**Database**

* Collection of data \ collection of related data
* Data is System organization /
* Focus topic

Data - “AIDS for producing info.”

Example of data:

Name, age, gender etc.

Example of Information

Inan, 19, Male.

DBMS – manage of data or as software

DBMS can do – Recording of Data Become more easier to:

* Manipulation
* Retrieve
* Produce info

CHARACTERISTIC:

* Real - World Entity (things or any object)
* Isolation of Data & Application
* Less Redundancy
* Relation Based Tables
* Consistency
* Query Language
* ACID prop- Atomicity, Consistency, Isolation, Durability
* Multiple Views
* Security

DBMS 2

3 Architecture

* Interface
* Application
* Database

Data Model

* Defined Logical Struct. of DB
* Define how data is connected to each other
* Define how data are processed and stored

Entity Relationship Model

* Relationship of Real World Entity

3 elements of ERD

* Entity
* Attribute
* Relationship

Relational Model Elements

* Attribute
* Column
* Tuple

Data Schema – Skeleton Structure of future DB

Student:

|  |  |
| --- | --- |
| Data type/Key | Attribute |
| Primary key | S.ID |
| varchar | Name |
| Int | Age |
| Varchar | Guardian |

Data Independence

* Independent Data
* Dependent

Student:

|  |  |  |
| --- | --- | --- |
| S.ID | Name | Age |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |