

Course Name: **A Level (1st Sem)**

Subject : **Introduction to DBMS**

Topic: **RDBMS & Its Terminologies (Part1)**

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RDBMS –

It stands for Relational Database Management System. RDBMS provides an efficient way to organize, store, insert, update, delete and retrieval of data into database.

In RDBMS, the data is represented as a collection of relations. A relation is nothing but a table of values. Table consists of rows and columns. The data are stored in different tables and these tables are interconnected/related to each other that is why it is “relational”.

Some example of popular relational database software includes Microsoft SQL Server, IBM DB2, Oracle MySql, Microsoft Access, MariaDB etc.

Example of some non-relational database software includes Apache HBase, IDM Domino, MongoDB etc.

Non relational database are based on NoSql while RDBMS are based on SQL (Structured Query Language).

RDBMS Terminologies:

- **Table:** RDBMS uses table to store data. A table is a collection of related data and contains rows and columns to store data. For example

Table1: employee_info

emp_id	emp_name	emp_fname	emp_dob	emp_aadhar	emp_mobile	dept_id
1001	Ramesh	Suresh	12-Mar-1991	78528	7854	101
1002	Ram	Shyam	02-Feb-1989	85297	4547	101
1003	Dharam	Suresh Kumar	01-Aug-1991	45824	4514	102

Table2: department

dept_id	dept_name	dept_location	dept_budget
101	IT	GF-20	500000
102	Electronics	GF-23	400000
103	Admin	FF-23	350000
104	Accounts	FF-24	250000

Note: These above two tables are interconnected /related with each other through dept_id field/column.

The rows of the **table (relation)** are also called **tuples/records**. Table1-employee_info has 3 rows/records/tuples. Table2-department has 4 rows/records/tuples.

The columns of the **table (relation)** are also called **fields/attributes**. Table1-employee_info has 7 columns/fields/ attributes. Table2-department has 4 columns/fields/ attributes

Degree: The number of column/field/attribute in a table is called **Degree** of table. The degree of table1 is 7 and 4 for table2.

Cardinality: The number of row/**tuple/record** in a table is called **Cardinality** of table. The cardinality of table1 is 3 and 4 for table2.

Exercises:

1. Suppose you want to store the data of students in RDBMS, Create a table student_info which have at least five columns and have at least the records of five students.
2. Identify the degree and cardinality of above table.