

INT 306

Database Management Systems

(DBMS)

Lecture 0

‘Let’s move toward the better way to store and manage the data’

Course Details

- **INT-306**

- **Text Book –**

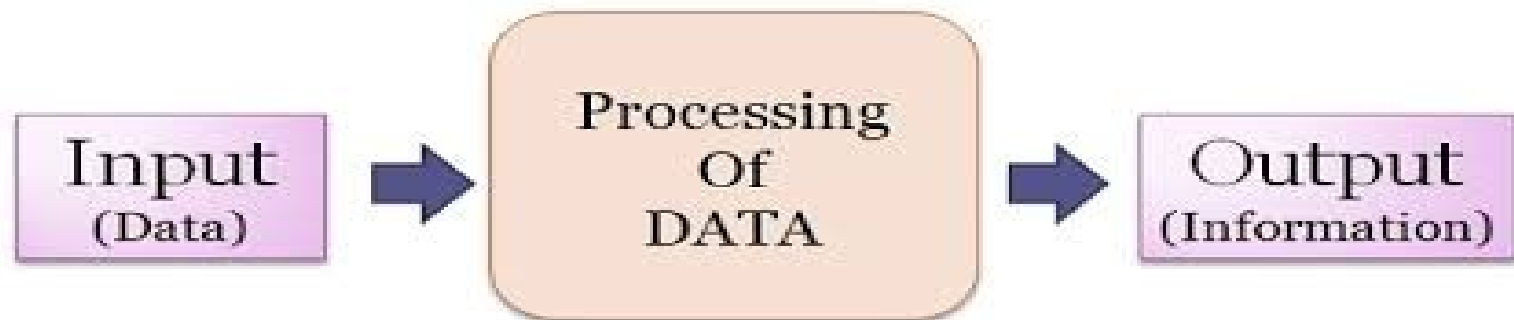
DATABASE SYSTEM CONCEPTS by HENRY F. KORTH, ABRAHAM SILBERSCHATZ, S. SUDARSHAN, TATA MCGRAW -HILL EDUCATION.

Marks criteria

Contributor	Marks
Attendance	5
CA(2 out of 3)	20
MTE	25
ETE	50

Data and information

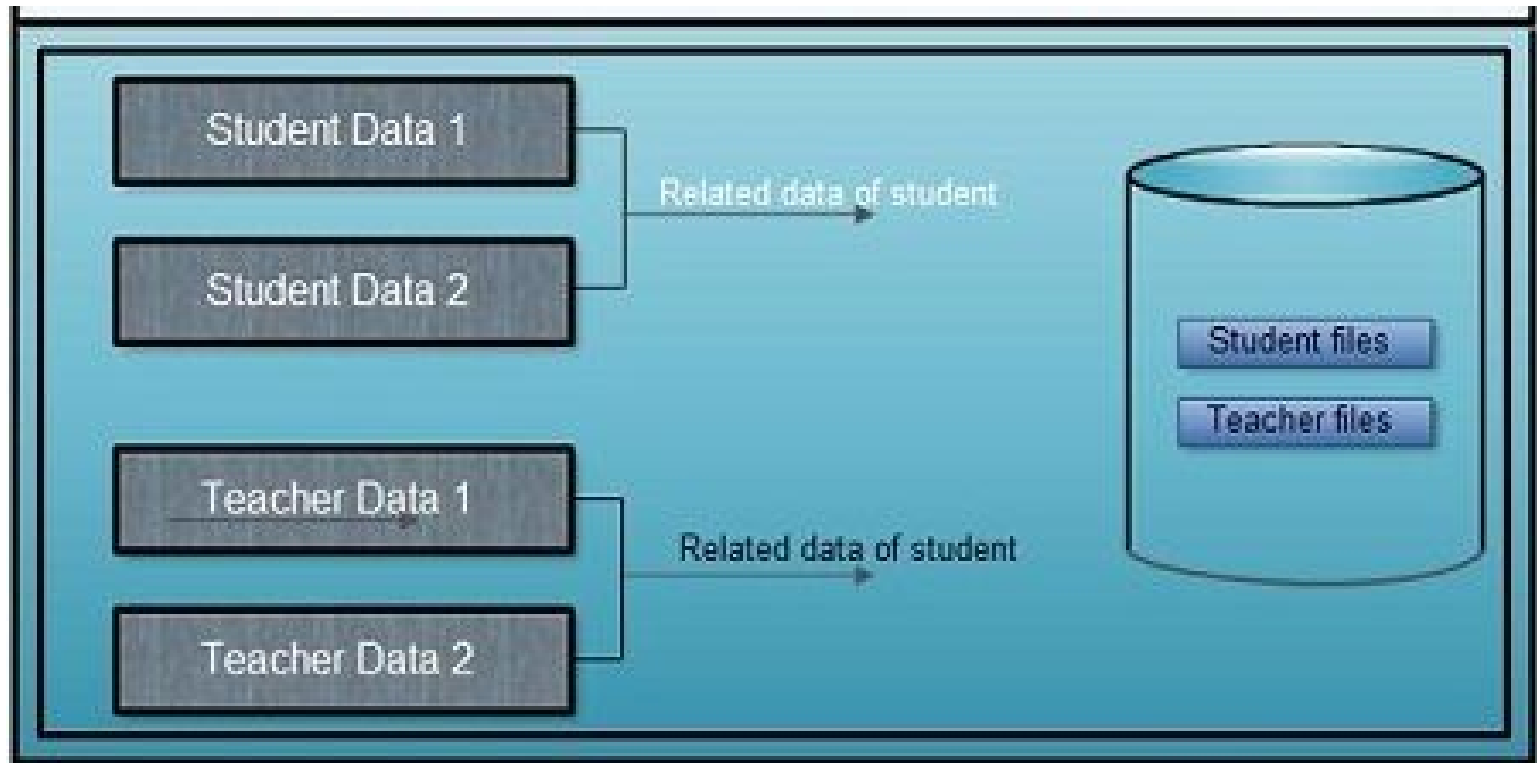
- Raw material that can be processed by any computing machine is data.
- Images, words, numbers , sounds etc. all forms different representations of the data.



