#########ANSWERS#########

1. RDBMS stands for **Relational Database Management System**. RDBMS is a program used to maintain a relational database. RDBMS is the basis for all modern database systems such as MySQL, Microsoft SQL Server, Oracle, and Microsoft Access. RDBMS uses SQL queries to access the data in the database. A Database Management System (DBMS) is application software that allows users to efficiently define, create, maintain and share databases. Defining a database involves specifying the data types, structures and constraints of the data to be stored in the database. Creating a database involves storing the data on some storage medium that is controlled by DBMS. Maintaining a database involves updating the database whenever required to evolve and reflect changes in the miniworld and also generating reports for each change. Sharing a database involves allowing multiple users to access the database.
2. A [**transaction**](https://www.geeksforgeeks.org/sql-transactions/amp/) is a single logical unit of work that accesses and possibly modifies the contents of a database. Transactions access data using read and write operations.   
   In order to maintain consistency in a database, before and after the transaction, certain properties are followed. These are called **ACID** properties.
3. Normalization is **the process of organizing data in a database**. This includes creating tables and establishing relationships between those tables according to rules designed both to protect the data and to make the database more flexible by eliminating redundancy and inconsistent dependency.

4.Structured Query Language(SQL) as we all know is the database language by the use of which we can perform certain operations on the existing database and also we can use this language to create a database. [SQL](https://www.geeksforgeeks.org/structured-query-language/amp/) uses certain commands like Create, Drop, Insert, etc. to carry out the required tasks.

These [SQL](https://www.geeksforgeeks.org/sql-concepts-and-queries/amp/)commands are mainly categorized into five categories as:

1. DDL – Data Definition Language
2. DQL – Data Query Language
3. DML – Data Manipulation Language
4. DCL – Data Control Language

DDL:

[DDL](https://www.geeksforgeeks.org/features-of-structured-query-language-sql/amp/) or Data Definition Language actually consists of the SQL commands that can be used to define the database schema. It simply deals with descriptions of the database schema and is used to create and modify the structure of database objects in the database.

Examples:

* [**CREATE**](https://www.geeksforgeeks.org/sql-create/amp/): This command is used to create the database or its objects (like table, index, function, views, store procedure, and triggers).
* [**DROP**](https://www.geeksforgeeks.org/sql-drop-truncate/amp/): This command is used to delete objects from the database.
* [**ALTER**](https://www.geeksforgeeks.org/sql-alter-add-drop-modify/amp/)**:**This is used to alter the structure of the database.
* [**TRUNCATE**](https://www.geeksforgeeks.org/sql-drop-truncate/amp/)**:**This is used to remove all records from a table, including all spaces allocated for the records are removed.
* [**COMMENT**](https://www.geeksforgeeks.org/sql-comments/amp/): This is used to add comments to the data dictionary.
* [**RENAME**](https://www.geeksforgeeks.org/sql-alter-rename/amp/)**:**This is used to rename an object existing in the database.

Dql:

**DQL**statements are used for performing queries on the data within schema objects. The purpose of the DQL Command is to get some schema relation based on the query passed to it. We can define DQL as follows it is a component of SQL statement that allows getting data from the database and imposing order upon it. It includes the SELECT statement.

**EXAMPLE:**

* [**SELECT**](https://www.geeksforgeeks.org/sql-select-clause/)**:**It is used to retrieve data from the database.

Dml:

### **DML(Data Manipulation Language):**

The SQL commands that deals with the manipulation of data present in the database belong to DML or Data Manipulation Language and this includes most of the SQL statements. It is the component of the SQL statement that controls access to data and to the database. Basically, DCL statements are grouped with DML statements.

Example:

* [**INSERT**](https://www.geeksforgeeks.org/sql-insert-statement/amp/) : It is used to insert data into a table.
* [**UPDATE**](https://www.geeksforgeeks.org/sql-update-statement/amp/)**:** It is used to update existing data within a table.
* [**DELETE**](https://www.geeksforgeeks.org/sql-delete-statement/amp/) : It is used to delete records from a database table.
* [**LOCK:**](https://www.geeksforgeeks.org/sql-lock-table/amp/) Table control concurrency.
* **CALL:**Call a PL/SQL or JAVA subprogram.
* **EXPLAIN PLAN:** It describes the access path to data.

**Dcl:**

### **DCL (Data Control Language):**

DCL includes commands such as GRANT and REVOKE which mainly deal with the rights, permissions, and other controls of the database system.

List of  DCL commands:

* [**GRANT:**](https://www.geeksforgeeks.org/mysql-grant-revoke-privileges/amp/)This commandgives users access privileges to the database.
* [**REVOKE:**](https://www.geeksforgeeks.org/difference-between-grant-and-revoke/amp/)This command withdraws the user’s access privileges given by using the GRANT command.

## 5. **Primary Key**

First, a primary key uniquely identifies each record in a database table. Any individual key that does this can be called a candidate key, but only one can be chosen by database engineers as a primary key.

## **Composite Key**

Next, there's the composite key, which is composed of two or more attributes that collectively uniquely identify each record.

An example would be a list of homes on a real estate market. In a well-ordered database, there should be a primary key that uniquely identifies each record.

How this works may have to do with the sophistication of the database.

In some cases, the homes may only be uniquely identified by a mortgage number — all other data (towns, streets, house numbers) is not unique to each record. The mortgage number would be the primary key. Suppose, however, that an MLS realtor’s listing technology assigns its own unique numbers to the records in the table.

Then, there will be two keys that developers might identify as “candidate keys”

**composite key is the DBMS key having two or more attributes that together can uniquely identify a tuple in a table**. Such a key is also known as Compound Key, where each attribute creating a key is a foreign key in its own right.

**6.** CREATE TABLE demo\_tbl

(

salary DECIMAL(8,2) primary 9500,

hire\_date DATE DEFAULT ’2011-01-27’ ,

birthdate DATE DEFAULT GETDATE()