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package utility;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.SQLException;

/**
 *
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 */
public class DBConnection {
     private Connection connection;
    private PreparedStatement createAdminsTable;
    private PreparedStatement createEquipmentsTable;
    private PreparedStatement createStudentsTable;
    private PreparedStatement createCampusesTable;
    private PreparedStatement createBorrowedEquipmentsTable;
    private PreparedStatement createActiveUserTable;


    // static method return mysql connection
    public static Connection getConnection() {
        final String MYSQL_URL = "jdbc:mysql://localhost:3306/";
        final String DATABASE_NAME = "CQULabEquipmentSourcing";
        final String DATABASE_URL = MYSQL_URL + DATABASE_NAME;
        final String USER_NAME = "root";
        final String USER_PASSWORD = null;
        PreparedStatement createDatabase;
        Connection conn = null;  // Connection object creation

        try {
            // MySQL connection without specified database name
            conn = DriverManager.getConnection(MYSQL_URL, USER_NAME,
USER_PASSWORD);
            if (conn != null) {
                System.out.println("MySQL database has been connected
.........");
                createDatabase = conn.prepareStatement("CREATE DATABASE
IF NOT EXISTS " + DATABASE_NAME); // database creation if not exist
                int result = createDatabase.executeUpdate();
                if (result > 0) {
                    System.out.println(DATABASE_NAME + " database has
been created successfully IF NOT EXISTS.");
                }
            }

            // database connection or selection with the specified
database name
            conn = DriverManager.getConnection(DATABASE_URL, USER_NAME,
USER_PASSWORD);
            if (conn != null) {
                System.out.println(DATABASE_NAME + " database has been
connecting successfully");
            }

        } catch (SQLException e) {
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            System.out.println("Connection Failed!");
            System.out.println("SQLException : " + e.getMessage());
        }
        return conn;
    }

    public void createTables() {
        try {
            this.connection = getConnection(); // database connection
            if (connection != null) {

                // admins table creation
                createAdminsTable = connection.prepareStatement("CREATE
TABLE IF NOT EXISTS admins ("
                        + "admin_id int NOT NULL AUTO_INCREMENT UNIQUE,"
                        + "admin_name VARCHAR(50) NOT NULL,"
                        + "username VARCHAR(100) NOT NULL UNIQUE,"
                        + "password VARCHAR(45) NOT NULL,"
                        + "email VARCHAR(100) NOT NULL UNIQUE,"
                        + "phone VARCHAR(15) NOT NULL UNIQUE,"
                        + "address VARCHAR(50) NOT NULL,"
                        + "campus VARCHAR(20)NOT NULL,"
                        + "PRIMARY KEY (admin_id) )");

                int adminsResult = createAdminsTable.executeUpdate();

                if (adminsResult > 0) {
                    System.out.println("Admin table has been created
successfully.");
                    createAdminsTable =
connection.prepareStatement("ALTER TABLE admins AUTO_INCREMENT = 10001");
                    createAdminsTable.executeUpdate();
                }

                // campuses table creation
                createCampusesTable = connection.prepareStatement("CREATE
TABLE IF NOT EXISTS campuses ("
                        + "campus_id int NOT NULL AUTO_INCREMENT UNIQUE,"
                        + "campus_name VARCHAR(100) NOT NULL,"
                        + "location VARCHAR(20) DEFAULT NULL,"
                        + "phone VARCHAR(100) NOT NULL,"
                        + "address VARCHAR(100) NOT NULL,"
                        + "PRIMARY KEY (campus_id) )");

                int campusesResult = createCampusesTable.executeUpdate();
                if (campusesResult > 0) {
                    System.out.println("Campuses table has been created
successfully.");
                    createCampusesTable =
connection.prepareStatement("ALTER TABLE campuses AUTO_INCREMENT =
40001");
                    createCampusesTable.executeUpdate();
                }

