A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied to the data.

Creating a Schema

You can create a schema in Apache Derby using the CREATE SCHEMA statement.

Syntax

Following is the syntax to the CREATE SCHEMA statement.

CREATE SCHEMA schema\_name AUTHORIZATION id

Example

Following example creates a schema named my\_schema in Derby database.

ij> CREATE SCHEMA AUTHORIZATION my\_schema;

0 rows inserted/updated/deleted

Then, you can create a table in this schema as shown below.

ij> CREATE TABLE my\_schema.Emp ( Id INT NOT NULL GENERATED ALWAYS AS IDENTITY,

Name VARCHAR(255),

Salary INT NOT NULL,

Location VARCHAR(255),

Phone\_Number BIGINT

);

> > > > > 0 rows inserted/updated/deleted

You can verify the list of schemas using the SHOW SCHEMAS query here you can find the list of schemas created.

ij> show schemas;

TABLE\_SCHEM

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APP

MY\_SCHEMA

NULLID

SQLJ

SYS

SYSCAT

SYSCS\_DIAG

SYSCS\_UTIL

SYSFUN

SYSIBM

SYSPROC

SYSSTAT

12 rows selected

Dropping a Schema

You can drop an existing schema using the DROP SCHEMA statement.

Syntax

Following is the syntax of DROPS SCHEMA statement.

DROP SCHEMA my\_schema RESTRICT;

Example

You can delete a schema only if does not have any objects in it. To delete the schema, delete all the tables in it and delete the schema.

ij> DROP TABLE my\_schema.Emp;

0 rows inserted/updated/deleted

Following example drops the above created schema.

ij> DROP SCHEMA my\_schema RESTRICT;

0 rows inserted/updated/deleted

JDBC Example

Following JDBC example creates and drops a schema named my\_schema.

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

import java.sql.Statement;

public class CreateSchemaExample {

public static void main(String args[]) throws Exception {

//Registering the driver

Class.forName("org.apache.derby.jdbc.EmbeddedDriver");

//Getting the Connection object

String URL = "jdbc:derby:sampleDB;create=true";

Connection conn = DriverManager.getConnection(URL);

//Creating the Statement object

Statement stmt = conn.createStatement();

stmt.execute("CREATE SCHEMA AUTHORIZATION my\_schema");

//Executing the query

String query = "CREATE TABLE my\_schema.Employees( "

+ "Id INT NOT NULL GENERATED ALWAYS AS IDENTITY, "

+ "Name VARCHAR(255), "

+ "Salary INT NOT NULL, "

+ "Location VARCHAR(255), "

+ "PRIMARY KEY (Id))";

stmt.execute(query);

System.out.println("Table created in schema");

stmt.execute("DROP TABLE my\_schema.Employees");

stmt.execute("DROP SCHEMA my\_schema RESTRICT");

System.out.println("Schema dropped");

}

}

Output

On executing, the above program generates the following example.

Table created in schema

Schema dropped