

Database Management System

ANSWER KEY (Part B – Unit III)

CHAPTER-11: Creating and Using Tables

ASSESSMENT TIME

A. Select the correct option.

1. Handouts
2. Query
3. Datasheet
4. Date/Time
5. Number

B. Fill in the blanks.

1. Relationship
2. Data type
3. Form
4. Memo
5. Primary key

C. Answer the following questions.

1. Describe different database objects.

Ans: **Tables:** Tables store the complete data in a structured manner, in the form of rows and columns.

Queries: Queries are used to ask questions from the database to retrieve records or data based on certain criteria.

Forms: A form has an attractive interface that accepts data from the user and inserts it in the corresponding table or query. You can also use these forms to update any record in the table or query.

Reports: Reports are used to display the selected data in a printable format. These are used for decision-making and analyzing the data by the organisations.

2. What are data types?

Ans: Every relational database stores the data in a table. Each table consists of fields and every field has its own set of properties. They describe the characteristics and behavior of data. The most important property of a field is its data type. A field's data type determines what type of data can be entered into it. For example, a field whose data type is 'Number' can only store numeric data and does not allow you to enter text into it.

3. Describe the use of the Text data type.

Ans: The Text datatype in Access is used to store text or a combination of text and numbers (alphanumeric). It can store up to 255 characters.

4. Distinguish between Datasheet View and Design View.

Ans: In the Design View, you can create a table from scratch by defining the field names and field types. You cannot enter the data while creating a table in the Design View. In the

Datasheet View, you can enter, edit, or update the data of the created tables. This view does not allow you to design the table structure from scratch.

5. What is a primary key?

Ans: Primary key is a standard feature of every database management system. It is a constraint in the table to check that every record in the table is unique. The field that is designated as the primary key of a table can neither have duplicate data nor can it be left blank while making a data entry.

CHAPTER-12: Performing Operations on Tables

ASSESSMENT TIME

A. Select the correct option.

1. Table Design View
2. Validation Rule
3. One-to-One
4. Relationships
5. Both a and b

B. Fill in the blanks.

1. Primary Key
2. One-to-One
3. Many-to-Many
4. Field Property

C. Answer the following questions.

1. What is the use of tables in a database?

Ans: Tables are the easiest way to store, organise, and present a large amount of information. They are the building blocks of a database. All the data is stored in a database by using tables. A well-designed table helps the users to retrieve data from a database easily.

2. How can you sort records of a table in the descending order?

Ans: To sort data in descending order, follow the given steps:

- Open a table and select the field that you want to sort.
- Click on the **Home** tab and select the Descending option in the Sort & Filter group.
- The data will be sorted depending on your choice.

3. Describe Referential Integrity.

Ans: Referential Integrity is implemented when the user wants to fetch data from two or more tables. This is possible only if all the tables have at least one common field. Referential Integrity (RI) is a rule in RDBMS. It states that a foreign key must have a matching primary key, i.e., all its references must be valid and the users cannot accidentally delete or modify data.

4. List the different types of relationships.

In relational database, there are different types of relationships that can exist between a given pair of tables. These are listed as follows:

- One-to-One
- One-to-Many
- Many-to-Many

5. Give a real-life example of many-to-many relationship.

Ans: In this type of relationship, records of one table are associated with several matching records of another table. For example, different customers can buy different products.

CHAPTER-13: Retrieving Data Using Queries

ASSESSMENT TIME

A. Select the correct option.

1. Criteria
2. Like
3. *
4. Structured Query Language

B. Fill in the blanks.

1. Query Wizard
2. OR
3. Wildcards
4. SQL

C. Answer the following questions.

1. What is a Query?

Ans: In RDBMS, a query is a database object that enables you to retrieve records from one or more tables of a database or different databases that meet a specific condition or criteria. Queries are used to view, change, summarise, and analyse records from the tables. The information retrieved through a query is stored in a separate table, called the Query Table.

