

LOG ON TO  
ACCESS

# DATABASE

- A Database is an organised way of storing information. It helps us to manage and access large amount of information quickly and efficiently.
- When we maintain database manually where there are thousands of records then chances of mistakes increase.
- So, A computerised record keeping system, is known as Database Management System.

# BENEFITS OF DATABASE MANAGEMENT SYSTEM

- Saves time and Energy
- Minimum chances of committing errors
- Data Handling becomes case and efficient
- There is no redundancy of Data

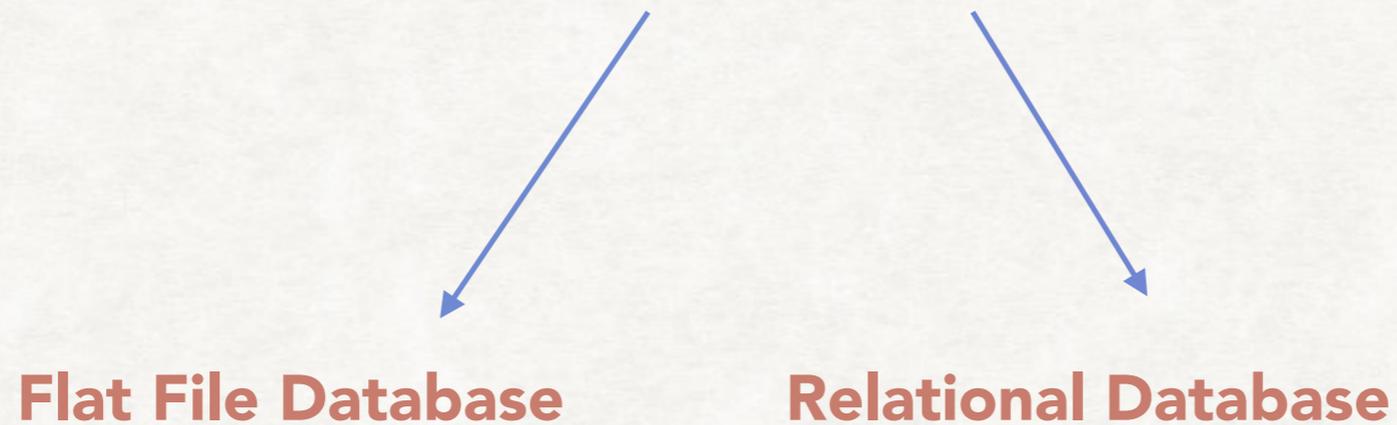


**Field:** A column within a table that contains only one type of information. Eg. Roll No., Name etc.

**Record:** A collection of field makes one record. A record displays all information about a single entry. Eg: A student's Name, Roll No., Address etc.

**File:** A file is a collection of related records.

# TYPES OF DATABASE



**Flat File Database:** It can store and retrieve information but is not capable of linking files together.

**Relational Database:** Links separate tables together to get a common piece of information. Eg. MS Access, SQL(Structured Query Language, Oracle, Sybase etc.

# MS ACCESS

Microsoft Access is the most popular RDBMS. It is used to organise and manipulate data. It organises data in the form of tables. It creates relationship between tables using common field

## Features of MS Access

- Provides facility to break information into small parts, so it is easy to access information.
- Duplication of data is reduced
- Increases efficiency, speed, and flexibility in searching and accessing information
- Different users can share same database
- Provides security measures so that the data is consistent and reliable
- Queries help to get information on specific topic
- Reports allows to present data in a meaningful and summarised manner

# TABLES

A Table is a collection of rows and columns which is used to store information. In MS Access a table can have maximum 255 columns and unlimited rows.

A Table name can have 64 characters including letters, numbers and spaces

# DATA TYPES

Data types are used to declare the fields of the table. It determines the type of data a particular field can accept.

Once the data type is defined, we cannot enter a different type of data. If we do so, an error message will be displayed.

# DATA TYPES

Type of Data	Description	Size
Short Text	Text or combinations of text and numbers, including numbers that do not require calculating (e.g. phone numbers).	Up to 255 characters.
Long Text	Lengthy text or combinations of text and numbers.	Up to 63, 999 characters.
Number	Numeric data used in mathematical calculations.	1, 2, 4, or 8 bytes (16 bytes if set to Replication ID).
Date/Time	Date and time values for the years 100 through 9999.	8 bytes
Currency	Currency values and numeric data used in mathematical calculations involving data with one to four decimal places.	8 bytes
AutoNumber	A unique sequential (incremented by 1) number or random number assigned by Microsoft Access whenever a new record is	4 bytes (16 bytes if set to Replication ID).
Yes/No	Yes and No values and fields that contain only one of two values (Yes/No, True/False, or On/Off).	1 bit.

# PRIMARY KEY

- It is an important feature of RDBMS
- It checks that every record in the table is unique and does not contain duplicate data
- Use of primary key is to relate the record from one table to the other's table
- It is a toggle key.
- It can be removed as well as added

# QUERIES

- A query is a simple question that we ask to find a specific solution from the database. We use queries to view, change, summarise and analyse specific data in different ways.
- Queries are made on tables and the result of a query is also in a form of a table.
- In Queries, there is a **criteria property** which contains the condition on the basis of which the records will be filtered.
- Criteria are of two types: **Simple criteria** and **Multiple criteria**.
- In Simple Criteria, the criteria value is specified in Criteria row. For Eg. In Science marks field if we write in criteria row " $\geq 50$ " , then all the rows will be displayed where the Science marks are greater than equal to 50.
- In Multiple criteria, the first condition is written in criteria row and the second condition is written in OR row.

THANK YOU