Class: VII **Subject:** Computers
Topic: Database and DBMS. **Teacher:** Prabhdeep
An Introduction

Good Morning Students.
This lesson is of Class VII for the Subect
of Computers. Today we Start with new
Topic:- Database and DBMS-An Introduction
given in your book Logix7 as Chapter:7.
In this Chapter we Study about types
and Structure of Database, what is
Microsoft Access, features, components,
Starting, creating Blank Database, crea-
ting database using templates. So, Students
let Start with what is database.

A database is an Organized collection of
Structured information, or data typically
Stored electronically in a Computer
System. A DBMS computerised record
System enables us to create, store
modify and extract information from a
database and with this it reduces the
chances of errors creeping into the
database to great extent.

Types of Database

There are mainly two types of database:
Flat File Database: A flat file database refers
to the data files that contain records, which
have a Small, fixed number of fields, without

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any structured relationship. Example - Microsoft Excel.

Relational Database: A relational database stores the data in several tables and links those tables together to get a common piece of information. Example - Microsoft Access, Microsoft SQL, Oracle.

Structure of Database

Structure of Database means the building blocks of a database. Each database contains a specific structure to store data and related data are grouped into tables, each of which consists of rows also called tuples and columns.

Students, first let us discuss some basic ~~terms~~ terminologies used in a database.

1. **TABLES:** A table is a collection of related data held in a table format within a database. It consists of columns and rows. In relational databases, and flat file databases, a table is a set of data elements using a model of vertical columns and horizontal rows, the cell being the unit where a row and column intersect.

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Elements of a Table

Fields : All the columns in a table are called fields. A field describes a particular attribute of all the records in a table.

Records : The rows in a table are called records. A record contains the values for all the fields that belong to a single person or an entity.

Data : A set of characters that represents a valid value is known as data.

Roll No.	Name	English	Maths	Science
1	Rajan	89	93	80
2	Amrit	95	96	81
3	Dipti	90	99	79

Fields (top), *Records* (right), *Data* (bottom)

2. QUERIES: A query is a way of requesting information from the database and queries help us to retrieve the filtered data based upon some conditions. Queries can perform many different functions such as delete, update, read and create on the data based on certain conditions we use term CRUD to perform queries.

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3. FORMS: A form is a database object that you can use to enter, edit or display data from a table or a query. A form has an attractive interface that accepts data from the user and forwards it to the corresponding table or query.

4. REPORTS: Reports are used to display the selected data in a printable format. Reports collect the summarised data from one or more tables/queries and organise it in a printable form.

MICROSOFT ACCESS

Microsoft Access is an information management tool, or relational database, that helps you to store information for reference, reporting and analysis. Access can also overcome the limitations found when trying to manage large amounts of information in Excel or other spreadsheet applications.

Features of Microsoft Access

1. Ideal for individual users and smaller teams.

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2. Easier than a client-server database to understand and use.
3. Helps in reducing the data duplication or we can say data redundancy and ensures that there is only one instance of particular data.
4. Ready templates for regular users to create and publish data.
5. Increases the efficiency, speed and flexibility in searching and accessing the information.
6. Allows output Reports in PDF format.
7. Different users can use the same database to extract data according to their needs.
8. Provides data security features and maintains integrity.
9. Facility to create data forms, so that the user can enter the required information.
10. Queries in database help you to get information on a specific topic from the information stored in the database.

Components of Microsoft Access 2010

Title Bar: It is located at the top of the window and displays the name of the active database.
Quick Access ToolBar: It is located at the top left corner. It contains the most frequently used Command buttons such as by default it displays Save,

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undo and Redo buttons but you can customize according to your choice also.

Ribbon: It contains contextual tabs and various other tabs with several groups of relevant commands.

Navigation Pane: It is present on the left side of the Access window. It displays the name of the objects such as Table, Queries, Forms and Reports.

Navigation Buttons: The Navigation buttons display the current record number in an object.

Object Tabs: The objects that you have opened in a database appear right above the work area.

Status Bar: This Bar is located at the bottom of the window. It displays the name of the current view on its left and view buttons on its right.

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