Database

- A database is actually a place where related piece of information is stored and various operations can be performed on it.
- Or we can say database is a shared collection of logically related data in a systematic manner that is stored to meet the requirements of different users of an organization that can be easily accessed.
- Database can be maintained manually or through electronic devices such as digital diaries, mobile phones, computers etc.

Database



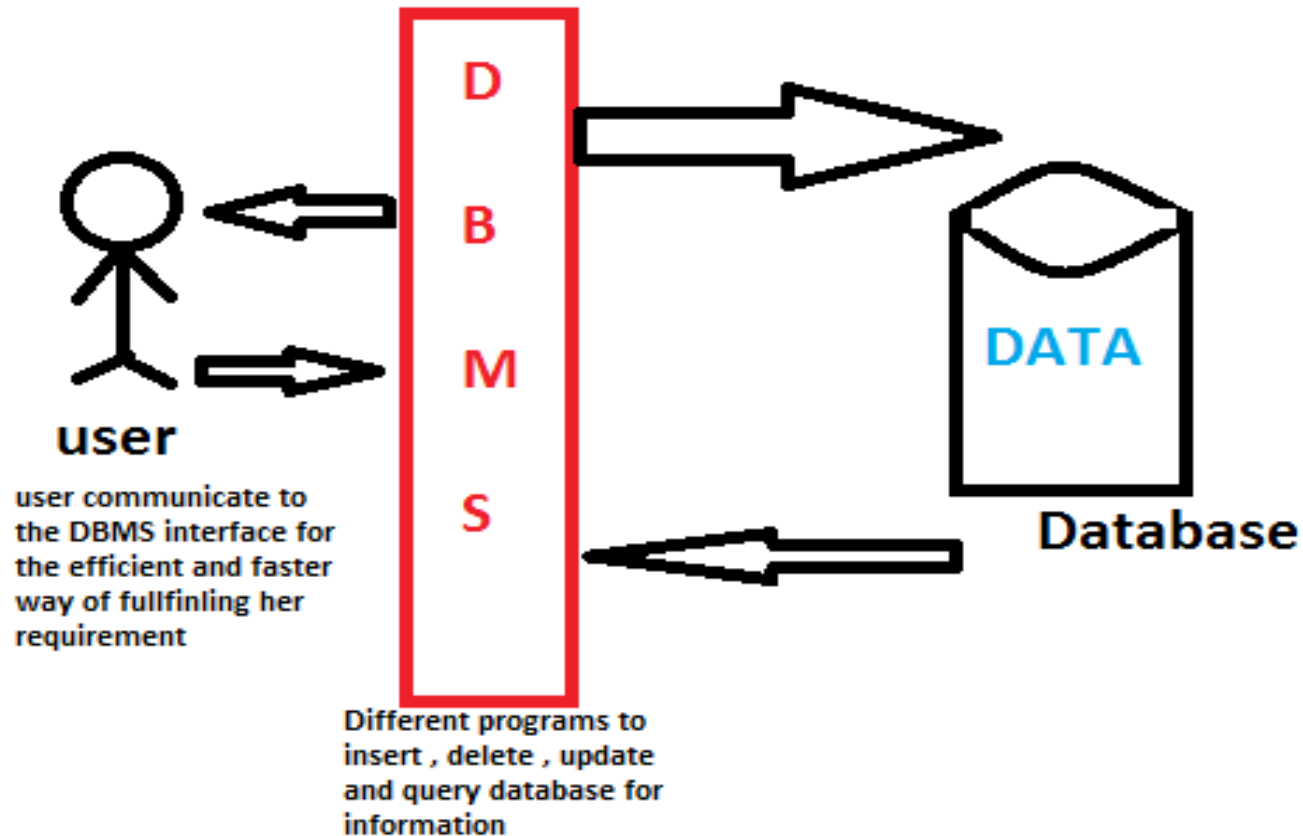
Introduction to DBMS

- DBMS=Database Management System
- Database+Management+System
- In which the database is managed by the system.
- Database Management System
- Database+Management System