2. What is the difference between the Query Wizard and Query Design View?

Ans: A Query Wizard provides a quick way to create a query. You choose the contents of a new query either from an existing list of tables or queries. With Query Wizard you can quickly add the columns you need to add in a new query. On the other hand, in Query Design, to create query you need to individually, manually choose each column.

3. What is SQL?

Ans: Structured Query Language (SQL) is the language used in RDBMS for writing queries. Using SQL, a user can create queries to fetch and manipulate the data of the database.

4. Distinguish between the DDL and DML commands.

Ans: Data manipulation is the process of editing or modifying the data. A user can manipulate

database anytime by using certain DML commands. These commands help in retrieval, insertion, deletion, and modification of the information present in the database. On the other hand, the DDL commands are used to define and modify the structure of a database.

CHAPTER-14: Working with Forms and Reports

ASSESSMENT TIME

A. Select the correct option.

1. Form
2. New Record
3. Report
4. Report header
5. Page footer

B. Write T for True and F for False.

1. T
2. F
3. T
4. F
5. T

C. Answer the following questions.

1. What is a form?

Ans: Access provides Forms, which prompt the user to provide information that can be fed into a database. Forms allow you to add and update data in one record at a time in a table. Creating forms for your database can make entering data much more convenient.

2. What is the use of the Form Wizard?

Ans: The Form Wizard is an in-built feature of Microsoft Access. It makes the form creation easy and fast. You can use it to have more control over a form.

3. Can you change the name of a label? If yes, how?

Ans: Yes, we can change the name of a label in MS Access. To change the properties of the label, follow the given steps:

- Click on a label to select it.
- Open **Property Sheet** by clicking on the **Property Sheet** option in the **Tools** group of the **Design** tab.
- In the **Property Sheet**, edit the **Caption** property by adding a new value.

4. What is the use of a report in Access?

Ans: A report is a summary of your database. It is an effective way to organise and summarise the data for viewing and printing. It consists of information obtained from tables or queries, and presented as per the user's requirements. Reports are generally prepared and presented in hard copy, if you need to share information from your database with someone but do not want that person to actually work with your database. Reports also provide the facility to group and sort the items, thus making it much more readable.

5. Distinguish between a form and report.

Ans: A report is a summary of your database. It is an effective way to organise and summarise the data for viewing and printing. It consists of information obtained from tables or queries, and presented as per the user's requirements. A form is a printed, or typed document with blank spaces

for insertion of the required or requested information. Forms allow you to add and update data in one record at a time in a table.

BRAIN DEVELOPER

SECTION 5: SHORT ANSWER TYPE QUESTIONS (UNSOLVED)

1. What is a tuple and attribute?

Ans: Tuples: Rows are referred to as records. A complete row with identical related information is referred to as record, which is also called a Tuple.

Attribute: Columns are referred to as fields. A field describes a specific property of a record, that is why a field is also known as an attribute. An attribute is a piece of information about an object.
relational database model

2. What is a composite primary key?

Ans: A composite key or composite primary key refers to a combination of two or more attributes (fields) that uniquely identify the records in a table. It may be a candidate key or primary key.

3. Describe the relational database model.

Ans: A relational model enables the users to store data in several tables. It has the capability to retrieve data from the different related tables conveniently, to produce the answers to questions that cannot be answered from individual tables alone. These tables are related to one another in such a way that whenever there is a need, the data can be joined by establishing a relationship between tables and information can be accessed from them at once.

4. What is a data type?

Ans: Every relational database stores the data in a table. Each table consists of fields and every field has its own set of properties. They describe the characteristics and behaviour of data. The most important property of a field is its data type. A field's data type determines what type of data can be entered into it. For example, a field whose data type is 'Number' can only store numeric data and does not allow you to enter text into it.

5. Describe the Date/time data type.

Ans: The Date/time data type is used to store date or time data. The calculations related to date or time can be done in this field type.

6. What is the use of Yes/No data type?

Ans: The Yes/No data type It is used at places where the field can have only one possible value - Yes/No or True/False.

