DBMS

LAB ACTIVITY - 1

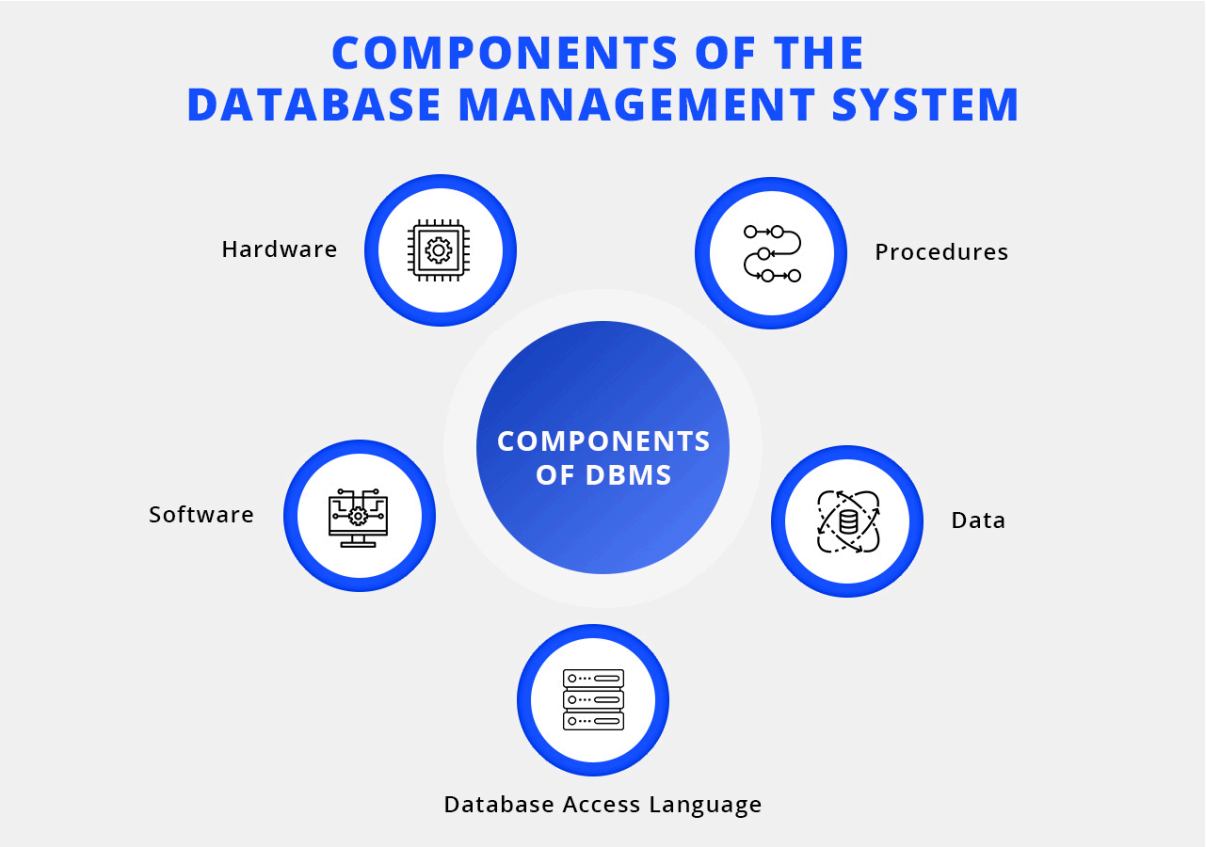
1. **List down the main difference between a File Processing system and a DBMS**

FILE PROCESSING SYSTEM	DBMS
Data is stored in seperate File(eg: txt,csv,etc.)	Data is stored in the form of a Tables(Rows and Columns)
It helps in storing and accessing data directly from files.	It helps in easy Storage, Retrieval and Management of Data.
It is less secure.	It helps in encrypting data which makes it more secure.
Same data is stored in multiple Files which leads to increased Data Redundancy.	It has low Data redundancy as Data is stored only once in a table.
It requires manual coding to access data.	Data can be accessed easily using SQL.

2. **Define the following terms**

a. **Data Dictionary**- It is basically Metadata(data about data) which gives more information about the data like its types, links, names ,definitions, etc. It basically defines the data making it easier to understand it.
b. **DBMS catalog**- It is the repository used to store Metadata. It is basically teh storehouse of Metadata.
c. **DDL(Data Definition Language)**- It is a language that defines data and its relationships. It tells how the data is stored.
d. **DML(Data Manipulation Language)**- It is a language that is used to modify the data stored in tables.
e. **Query Language-** It can be used to make queries and retrieve information from the database.
f. **Meta Data-** It is Data about the data basically more information about the data stored in a database. It helps in better understanding of Data.

3. **Describe the main components of DBMS.**



a. Hardware- It is the Machine in which a database is stored like our desktops, Laptops, etc.
b. Software- It refers to the DBMS Software which handles the database. It handles requests and helps in interacting with the data.
c. Data- It is the information stored in the Database.
d. Database access language- It is the language used to access data from a database. The most commonly used language is Structured Query Language (SQL). We can write queries here to access and modify data.
e. Procedures- It is a set of guidelines that governs the database,its Management, Storage and retrieval.

4. **Explain the various types of Database users and the role of a database administrator.**

Types of Database Users:

a. Naive Users- Users who directly use the database through an application without actually understanding it.
b. Application Programmers- Users who Develop the applications that interact with the database.
c. Sophisticated USers- Users who interact with the database through a language like SQL by directly writing the queries.
d. Specialized users- users who develop custom data applications for special tasks by using specialized tools.

Role of a Database administrator: A database administrator is responsible for the overall Management, Control Maintenance of the database.