collection of data is a set of program to store &
retrieve the data.

- A DBMS is a software(or a collection of programs) that enables users to store modify and extract information from a database as per the requirements.
- DBMS is actually a tool that is used to perform any kind of operation on data in database.
- Some DBMS examples:
 - My SQL
 - Oracle
 - My SQL server

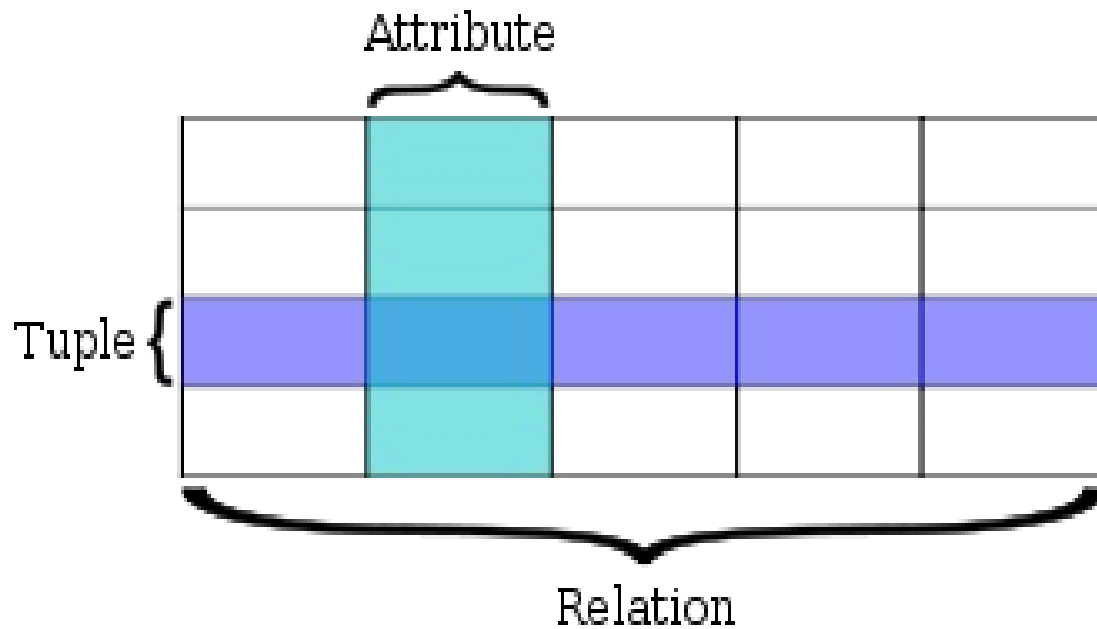
Database Management Systems



Unit 1: Introduction to Databases

- purpose of database systems
- components of dbms
- applications of dbms
- three tier dbms architecture
- data independence
- Database Schema, instance
- data modeling
- entity relationship model
- relational model

