Case Study On JDBC:[Emp Database]

**1)Prepare Emp Table with Eid,Ename,Sal,Designation In Oracle Sql ?**

CREATE TABLE Emp (

Eid INT PRIMARY KEY,

Ename VARCHAR(255),

Sal DECIMAL(10, 2),

Designation VARCHAR(255)

);

**2)CRUD OPERATIONS [insert,update,delete,select] on emp table?**

INSERT INTO Emp (Eid, Ename, Sal, Designation)

VALUES (1, 'John Doe', 50000, 'Manager');

UPDATE Emp

SET Sal = 55000

WHERE Eid = 1;

DELETE FROM Emp

WHERE Eid = 1;

SELECT \* FROM Emp;

INSERT INTO Emp (Eid, Ename, Sal, Designation)

VALUES (2, 'Mahesh', 30000, 'Manager');

**3)Prepared Statement,Statement interface methods on Emp Table?**

package xyz;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

public class Lab7q3 {

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

String url = "jdbc:mysql://localhost:3306/primepro";

String username = "root";

String password = "Maheshkumar@22";

Connection connection = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/primepro","root","Maheshkumar@22");

// Insert using PreparedStatement

String insertQuery = "INSERT INTO Emp (Eid, Ename, Sal, Designation) VALUES (?, ?, ?, ?)";

PreparedStatement preparedStatement = connection.prepareStatement(insertQuery);

preparedStatement.setInt(1, 1);

preparedStatement.setString(2, "John Doe");

preparedStatement.setDouble(3, 50000);

preparedStatement.setString(4, "Manager");

preparedStatement.executeUpdate();

// Update using Statement

Statement statement = connection.createStatement();

String updateQuery = "UPDATE Emp SET Sal = 55000 WHERE Eid = 1";

statement.executeUpdate(updateQuery);

// Delete using Statement

String deleteQuery = "DELETE FROM Emp WHERE Eid = 1";

statement.executeUpdate(deleteQuery);

// Select using Statement

String selectQuery = "SELECT \* FROM Emp";

ResultSet resultSet = statement.executeQuery(selectQuery);

while (resultSet.next()) {

int eid = resultSet.getInt("Eid");

String ename = resultSet.getString("Ename");

double sal = resultSet.getDouble("Sal");

String designation = resultSet.getString("Designation");

// Process the retrieved data

}

// Close resources

resultSet.close();

statement.close();

preparedStatement.close();

connection.close();

// **TODO** Auto-generated method stub

}

}

**4)Create Emp.txt file and store details in Emp table?**

package xyz;

import java.io.BufferedReader;

import java.io.FileReader;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

public class Lab7q4 {

public static void main(String[] args) {

// Establish a database connection (same as above)

try {

BufferedReader reader = new BufferedReader(new FileReader("Emp.txt"));

String line;

String insertQuery = "INSERT INTO Emp (Eid, Ename, Sal, Designation) VALUES (?, ?, ?, ?)";

Connection connection = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/primepro","root","Maheshkumar@22");

PreparedStatement preparedStatement = connection.prepareStatement(insertQuery);

while ((line = reader.readLine()) != null) {

String[] data = line.split(",");

preparedStatement.setInt(1, Integer.*parseInt*(data[0]));

preparedStatement.setString(2, data[1]);

preparedStatement.setDouble(3, Double.*parseDouble*(data[2]));

preparedStatement.setString(4, data[3]);

preparedStatement.executeUpdate();

}

reader.close();

preparedStatement.close();

} catch (Exception e) {

e.printStackTrace();

}

// Close resources (same as above)

}

}