

## UNIT-II

### RELATIONAL model.

Relational data model - keys, referential integrity and foreign keys, relational algebra - SQL fundamentals - Introduction, data definition in SQL, table, key and foreign key definitions, update behaviours - Intermediate SQL - Advanced SQL features - Embedded SQL - Dynamic SQL, case studies: Oracle: database design and Querying tools: SQL variations and Extensions.

#### Relational data model

- This is an approach to logically represent the data and to manage the data.
- here data are well organized and it has the collection of two dimensional inter related tables.
- Each relation is a collection of columns and rows.
- column represent the entity's attribute
- row called "tuples". which represents the record.
- here the main use of the table is to provide the data in straight forward, efficient and in flexible way.
- This model provides easy data storage access and data sorting.

Ex: Consider the scenario of the student to store the values such as student name, cnpa in a particular class.

## Domain

A Domain  $D$  is a set of atomic values. By atomic values means that each value in domain is indivisible units.

## Basic structure

attributes

Employee	Emp-no	Emp-name	salary	post	ANO
Relation name	1001	Poojan	40000	GM	101
	1002	B	50000	PL	102
	1003	C	30000	TL	103

} tuple - 103

→ Each data in tuple is called "relational instance"

## database schema

### Account

<u>acc-no</u>	branch-name	balance
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### Branch

<u>branch-name</u>	branch-city	assets
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### Borrower

<u>cust-id</u>	<u>loan-id</u>
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here primary keys are underlined.

Example relational table for "account" schema is as follows.

### Account

Acc-no	branch-name	balance
A101	Downtown	500
A102	Perrybridge	1000
A103	Redwood	700
A305	Round Hill	350

## Catalog

A catalog is a place where schema's such as internal, external and conceptual schema's are stored and mapping such as internal, external and conceptual mappings are kept.