7. Describe the use of the Table Design View option.

Ans: In the Design View, you can create a table from scratch by defining the field names and field types. To create the table, click on the Table Design option in the Tables group of the Create tab.

8. Give an example of a One-to-One relationship.

Ans: In a one-to-one relationship, a record in a table can have only one matching record in another table. In a one-to-many relationship, a record of one table is associated with several matching records in the other. However, a record of the second table is associated with only one record in the first table.

9. What is the use of Reports in MS Access?

Ans: In MS Access Reports are used to display the selected data in a printable format. These are used for decision-making and analyzing the data by the organisations.

10. List any two DML commands.

Ans: The two most widely used DML commands are:

Select: This command retrieves data from the table.

Insert: This command inserts data into a table.

SECTION 6: LONG ANSWER TYPE QUESTIONS (UNSOLVED)

1. Describe any four advantages of DBMS.

Ans: Following are the different advantages of a database:

a. **Enforcement of Data Standards:** A database always holds data in a standard format. The standard may relate to the naming of data, format of data, structure of data, etc. Standardised data facilitates data interchange or migration between different systems.

b. **Data Availability:** The data of a database can be available anytime and anywhere. DBMS enables multiuser access to information that is available remotely and 24 hours a day, 7 days a week.

c. **Reduced Data Redundancy:** Data redundancy occurs when the same piece of data is duplicated unnecessarily multiple times in a database. The chances of data duplicity are very high. In the database approach, ideally, all the information is kept at only one place and shared among the users. There is no need to maintain a separate copy of the same data over and over again. This capability minimises data duplication and redundancy.

d. **Minimised Data Inconsistency:** When the redundancy is not controlled, it leads to data inconsistency. Data inconsistency occurs when the same data exists in different formats in multiple tables. The DBMS reduces data inconsistency by implementing constraints and checks.

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

Ans: A key plays an important role in relational database. It is used for identifying unique records (rows or tuples) from a table. It also establishes a relationship among the tables. Relationships are links that associate a field in one table with a field in another table.

A primary key is a set of one or more fields that uniquely identifies each record in a table. It does not contain any duplicate data. A table can have only one primary key. The value in the primary key field is different for every tuple and thus helps in uniquely identifying the records. A foreign key is a field or set of fields that is used to establish a relation between the two tables. In other words, it consists of one or more fields whose value matches with a primary key in another table. Basically, a foreign key in one table is used to point at a primary key in another table. It acts as a cross-reference between the tables. For maintaining the cross-reference, it makes use of the primary key.

3. How can you create a blank database?

Ans: To create a database in MS Access, follow the given steps:

- a. Open Microsoft Access. You will get the Backstage View of Access.
- b. Click on the Blank database option under the Available Templates category. The Blank database task pane appears on the right side that prompts you to create a file.
- c. Specify the file name in the File Name text box.
- d. Click on the Create button.

4. What are tables? List the different ways available in MS Access to create tables.

Ans: Tables store the complete data in a structured manner, in the form of rows and columns. Every table has a finite number of columns but it can have infinite rows. Tables are the basic building blocks of a database. Data is stored in it by using tables.

You can create tables in an existing database by any of the following methods:

- a. Using Design View: In the Design View, you can create a table from scratch by defining the field names and field types.
- b. Using Datasheet View: In the Datasheet View, you can enter, edit, or update the data of the created tables. This view does not allow you to design the table structure from scratch.

5. What is SQL? Discuss any two DDL and DML commands with their syntax.

Ans: Structured Query Language (SQL) is the language used in RDBMS for writing queries. Using SQL, a user can create queries to fetch and manipulate data from the database.

The two popular DDL and DML commands are:

- a. The Select command is a DML command. The Select statement is used to retrieve multiple records from one or more tables of a database. It is the most commonly used DML command.

Syntax: `SELECT * FROM Table_name;`

The DROP TABLE COMMAND is a DDL command. The DROP TABLE command is used for removing an existing table from a database.

Syntax: `DROP TABLE Table_name;`