//Code for Student Management System

CREATE DATABASE IF NOT EXISTS StudentDB;

USE StudentDB;

CREATE TABLE IF NOT EXISTS students (

id INT PRIMARY KEY AUTO\_INCREMENT,

name VARCHAR(100),

age INT,

grade VARCHAR(10)

);

/////////////////////////////////////////////////

import java.sql.\*;

import java.util.Scanner;

public class StudentManagement {

static final String URL = "jdbc:mysql://localhost:3306/StudentDB";

static final String USER = "root";

static final String PASSWORD = "your\_password"; // Change this to your MySQL password

static Connection conn;

static Scanner sc = new Scanner(System.in);

public static void main(String[] args) {

try {

// Step 1: Load Driver

Class.forName("com.mysql.cj.jdbc.Driver");

// Step 2: Establish Connection

conn = DriverManager.getConnection(URL, USER, PASSWORD);

int choice;

do {

System.out.println("\n--- Student Management ---");

System.out.println("1. Insert Student");

System.out.println("2. View Students");

System.out.println("3. Update Student");

System.out.println("4. Delete Student");

System.out.println("5. Drop Table");

System.out.println("6. Exit");

System.out.print("Enter your choice: ");

choice = sc.nextInt();

switch (choice) {

case 1 -> insertStudent();

case 2 -> viewStudents();

case 3 -> updateStudent();

case 4 -> deleteStudent();

case 5 -> dropTable();

case 6 -> System.out.println("Exiting...");

default -> System.out.println("Invalid choice.");

}

} while (choice != 6);

conn.close();

} catch (Exception e) {

e.printStackTrace();

}

}

static void insertStudent() throws SQLException {

System.out.print("Enter name: ");

sc.nextLine();

String name = sc.nextLine();

System.out.print("Enter age: ");

int age = sc.nextInt();

System.out.print("Enter grade: ");

sc.nextLine();

String grade = sc.nextLine();

String sql = "INSERT INTO students (name, age, grade) VALUES (?, ?, ?)";

PreparedStatement pst = conn.prepareStatement(sql);

pst.setString(1, name);

pst.setInt(2, age);

pst.setString(3, grade);

int rows = pst.executeUpdate();

System.out.println(rows + " student inserted.");

}

static void viewStudents() throws SQLException {

String sql = "SELECT \* FROM students";

Statement st = conn.createStatement();

ResultSet rs = st.executeQuery(sql);

System.out.println("\n--- Student List ---");

while (rs.next()) {

System.out.println(

rs.getInt("id") + " | " +

rs.getString("name") + " | " +

rs.getInt("age") + " | " +

rs.getString("grade")

);

}

}

static void updateStudent() throws SQLException {

System.out.print("Enter ID to update: ");

int id = sc.nextInt();

System.out.print("Enter new name: ");

sc.nextLine();

String name = sc.nextLine();

System.out.print("Enter new age: ");

int age = sc.nextInt();

System.out.print("Enter new grade: ");

sc.nextLine();

String grade = sc.nextLine();

String sql = "UPDATE students SET name = ?, age = ?, grade = ? WHERE id = ?";

PreparedStatement pst = conn.prepareStatement(sql);

pst.setString(1, name);

pst.setInt(2, age);

pst.setString(3, grade);

pst.setInt(4, id);

int rows = pst.executeUpdate();

System.out.println(rows + " student(s) updated.");

}

static void deleteStudent() throws SQLException {

System.out.print("Enter ID to delete: ");

int id = sc.nextInt();

String sql = "DELETE FROM students WHERE id = ?";

PreparedStatement pst = conn.prepareStatement(sql);

pst.setInt(1, id);

int rows = pst.executeUpdate();

System.out.println(rows + " student(s) deleted.");

}

static void dropTable() throws SQLException {

System.out.print("Are you sure you want to drop the table? (yes/no): ");

sc.nextLine();

String confirm = sc.nextLine();

if (confirm.equalsIgnoreCase("yes")) {

String sql = "DROP TABLE IF EXISTS students";

Statement st = conn.createStatement();

st.execute(sql);

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

} else {

System.out.println("Drop cancelled.");

}

}

}