Database management system (DBMS) & Relational database system (RDBMS)

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Database management system (DBMS)

A database management system (DBMS) is a software that permits an organization to centralize data, manage them efficiently, and provide access to the stored data by application programs. DBMS acts as an interface between application programs and the physical datafiles. When the application programs call for a data item, the DBMS finds this item in the database and presents it to the application program.

DBMS

Some key points:

- A set of programs provided to facilitate users in an organization, creating, updating, and manipulating data in a database, called DBMS.
- A common example of DBMS is MS-ACCESS.

Database management system (DBMS) tools

A DBMS contains five important tools or components:

- DBMS engine
- Data definition subsystem
- Data manipulation subsystem
- Application generation subsystem
- And, data administration subsystem

Advantages of DBMS:

- DBMS eliminates the data redundancy.
- It allows only authorized person to access data.
- It gives a faster response to the user.
- Also, provides mass storage of data.
- Similarly, provides multiple accesses of data.
- Query flexibility provides.
- Program independent.
- Consistent and maintains data integrity.

Relational database system (RDBMS)

A database model in which data elements are organized in the form of multiple tables and data in the one table is related to the data in another table by the use of common field. Such database management system is called RDBMS. A relational database system is a program that lets you create, update, and administer a relational database.

Most commercial RDBMS's use the structured query language(SQL) to access the database, although SQL has invented after the development of the relational model and is not necessary for its use. Ms-access called RDBMS. In Ms-access we can create several tables and relate them with common field as shown below in figure. Hence, Ms-access is known as RDBMS. Below figureshows the relational database example:
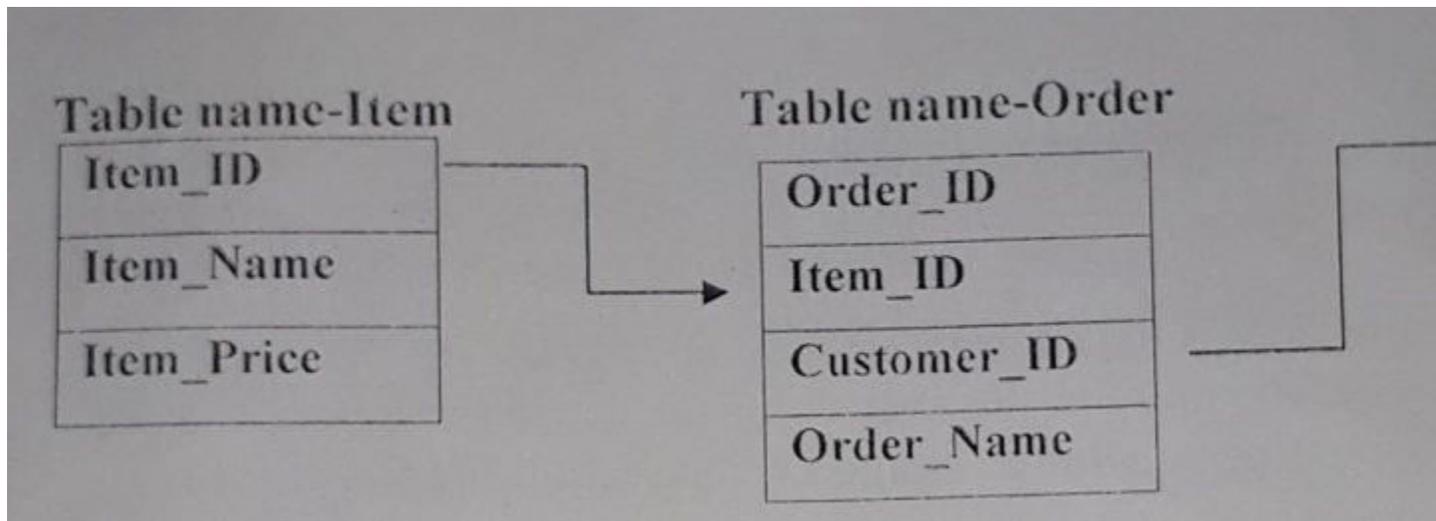
Features of RDBMS:

- It provides mass storage of data.
- Reduce the data redundancy.
- Provides query flexibility.
- Makes data manipulation efficient and easier.
- Protects data against unauthorized access.
- It solves data integrity problems.
- Provides primary key (primary key is the property that uniquely identifies the records in the table of database)

Hence, these are the definition, features, and disadvantages of DBMS & RDBMS.

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