**Database Testing:**

JDBC is a standard Java API for database-independent connectivity between the Java programming language and a wide range of databases.

This Java API allows to opening connection, create SQL, execute SQL, and Viewing (can perform CRUD operations). // Similar to Microsoft’s ODBC.

**Components of JDBC:**

* Driver Manager is an interface: used to manage list of database Drivers
* Driver is an interface: handles communications with database.
* Connection is an interface: consists of methods required to connect and communications with the data base.

[Note: Download the mysql.jdbc jar file and add to the project.]

**Step 1**: **Register Driver & Open Connection**

String jdbcDriver = ”com.mysql.jdbc.Driver”;

String dbURL = ”jdbc.mysql://localhost/emp”;

Connection con = null;

Statement stmt=null;

//Register JDBC driver

Class.forName(“com.mysql.cj.jdbc.Driver”);

con=DriverManager.getConnection(dbURL,”username”,”password”);

**Step 2**: **Execute a Query**

stmt=con.createStatement();

String sql;

sql=” Select \* from emp”;

ResultSet rs=stmt.executeStatement(sql);

**Step 3**: **Extract data from result set**

while(rs.next){

int id =rs.getInt(“id”);

String fname=rs.getString(“firstname”);

String lname=rs.getString(“lastname”);

sout( id + “ ”+fname +” ”+lname);

}

**Step 4**: **Clean up and Close the connection for garbage collection.**

rs.close();

stmt.close();

con.close();