Experiment No.3
Create a database using Data Definition Language(DDL) and apply integrity constraints for the specified system
Date of Performance:
Date of Submission:

Aim:- Write a query to create tables for each relation in the relational schema of experiment no.2. Apply drop and alter commands on those tables.

Objective:- To learn commands of Data Definition Language(DDL) to create and define databases, and also learn to apply integrity constraints for the specified system.

Theory:

DDL Commands & Syntax:-

Data Definition Language (DDL) is a subset of SQL and a part of DBMS(Database Management System). DDL consist of Commands to commands like CREATE, ALTER, TRUNCATE and DROP. These commands are used to create or modify the tables in SQL.

DDL Commands:

1. Create
2. Alter
3. truncate
4. drop
5. Rename

CREATE:

This command is used to create a new table in SQL. The user must give information like table name, column names, and their data types.

Syntax –CREATE TABLE table_name

(

column_1 datatype,

column_2 datatype,

column_3 datatype,

....

);

ALTER :

This command is used to add, delete or change columns in the existing table. The user needs to know the existing table name and can add, delete, or modify tasks easily.

Syntax –

ALTER TABLE

table_name ADD

column_name

datatype;

TRUNCATE :

This command is used to remove all rows from the table, but the structure of the table still exists.

Syntax –

TRUNCATE TABLE table_name;

DROP :

This command is used to remove an existing table along with its structure from

the Database. Syntax –

DROP TABLE table_name;

RENAME :

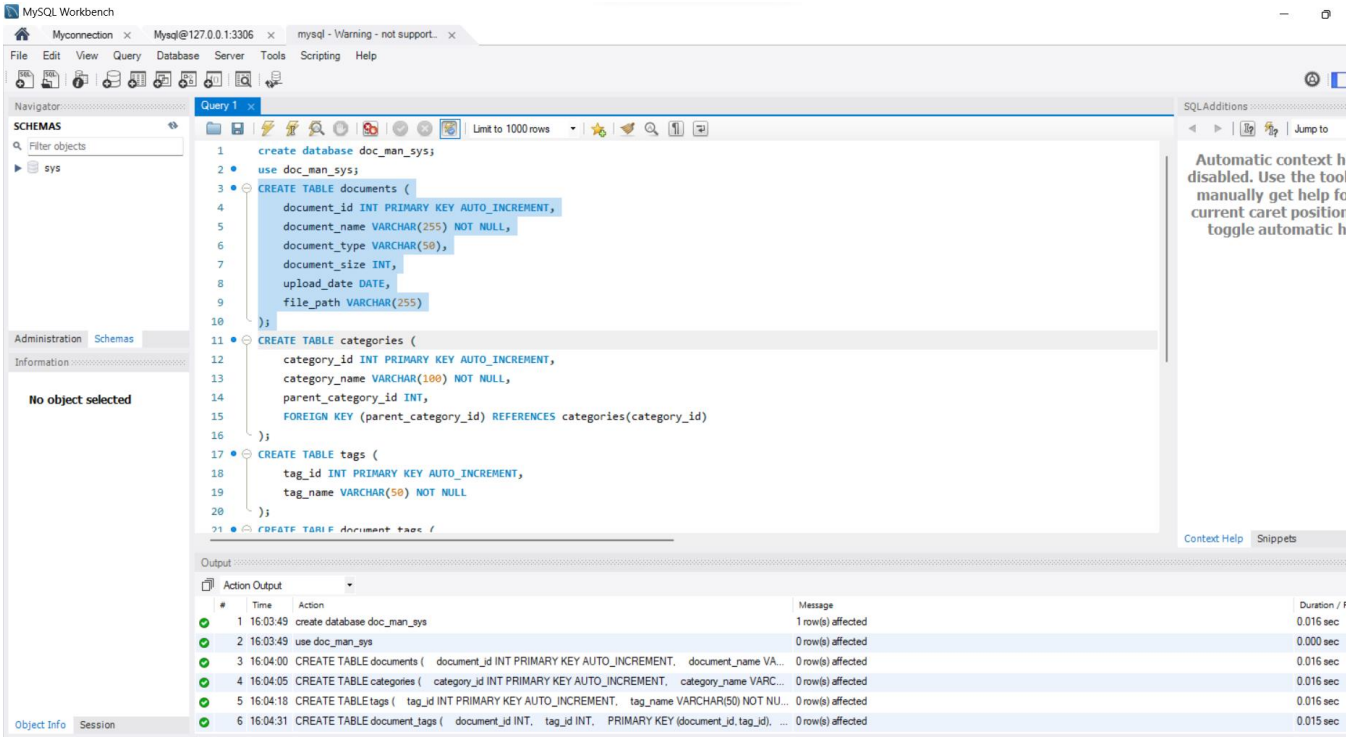
It is possible to change name of table with or without data in it using simple

RENAME command. We can rename any table object at any point of time.

Syntax –

RENAME TABLE <Table Name> To <New_Table_Name>;

Implementation:



Conclusion:

1. Explain the concept of constraints in DDL. How are constraints used to enforce data integrity?
2. What is the significance of data types in DDL? Provide examples of commonly used data types in DDL.

In conclusion, constraints play a crucial role in maintaining data integrity within a database schema. They enforce rules and conditions on the data, ensuring its accuracy, consistency, and reliability. Constraints in Data Definition Language (DDL) define the valid values and relationships that data can have, preventing the insertion or modification of data that would violate these rules. By enforcing constraints such as primary key, foreign key, unique, check, and not null constraints, databases ensure that the data remains accurate and consistent over time.

Additionally, data types in DDL are significant as they define the kind of data that can be stored in a column of a table, specifying the format and range of values allowed. Commonly used data types include:

1. Integer: Used to store whole numbers (e.g., INT, SMALLINT, BIGINT).
2. Character: Used to store alphanumeric characters (e.g., CHAR, VARCHAR, TEXT).
3. Numeric: Used to store numbers with decimal points (e.g., NUMERIC, DECIMAL, FLOAT).
4. Date and Time: Used to store date and time values (e.g., DATE, TIME, TIMESTAMP).
5. Boolean: Used to store true/false values (e.g., BOOLEAN).

These data types ensure consistency in data representation and facilitate efficient storage and retrieval operations within the database. Overall, constraints and data types in DDL are fundamental components that contribute to the integrity and functionality of a database system.