Relational Databases



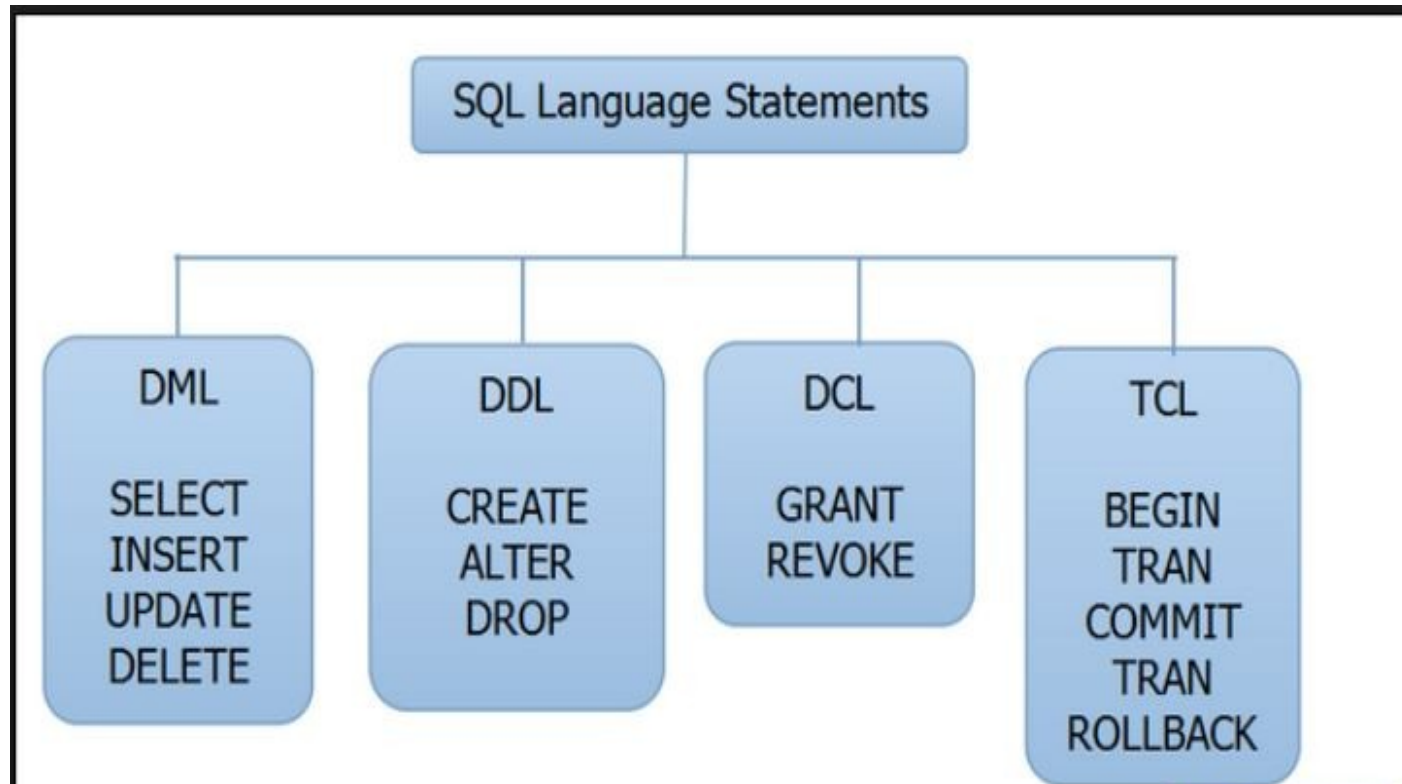
Relational Databases

UserID	First Name	Last Name	Email	Phone #
7500848	Stephen	Barrett	sbarrett@mail.com	555-222-3987
7500843	Derek	Clapton	derek@dominos.com	555-735-2406
7500843	John	Didsbury	jdisbury@mail.com	555-769-3987
7500847	Georgia	Grace	gg@mail.com	555-859-9876
7500841	Carly	Rose	crose@mail.com	555-403-1018

