**Assignment Group: A**

**Assignment NO 9**

**Assignment Title**: Database Connectivity: Write a program to implement MySQL/Oracle database connectivity with any front end language to implement Database navigation operations (add, delete, edit etc.)

// JAVA JDBC

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

public class DatabaseOperations {

private static final String DB\_URL = "jdbc:mysql://localhost:3306/sampleDB"; // Change if needed

private static final String USER = "yourUsername"; // Replace with your MySQL username

private static final String PASS = "yourPassword"; // Replace with your MySQL password

public static void main(String[] args) {

try {

// Connect to the database

Connection connection = DriverManager.getConnection(DB\_URL, USER, PASS);

System.out.println("Database connected!");

// Add a new user

addUser(connection, "John Doe", "john@example.com");

addUser(connection, "Jane Doe", "jane@example.com");

// Display all users

System.out.println("All users:");

displayUsers(connection);

// Edit a user

editUser(connection, 1, "John Smith", "johnsmith@example.com");

// Display all users after update

System.out.println("All users after update:");

displayUsers(connection);

// Delete a user

deleteUser(connection, 2);

// Display all users after deletion

System.out.println("All users after deletion:");

displayUsers(connection);

// Close the connection

connection.close();

} catch (SQLException e) {

e.printStackTrace();

}

}

private static void addUser(Connection connection, String name, String email) throws SQLException {

String sql = "INSERT INTO Users (name, email) VALUES (?, ?)";

try (PreparedStatement pstmt = connection.prepareStatement(sql)) {

pstmt.setString(1, name);

pstmt.setString(2, email);

pstmt.executeUpdate();

System.out.println("User added: " + name);

}

}

private static void editUser(Connection connection, int id, String name, String email) throws SQLException {

String sql = "UPDATE Users SET name = ?, email = ? WHERE id = ?";

try (PreparedStatement pstmt = connection.prepareStatement(sql)) {

pstmt.setString(1, name);

pstmt.setString(2, email);

pstmt.setInt(3, id);

pstmt.executeUpdate();

System.out.println("User updated: " + name);

}

}

private static void deleteUser(Connection connection, int id) throws SQLException {

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

try (PreparedStatement pstmt = connection.prepareStatement(sql)) {

pstmt.setInt(1, id);

pstmt.executeUpdate();

System.out.println("User deleted with ID: " + id);

}

}

private static void displayUsers(Connection connection) throws SQLException {

String sql = "SELECT \* FROM Users";

try (PreparedStatement pstmt = connection.prepareStatement(sql);

ResultSet rs = pstmt.executeQuery()) {

while (rs.next()) {

int id = rs.getInt("id");

String name = rs.getString("name");

String email = rs.getString("email");

System.out.println("ID: " + id + ", Name: " + name + ", Email: " + email);

}

}

}

}

// Compile the Java file:

javac -cp .:mysql-connector-java-x.x.x.jar DatabaseOperations.java

java -cp .:mysql-connector-java-x.x.x.jar DatabaseOperations