UNIT-3 RELATIONAL DATABASE MANAGEMENT SYSTEMS (BASIC)
NCERT TEXTUAL EXERCISES

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Fill in the blanks.

1. A **database** is an organized collection of data.
2. A **DBMS** is a software package that can be used for creating and managing databases.
3. A **RDBMS** is a database management system that is based on the relational model.
4. Three popular DBMS software are **Microsoft Access,** **OpenOfficeBase** & **MySQL**.
5. A **Primary Key** is a unique value that identifies a row in a table.
6. Composite Key is a combination of **one or more** columns.

Short Answer Questions

Q1. What does DBMS Stands for?

Ans. DBMS stands for Database Management System.

Q2. What does RDBMS Stands for?

Ans. RDBMS stands for Relational Database Management System.

Q3. How is data organized in a RDBMS?

Ans. The Relational Database Management System (RDBMS) organizes the data into tables. In tables vertical lines are called fields and horizontal lines are called records.

Q4. State the relationship and difference between a primary and foreign key.

Ans. Primary key and Foreign key are used to relate the tables so that data can be fetched from multiple tables.

We cannot enter duplicate values in Primary key while duplicate values can be entered in Foreign Key.

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Fill in the blanks.

1. A table is a set of data elements that is organized using a model of vertical **columns** and horizontal **rows**.
2. A **column** is a set of data values of a particular type, one for each row of the table.
3. A **row** represents a single, data item in a table.
4. **Datatypes** are used to identify which type of data we are going to store in the database.
5. There are **2** ways to create a table.
6. Field properties can be set in both the **Design View** and **Wizards**.

Short Answer Questions

Q1. In how many ways tables can be created in Base?

Ans. Tables can be created in two ways.

1. In Design view
2. Using Wizard

Q2. Why are data types used in DBMS /RDBMS?

Datatypes are used to identify which type of data (value) we are going to store in the database

Q3. List datatypes available in Numeric Datatype?

Ans. The different types of numeric data types are:

Boolean, Tinyint, Smallint, Integer, Bigint, Numeric, Decimal, Real, Float, Double

Q4. List datatypes available in Alphanumeric Data Type?

Ans. The different types of Alphanumeric Data Type are:

Longvarchar, Char, Varchar, Varchar_Ignore **Case**

Q5. Define the structure of a table.

Ans. A table is a set of data elements (values) that is organized in vertical columns and horizontal rows. A table has a defined number of columns, but can have any number of rows.

Q6. Differentiate between Tuples and Attributes of a table.

Ans. A row also called a Record or Tuple represents a single, data item in a table. Whereas A column is a set of data values of a particular simple type, one for each row of the table.

Q7. Name different Binary data types.

Ans. The different Binary data types are: Longvarbinary, Binary, Varbinary

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Fill in the blanks.

1. The types of languages used for creating and manipulating the data in the Database are **DDL** & **DML**.
2. A **DDL** is a standard for commands that define the different structures in a database.
3. A **DML** is a language that enables users to access and manipulate data in a database.
4. A **Select** is a part of DML involving information retrieval only.
5. A popular data manipulation language is **SQL**.
6. **Tables** are the basic building blocks of a database.
7. There are **three** types of Relationships in a table.

Short Answer Questions

Q1. What is the file extension for databases created using OpenOffice.Org Base?

Ans. The extension is .odb

Q2. List any three file formats that can be managed using OpenOffice.Org Base?

Ans. Three file formats that can be managed using OpenOffice.Org Base.

.odb, .odf, .odt

Q3. How many types of relationships can be created in Base? Explain each of them.

Ans. There are three types of relationship in OpenOffice Base.

ONE to ONE : In this relationship, both the tables must have primary key columns. Example: In the given tables EMP and DEPT, EMP_ID in EMP table and DEPT_ID in DEPT table are the primary keys.

ONE to MANY : In this relationship, one of the table must have primary key column. It signifies that one column of primary key table is associated with all the columns of associated table.

MANY to MANY : In this relationship, no table has the primary key column. It signifies that all the columns of primary key table are associated with all the columns of associated table.

Q4. What do you mean by Sorting? In how many ways it can be done?

Ans. Sorting means arranging elements in particular sequence. It can be done in two ways.

1. Increasing order
2. Decreasing Order

Q5. Explain Referential Integrity with the help of an example.

Ans. Referential integrity is used to maintain accuracy and consistency of data in a relationship. In Base, data can be linked between two or more tables with the help of primary key and foreign key constraints. for example we have two tables :

Student table has fields Admno, Name, Fname , Mname (Admno is a primary Key)

Teacher table has fields T_id, Admno, Tname, Tsal (T_id is primary key and Admno is Foreign Key)

Both the above tables can be linked by Common Fields ie Admno

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Fill in the blanks.

1. A **form** helps the user to systematically store information in the database.
2. A **form** enables users to view, enter, and change data directly in database objects such as tables.
3. **SELECT** statement retrieves zero or more rows from one or more database tables or database views.
4. By default, data is arranged in **ascending** order using ORDER BY clause.
5. **UPDATE** statement is used for modifying records in a database.
6. **DELETE** statement is used to remove one or more records in a Database.

Short Answer Questions

Q1. Name DML commands.

Ans. DML stands for Data Manipulation Language. DML Commands are :
SELECT – retrieve data from a database.
INSERT – insert data into a table.
UPDATE – updates existing data within a table.
DELETE – deletes all or specific records from a table.

Q2. What is the purpose of using queries?

Ans. The purpose of using query is to collect specific information from the pool of data(TABLE). A query also helps us to extract information from different tables.

Q3. Which clause of the Select statement helps to display specific data?

Ans. 'Where' clause of the Select statement helps to display specific data.

Q4. Differentiate between Where and Orderby clause of SQL statements.

Ans. Where clause helps to retrieve specific row from the table and ORDER BY clause specifies an order in which to return the rows.

Q5. State the purpose of Update Command with the help of an example.

Ans. Update statement is used for modifying records in a table. for example the following command will increase the salary of all employees by Rs 2000.
Update emp set sal = sal + 2000;

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Fill in the blanks.

1. To create a form you need to select the **form** option available under Database section.
2. A **query** helps to collect specific information from the pool of data in the database.
3. **Report** is used to display the summary of data.
4. **Forms** are the interfaces with which the user interacts.
5. Data from multiple tables can be linked with the help of **Primary Key** and **Foreign Key** constraints.

Short Answer Questions

Q1. Why is there a need to create Forms?

Ans. A form provides the user a systematic way of storing information into the database. It is an interface in a user specified layout that lets users to view, enter, and change data directly in database objects such as tables.

Q2. What is the purpose of creating Reports?

Ans. A report helps to display the data in a summarized manner. It is used to generate the overall work outcome in a clear format. We can create reports in OpenOffice Base using wizard.

Q3. What are the prerequisites to create a Form and Reports?

Ans. Table must be created and selected before creating forms and reports in OpenOffice Base.

Q25. Differentiate between Forms and Reports.

Forms	Reports
A form provides an interface that allows users to enter, change and view the data in a database table. Forms are made up of elements such as textboxes and labels.	Reports are used to present data from tables or queries in a format that can be printed.
We can make changes to data.	We can not make changes to the data.

Q26. Can a form display data from queries?

Ans. Yes

Q27. In how many ways Forms and Reports can be created in a database?

Ans. Forms and Reports can be created in two ways:

1. Create Form in design View
2. Create Form using wizard