photographs
  - (2) Audio
  - (3) Video
- Objects contain both data and instructions
- Organize using objects, classes, entities, attributes, and methods

Hierarchical Database
- Fields or records structured in nodes
- Nodes
  - (1) Points connected like branches of an upside- down tree
- One parent per node
- Parent can have several child nodes
  - (1) One-to-many relationship

Multidimensional Database
- A variation and an extension of the relational model
- to include additional dimensions, sometimes called
- a data cube
- Good for representing complex relationships
- Advantages over relational
  - (1) Conceptualization
  - (2) Processing speed

ROLE OF DATA ANALYST

(1) Study the information

(2) Clean it from noise

(3) Assess the quality of the data and its sources

(4) Develop the scenarios for automation and machine learning

(5) Oversee the proceedings