DATABASE MANAGEMENT SYSTEM BCSC0003

By

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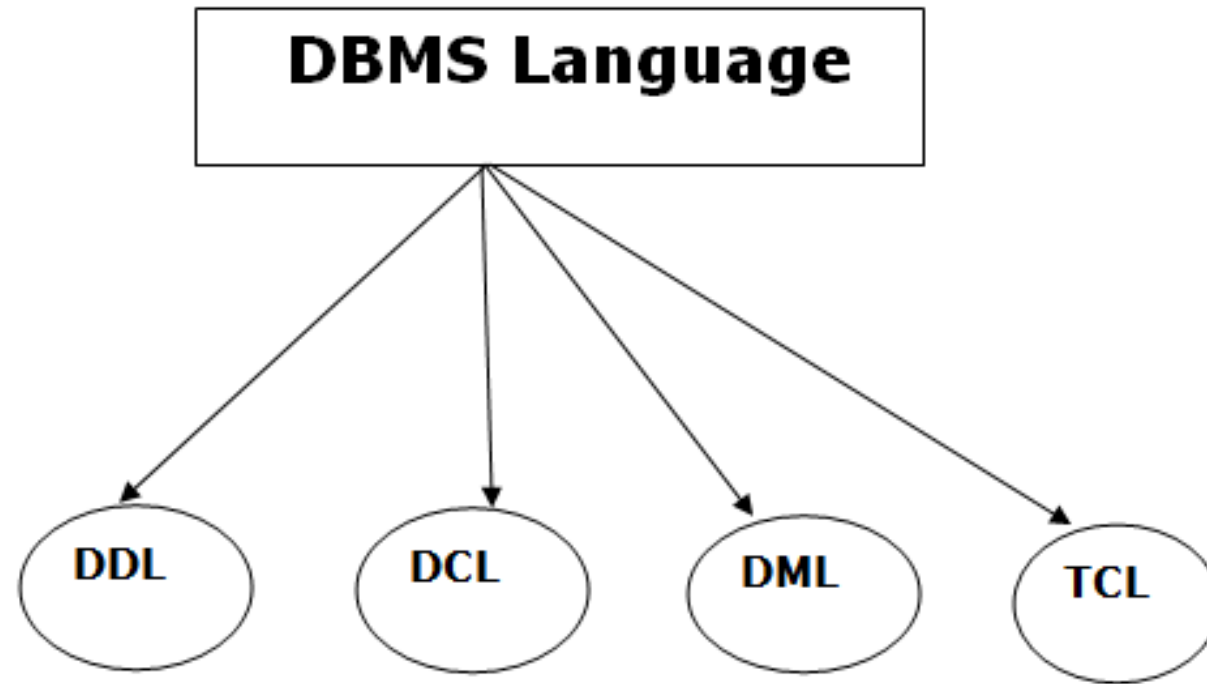
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Today we will discuss

✓Database Language and Interfaces

✓Database Development Life Cycle (DDLC).

Database Language and Interfaces (DDL, DML, DCL)

➢ A DBMS has appropriate languages and interfaces to express database queries and updates.

➢ Database languages can be used to read, store and update the data in the database.

Types of Database Language

Data Definition Language (DDL)

✓ **DDL** is used to define database structure or pattern.

✓ Using the DDL statements, you can create the skeleton of the database.

✓ Data definition language is used to store the information of metadata like the number of tables and schemas, their names, indexes, columns in each table, constraints, etc.

✓ The commands are used to update the database schema that's why they come under Data definition language.

Data Definition Language (DDL)

Tasks come under DDL,

✓**Create:** It is used to create objects in the database.

✓**Alter:** It is used to alter the structure of the database.

✓**Drop:** It is used to delete objects from the database.

✓**Truncate:** It is used to remove all records from a table.

✓**Rename:** It is used to rename an object.

✓**Comment:** It is used to comment on the data dictionary.

Data Control Language (DCL)

✓**DCL** is used to retrieve the stored or saved data.

The DCL execution is transactional. It also has rollback parameters.

Tasks that come under DCL,

➢**Grant:** It is used to give user access privileges to a database.

➢**Revoke:** It is used to take back permissions from the user.

There are the following operations which have the authorization of Revoke:

CONNECT, INSERT, USAGE, EXECUTE, DELETE, UPDATE and SELECT.

Data Manipulation Language (DML)

✓**DML** is used for accessing and manipulating data in a database. It handles user requests.

✓Tasks that come under DML,

Select: It is used to retrieve data from a database.

Insert: It is used to insert data into a table.

Update: It is used to update existing data within a table.

Tasks that come under DML,

Delete: It is used to delete all records from a table.

Merge: It performs UPSERT operation, i.e., insert or update operations.

Call: It is used to call a structured query language or a Java subprogram.

Explain Plan: It has the parameter of explaining data.

Lock Table: It controls concurrency.

Transaction Control Language (TCL)

✓TCL is used to run the changes made by the DML statement.

TCL can be grouped into a logical transaction.

Tasks that come under TCL,

Commit: It is used to save the transaction on the database.

Rollback: It is used to restore the database to original since the last Commit.

Database Interfaces

Database management system interface is a user interface.

It allows for the ability to input queries to a database without using the query language itself.

✓User-friendly interfaces provide by DBMS may include the following,

1. Menu-Based Interfaces for Web Clients or Browsing
2. Forms-Based Interfaces
3. Graphical User Interface
4. Natural language Interfaces
5. Speech Input and Output
6. Interfaces for DBA

Thanks