

### **GROUP MIND MAP**

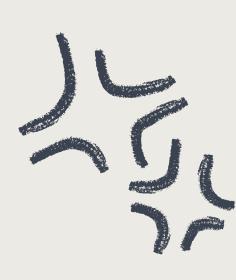
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### NETWORK PATABASE

- Hierarchical node arrangement Each child node may have more than one
- node (many-to-many relationship)
- (1) Additional connections between parent

(1) Nodes can be reached through multiple paths

## NATA

- 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

# Nata 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



## NATABASE

#### **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