# Warehouse

# Items

# What is Data ?

In simple words, data can be facts related to any object in consideration(name, age, height, weight, a picture, image, file, pdf, etc)

|  | Baseball | Basketball | Football | Total |
|---|---|---|---|---|
| **Male** | 13 | 15 | 20 | 48 |
| **Female** | 23 | 16 | 13 | 52 |
| **Total** | 36 | 31 | 33 | 100 |

# What is Database?

A database is a systematic collection of data. They support electronic storage and manipulation of data. Databases make data management easy.

An online telephone directory uses a database to store data of people, phone numbers, and other contact details. Your electricity service provider uses a database to manage billing, client-related issues, handle fault data, etc.

Let us also consider Facebook. It needs to store, manipulate, and present data related to members, their friends, member activities, messages, advertisements, and a lot more. We can provide a countless number of examples for the usage of databases.

# What is a DBMS ?

**Database Management System** (**DBMS**) is software for storing and retrieving users' data while considering appropriate security measures. It consists of a group of programs that manipulate the database. The DBMS accepts the request for data from an application and instructs the operating system to provide the specific data. In large systems, a DBMS helps users and other third-party software store and retrieve data.

**DBMS** allows users to create their own databases as per their requirements. The term "DBMS" includes the user of the database and other application programs. It provides an interface between the data and the software application.

# Types of DBMS

- Hierarchical database
- Network databases
- Relational databases
- Object-oriented databases
- Distributed databases
- Centralized database
- Open-source databases
- Cloud databases
- Data warehouses
- Graph databases
- OLTP databases
- Personal database
- Multimodal database
- Document/JSON database

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# RDBMS

**RDBMS** stands for **Relational Database Management System**. RDBMS is a program used to maintain a relational database. It is also called **Relational DBMS**, which is the most popular **DBMS** type in the market. **RDBMS** uses **SQL** queries to access the data in the database.

- MySQL
- Microsoft SQL Server
- Oracle
- **PostgreSQL**
- SQLite
- IBM DB2
- MariaDB
- dBASE

**Database Management System (DBMS)** is a software that is used to define, create and maintain a database and provides controlled access to the data.

**Relational Database Management System (RDBMS)** is an advanced version of a **DBMS**.

# DBMS and RDBMS difference

| DBMS | RDBMS |
|---|---|
| DBMS stores data as file | RDBMS stores data in tabular form. |
| Data elements need to access individually. | Multiple data elements can be accessed at the same time. |
| It deals with small quantity of data. | It deals with large amount of data. |
| low security levels | multiple levels of data security |
| It supports single user. | It supports multiple users |
| Data fetching is slower for the large amount of data. | Data fetching is fast because of relational approach. |

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# Elements of RDBMS ?

- Tables
- Indexs
- Login/group roles
- Functions
- Triggers
- Views
- Casts
- Types
- Sequences

# Interview Questions