Group A: Assignment No : 8

Title of Assignment: MYSQL database connectivity

Assignment Name: -. Implement MYSQL/Oracle database connectivity with front end language(Java) to implement Database navigation operations (add, delete, edit, etc.).

Theory: -

Software Required and Steps

• Eclipse

• JDK 1.6

• MySQL

• Java-MySQL Connector

Connection to database with Java

The interface for accessing relational databases from Java is *Java Database Connectivity (JDBC)*. Via JDBC you create a connection to the database, issue database queries and updateas well as receive the results.

JDBC provides an interface which allows you to perform SQL operations independently ofthe instance of the used database. To use JDBC, you require the database specific implementation of the JDBC driver.

MySQL JDBC driver(Connector)

To connect to MySQL from Java, you have to use the JDBC driver from MySQL. The MySQLJDBC driver is called *MySQL Connector/J*. You find the latest MySQL JDBC driver under thefollowing URL: http://dev.mysql.com/downloads/connector/j.

The download contains a JAR file which we require later.

To connect Java application with the MySQL database, we need to follow following steps.

1. **Driver class:** The driver class for the mysql database is **com.mysql.jdbc.Driver**.
2. **Connection URL:** The connection URL for the mysql database is **jdbc:mysql://localhost:3306/db1** where jdbc is the API, mysql is the database, localhost is the server name on which mysql is running, we may also use IP address,

3306 is the port number and sonoo is the database name. We may use any database,in such case, we need to replace the db1 with our database name.

3. **Username:** The default username for the mysql database is **root**.
4. **Password:** It is the password given by the user at the time of installing the mysql database.

In Eclipse perform following steps:

1. File - New – Java Project –Give Project Name – ok
2. In project Explorer window- right click on project name-newclass- give Class name-ok
3. In project Explorer window- right click on project name- Build

   path- Configure build path- Libraries- Add External Jar - JavaMySQL Connector
4. In MySQL first Create one Database with name db1 and one table with name

   stud(name,age)

Steps to be perform in Java to write Code:

1. Import packages

import java.sql.*;

2. Load Driver

Class.forName("oracle.jdbc.driver.OracleDriver");

3. Create connection

Connection con = DriverManager.getConnection(

"jdbc:mysql://localhost:3306/DatabaseName","username","passwd ")

4. Creates a Statement object for sending SQL statements to the database

Statement stmt = con.createStatement() ;

5. Executing SQL Statements

executeUpdate – This Method is used for insert, update and delete queries

• Example

String sql = "INSERT INTO stud VALUES

('Ankita',21)";stmt.executeUpdate(sql);

6. Get ResultSet (SELECT Query)

String sql1 = "SELECT name, age FROM stud";

//Write a select query in any string variable

ResultSet rs = stmt.executeQuery(sql1);

//executeQuery used to run the select query and store the result in ResultSetwhile

(rs.next()) //Iterate through ResultSet till data is found

{

String name1 = rs.getString("name");

//Store name data into name1 variableint

age1 = rs.getInt("age");

//Store age data into age1 variable

}

7. Close connection

• stmt.close();

• con.close();