Fields

Each row is a separate record

Unit 2: Relational Query Languages

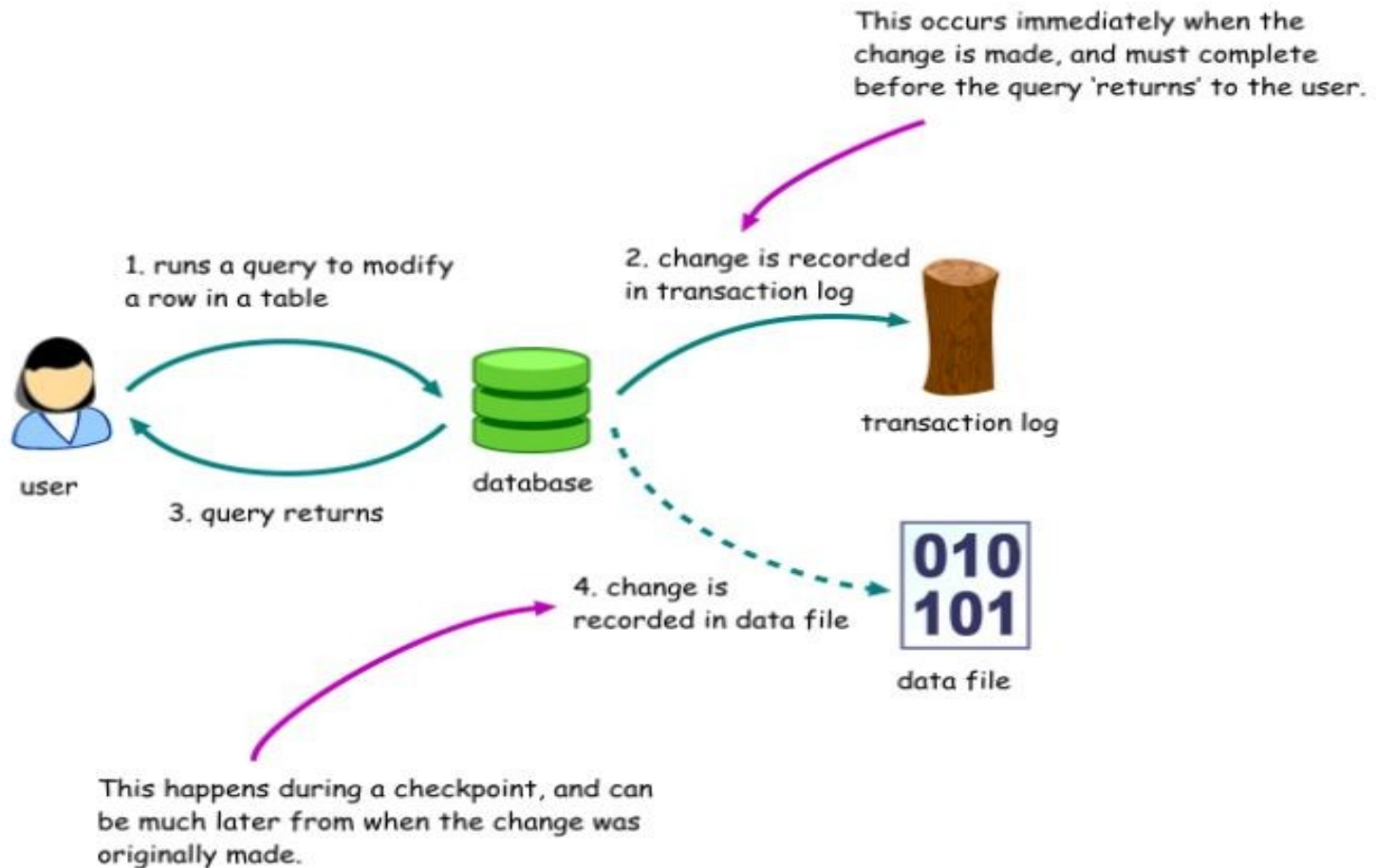


Unit 3: Relational Database Design

First Name	Last Name	Address	City	Age
Mickey	Mouse	123 Fantasy Way	Anaheim	73
Bat	Man	321 Cavern Ave	Gotham	54
Wonder	Woman	987 Truth Way	Paradise	39
Donald	Duck	555 Quack Street	Mallard	65
Bugs	Bunny	567 Carrot Street	Rascal	58
Wiley	Coyote	999 Acme Way	Canyon	61
Cat	Woman	234 Purrfect Street	Hairball	32
Tweety	Bird	543	Itotltaw	28

- Normalization
- Normal forms

Unit 4: Database Transaction Processing



Unit 5: Programming Constructs in Databases

- Cursors
- Triggers
- exception handling

Unit 6: File Organization and Trends in Databases

