

DATABASE MANAGEMENT SYSTEM FOR ACCOUNTING

Database Management System (DBMS) such as LibreOffice Base, Oracle, SQL Server etc. provides a variety of software tools for storing, organising, processing and querying data very easily.

Data – Data are facts and figures about people, objects, entities or events.

Database – It is a collection of data that is stored and used for multiple purposes. Eg. Telephone directory, admission register, stock register of a business enterprise etc.

Front-end interface (FE) – It is an interactive link between the user and database, through which the user communicates to the back-end database. Eg. Purchase Voucher to enter purchase transactions.

Back-end database (BE) – It is the data storage system which is hidden from the user and responds to the requirements of the user to the extent the user is authorised to access.

Data Processing – It is a series of actions by which the data are transformed into useful information meant for decision making.

Reporting System – Reporting is an integrated set of objects, which provides meaningful information to the users.

LibreOffice Base and its components

It is one of the popularly used Database Management System (DBMS) to create, store and manage database. It has the following objects or components.

1. **Tables** – Tables allows a database designer to create the data tables with their respective field names, data types and its properties.
2. **Queries** – This component is used to retrieve filtered data and information from the table and to include computation fields.
3. **Forms** - It allows the front end user for entering data to a database file. It also facilitates displaying, updating and deleting the data.
4. **Reports:** This is used to create various reports by using the data from tables and queries. It is used to present selected set of contents in a format.

Identification of data to be stored in table – Identification of various attributes of a database is considered as part of requirement analysis. As the part of normalisation, we ensure how many tables are to be created and what are the attributes to be included in each table.



For example, while preparing a payroll statement, we have to analyse the contents required in the table based on the report we want.

Logical structuring of data in tables – All the data must be logically arranged in different tables based on its nature. Eg: a payroll statement contains information related with employee details, salary details etc. If all these data are entered in a single table it will cause for data redundancy when we prepare payroll statement for subsequent months.

In order to eliminate data redundancy, we have to set tables, queries, forms, reports, primary key etc. as part of normalisation. Normalisation is the process of removing data redundancy.

Steps for Creation of Database in LibreOffice Base

1. Open LibreOffice Base: Applications – Office – LibreOffice Base
2. Creating Tables in LibreOffice Base: Click on Tables – Create table in design view – Enter the field Name - Field Type – Description (optional) – Set the Primary Key – Save.
3. Creating Queries – Click on query icon on the left panel – Use Wizard to create query – Select appropriate options from the coming windows – Finish.
4. Creating Forms – Click on Forms from the database pane – Use Wizard to create form – Select the table or query to add the fields into the form – Select appropriate options from the coming windows – Finish.
5. Creating Report – Click on the object Report from the database pane – Create report by using wizard – Choose appropriate options from the coming windows – Give a suitable name for the report – Finish.

Primary Key : After defining all the columns of the table, the primary key column of the table can be specified as any of the columns that are expected to have unique data values.

To set Primary Key: Select the field – Right Click – Select Primary Key

Entering data into Table – Double click on table icon – Enter the data. We can also enter the data through **Forms**.

Editing Table Field Properties – Right Click on Table icon – Edit – Make changes.

Deleting Table – Right Click on Table icon – Delete.

To Enter the data through Forms, to Edit and Delete the Forms the above steps may be followed as in the case of Tables.



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