**Database Testing**

Store data from Application UI -> Verify data stored in data base

Store data by directly in DB -> Verify data stored in data base

Store data by directly in DB -> Verify data accessibility using Application UI

1. Download MySql Installer
   1. Navigate to <http://dev.mysql.com/downloads/installer/>
   2. Click on My Sql Installer download link (around 300+mb)
   3. No need to login or sign up. Click on start my download
   4. The exe file will be downloaded
2. Install MySQL Server
   1. Select Custom installation and click on next
   2. Expand MySql servers Select MySql Server version and click on arrow mark to select features to be installed
   3. Click on next -> click on execute -> Click on next
   4. It will by default uses 3306 port number. If that port number already in use then use 3307
   5. Click on Next. It ask for password
   6. Give password and remember that password. That will be used to login to DB
   7. Click on next -> Click on execute-> Click on next until you get finish
3. Starting MySQl
   1. After finishing start MySQL Command Line Client from start menu
   2. It will ask for password
   3. Give the password what you have entered while installing
4. Create a Test DB for testing
   1. Create data base company and give data in it
      1. CREATE DATABASE company;
      2. Use company;
   2. Create table
      1. CREATE TABLE emp (id INT(6), name VARCHAR(20), age INT(6), sal INT(6));
      2. INSERT INTO emp (id, name, age, sal) VALUES (1, 'sudhakar', 32,99999);
      3. INSERT INTO emp (id, name, age, sal) VALUES (2, 'balu', 25,89898);
   3. Get data from created db
      1. Select \* from emp;
      2. It should display all data
5. Download my sql java jar
   * Navigate to <https://downloads.mysql.com/archives/c-j/>
   * Click on download at zip file link
   * Extract zip file to safe location
   * Add jar file to eclipse project build path

Use below program to connect db from eclipse

package com.read.files;

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 ReadDB {

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

InstantiationException, IllegalAccessException,

ClassNotFoundException {

// Database URL.

// "test" Is database name. You can change It as per your database name.

String sqldb\_url = "jdbc:mysql://localhost:3307/emp";

// Use your database username here. It Is "root" for root account.

String sqldb\_uname = "root";

String sqldb\_pass = "sudhakar";

// To Create database connection.

Connection connect = DriverManager.getConnection(sqldb\_url,

sqldb\_uname, sqldb\_pass);

Statement stmt = connect.createStatement();

// Printing all records

String query = "select \* from user";

// Get the contents of user table from DB

ResultSet res = stmt.executeQuery(query);

// Print the result untill all the records are printed res.next()

// returns true if there is any next record else returns false.

while (res.next()) {

System.out.println(res.getString(1));

System.out.println(res.getString(2));

System.out.println(res.getString(3));

System.out.println(res.getString(4));

}

connect.close();

}

}

**Get data from table column wise**

**package** com.files.handle;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.ResultSetMetaData;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**public** **class** ReadDataFromDB {

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

// Database URL.

// "dec19" Is database name. You can change It as per your database

// name.

String sqldb\_url = "jdbc:mysql://localhost:3307/dec19";

// Use your database username here. It Is "root" for root account.

String sqldb\_uname = "root";

String sqldb\_pass = "admin";

// To Create database connection.

Connection connect = DriverManager.*getConnection*(sqldb\_url,

sqldb\_uname, sqldb\_pass);

// create a query

Statement stmt = connect.createStatement();

// for inserting data

// stmt.execute("INSERT INTO student (id, name, age) VALUES (1, 'mindq', 16);");

// Get the contents of user table from DB

ResultSet res = stmt.executeQuery("select \* from student where name='sudhakar'");

// get column names

ResultSetMetaData rsm = res.getMetaData();

// print column count

System.***out***.println("number of columns are:" + rsm.getColumnCount());

// get data from each column

**for** (**int** c = 1; c <= rsm.getColumnCount(); c++) {

// get column name

String cName = rsm.getColumnLabel(c);

System.***out***.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.***out***.println(cName);

System.***out***.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

// get data from that column of each row

**while** (res.next()) {

System.***out***.println(res.getString(cName));

}

// move to beginning

res.beforeFirst();

}

// close db connection

connect.close();

}

}

**Create a table for storing testdata**

Create table:

CREATE TABLE ohrm (tcid VARCHAR(20), username VARCHAR(20), password VARCHAR(20),firstname VARCHAR(20),lastname VARCHAR(20));

**Add Table Data:**

INSERT INTO OHRM VALUES ('TC\_OHRM\_001', 'admin', 'admin','selenium','hq');

INSERT INTO OHRM VALUES ('TC\_OHRM\_002', 'admin', 'admin','web','driver');

**public** **static** HashMap getTcDataFromDB(String tcid) **throws** SQLException {

// Database URL.

// "dec19" Is database name. You can change It as per your database

// name.

String sqldb\_url = "jdbc:mysql://localhost:3307/dec19";

// Use your database username here. It Is "root" for root account.

String sqldb\_uname = "root";

String sqldb\_pass = "admin";

// To Create database connection.

Connection connect = DriverManager.*getConnection*(sqldb\_url,

sqldb\_uname, sqldb\_pass);

// create a query

Statement stmt = connect.createStatement();

// for inserting data

// stmt.execute("INSERT INTO student (id, name, age) VALUES (1, 'mindq', 16);");

// Get the contents of user table from DB

ResultSet res = stmt

.executeQuery("select \* from ohrm where tcid='"+tcid+"'");

// get column names

ResultSetMetaData rsm = res.getMetaData();

//create hashmap

HashMap<String, String> tcData= **new** HashMap();

// get data from each column

**for** (**int** c = 1; c <= rsm.getColumnCount(); c++) {

// get column name

String cName = rsm.getColumnLabel(c);

res.next();

tcData.put(cName, res.getString(cName));

res.beforeFirst();

}

// close db connection

connect.close();

**return** tcData;

}