                //student table creation
                createStudentsTable = connection.prepareStatement("CREATE
TABLE IF NOT EXISTS students("
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                        + "student_id int NOT NULL AUTO_INCREMENT
UNIQUE,"
                        + "student_name VARCHAR(50) NOT NULL,"
                        + "username VARCHAR(30) NOT NULL UNIQUE,"
                        + "password VARCHAR(45) NOT NULL,"
                        + "email VARCHAR(100) NOT NULL UNIQUE,"
                        + "phone VARCHAR(50) NOT NULL UNIQUE,"
                        + "address VARCHAR(50) NOT NULL,"
                        + "campus VARCHAR(30) NOT NULL,"
                        + "PRIMARY KEY (student_id) )");

                int studentResult = createStudentsTable.executeUpdate();

                if (studentResult > 0) {
                    System.out.println("Students table has been created
successfully.");
                    createStudentsTable =
connection.prepareStatement("ALTER TABLE students AUTO_INCREMENT =
10001");
                    createStudentsTable.executeUpdate();
                }


                //equipments table creation
                createEquipmentsTable =
connection.prepareStatement("CREATE TABLE IF NOT EXISTS equipments ("
                        + "equipment_id int NOT NULL AUTO_INCREMENT
UNIQUE,"
                        + "equipment_name VARCHAR(100) NOT NULL,"
                        + "brand VARCHAR(50) NOT NULL,"
                        + "type VARCHAR(50) NOT NULL,"
                        + "availableQuantity INT NOT NULL,"
                        + "campus VARCHAR(100) NOT NULL,"
                        + "PRIMARY KEY (equipment_id))");

                int equipmentsResult =
createEquipmentsTable.executeUpdate();
                if (equipmentsResult > 0) {
                    System.out.println("Equipment table has been created
successfully.");
                    createEquipmentsTable =
connection.prepareStatement("ALTER TABLE equipments AUTO_INCREMENT =
30001");
                    createEquipmentsTable.executeUpdate();
                }

                 //borrowed equipments table creation
                createBorrowedEquipmentsTable =
connection.prepareStatement("CREATE TABLE IF NOT EXISTS
borrowedequipments ("
                        + "borrow_id int NOT NULL AUTO_INCREMENT UNIQUE,"
                        + "equipment_id int NOT NULL,"
                        + "equipment_name VARCHAR(100) NOT NULL,"
                        + "brand VARCHAR(50) NOT NULL,"
                        + "type VARCHAR(50) NOT NULL,"
                        + "campus VARCHAR(100) NOT NULL,"
                        + "borrower_name VARCHAR(100) NOT NULL,"
                        + "borrow_date DATE NOT NULL,"
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                        + "return_date DATE NOT NULL,"
                        + "returned_on_date DATE,"
                        + "status VARCHAR(50) NOT NULL,"
                        + "PRIMARY KEY (borrow_id))");

                int borrowedEquipmentsResult =
createBorrowedEquipmentsTable.executeUpdate();
                if (borrowedEquipmentsResult > 0) {
                    System.out.println("BorrowedEquipment table has been
created successfully.");
                    createBorrowedEquipmentsTable =
connection.prepareStatement("ALTER TABLE borrowedequipments
AUTO_INCREMENT = 30001");
                    createBorrowedEquipmentsTable.executeUpdate();
                }

                 // activeUser table creation
                createActiveUserTable =
connection.prepareStatement("CREATE TABLE IF NOT EXISTS activeuser ("
                        + "activeUser_id int NOT NULL AUTO_INCREMENT
UNIQUE,"
                        + "username VARCHAR(50) NOT NULL,"
                        + "PRIMARY KEY (activeUser_id))");

                int activeUserResult =
createActiveUserTable.executeUpdate();

                if (activeUserResult > 0) {
                    System.out.println("Active User table has been
created successfully.");
                    createActiveUserTable =
connection.prepareStatement("ALTER TABLE activeuser AUTO_INCREMENT =
80001");
                    createActiveUserTable.executeUpdate();
                }


            }
        } catch (SQLException e) {
            System.out.println("Connection Failed!2");
            System.out.println("SQLException : " + e.getMessage());
        }
    }
}
```