• Chapter 05 : Introduction To Microsoft Access

5.1 Overview

Q : 05-01-01 : Describe MS Access ? Describe Benefits of MS Access ?

Answer :

Microsoft Access : Microsoft Access is one of the most popular and powerful DBMS. It has many built in features to assist you in constructing database and viewing information. MS Access is much more involved and is a more genuine DBMS than other programs such as Microsoft Works. Microsoft Access is a Relational Database Management System (RDBMS) that you can use to store and manipulate large amount of information. It is easy to understand and its graphical interface, helps to create queries, forms, and reports. In other words, even inexperienced programmers can use MS Access to turn a stack of invoices, a card file of customer names, a ledger, and an inventory list into a relational database that makes entering, updating, and reporting information as easy as clicking a button.

Benefits of Microsoft Access : MS-Access offers more than just pretty interface for learning how to manage data. Benefits of MS Access are :

Sample Databases : It includes sample database applications to assist you learn about real-world tables, forms, queries, and reports, and how they are interconnected to form a database management system.

Wizard : It makes very easy to create a database. You can choose from several examples of databases in the Database Wizard for such storage uses as contact information, inventory control, a ledger, and so on. You can create and then modi1r these databases to meet your own needs.

Keys to Understand The Structure : After you have decided how to create and relate tables, you can easily view all the relationships in the database with the graphical interface in the Relationship Window. This makes one of the toughest parts of relational database design much easier and more manageable.

Microsoft Office Integration : You can use access with Word, Excel, and other office application to create mail merges, charts, and other helpful uses for your data.

Easier Programming : You can use relatively simple code with macros to automate repeated tasks, or you can try more complex and flexible code with VBA. Access provides graphical shortcuts and hints to help writing easier code.

Common Standards : It uses standards that help applications scale up to work within larger environments. Access uses objects and SQL (Structure Query Language) to make its code from the adaptable to other applications.

Redundancy : MS-Access allows you to store, retrieve, sort, analyze, and print information contained in the database. Data may be manipulated without data redundancy by defining relationships between sets of data. Databases are often used for product data. Redundancy means duplication of data in multiple files. It wastes the storage media of computer.

5.4 Database Objects

Q : 05-04-01 : Describe MS Access Database Components ?

Answer :

Microsoft Access Database Components : MS-Access database consists of various components called the objects. The database objects are used to store data and to retrieve data from database. The major database objects are :

Tables : The most important object of a database is a Table. The data is stored in tables of database. A table is a collection of related data organized in rows and, columns. Each row consist a record, and each record consists of columns. The row is divided into columns called field containing different data values of a particular record. A relational database may contain multiple tables, which are identified by unique names. This is the fundamental property of a relational database.

Queries : Query is a statement that extracts specific information from database. It is created by specifying the fields to display from a table or another query. It is more flexible way of selecting, filtering and sorting records. The user can also change data in the database that fulfils certain criteria. In addition, queries allow to perform calculations of different fields. The output of a query is also displayed in the form of a table and can also be used as source of records for Forms and Reports. The query allows you to view and analyze data in many different ways. Technically, a query is a stored question or request. You design a query in design view to extract certain information from the database. The information appears in Datasheet which looks exactly like Datasheet view for a table. The difference between a datasheet for a table and a datasheet for a query is that the query's datasheet can combine information from multiple tables.

Forms : The Form object of database is used to enter data into databases, edit data and view data from database. You can add, update, and delete records in your table by using a form. Form provide :

An easy method for entering and editing data in tables. Thus the user does not have to work directly with tables.

Facilities to display data retrieved from database tables.

Most of the DBMSs provide the facility to create Forms. The application programmer creates the user interface by designing the Forms. In this way arid Reports, the users can perform different operations on the database very easily.

Reports : The Report object of database is used to retrieve and present data in a formatted way. The Report can be printed. Some reports are simply a list of the records in the database, one record after the other. Most of the popular DBMS provide this facility. The output of the query can also be given as input source to Reports.

The Difference Between The Forms and Report :

Forms are used to enter data into database, change data and view data of databases.

Reports are used to retrieve the data from database and present it on screen in a predefined format. Reports do not allow user to change data or to enter data into database.