**Labsheet12**

**Module 3 – Java Database Connectivity**

**Q1**. Write the useful classes , interface and methods available in sql.\*

**Solution : Principal JDBC interfaces and classes under sql.\***

Let’s take an overview look at the JDBC’s main interfaces and classes which we’ll use in this article. They are all available under the *java.sql* package: 

* **Class.forName() :** Here we load the driver’s class file into memory at the runtime. No need of using new or creation of object.
* **DriverManager:** This class is used to register driver for a specific database type (e.g. Oracle Database in this tutorial) and to establish a database connection with the server via its **[getConnection()](https://practice.geeksforgeeks.org/problems/how-to-connect-to-a-database-in-java/)** method.
* **Connection:** This interface represents an established database connection (session) from which we can create statements to execute queries and retrieve results, get metadata about the database, close connection, etc.

* **Statement** and **PreparedStatement**: These interfaces are used to execute static SQL query and parameterized SQL query, respectively. **Statement** is the super interface of the **PreparedStatement** interface. Their commonly used methods are:
  1. **boolean execute(String sql):** executes a general SQL statement. It returns *true* if the query returns a *ResultSet*, false if the query returns an update count or returns nothing. This method can be used with a *Statement* only.
  2. **int executeUpdate(String sql):** executes an INSERT, UPDATE or DELETE statement and returns an update account indicating number of rows affected (e.g. 1 row inserted, or 2 rows updated, or 0 rows affected).
* **ResultSet executeQuery(String sql):** executes a SELECT statement and returns a *ResultSet* object which contains results returned by the query.
* **ResultSet:** contains table data returned by a SELECT query. Use this object to iterate over rows in the result set using next() method.
* **SQLException:** this checked exception is declared to be thrown by all the above methods, so we have to catch this exception explicitly when calling the above classes’ methods.

**Q2**. Use MySql to Create a database userdb and a table user with attributes

id, password, Fullname, email

All are string.

Make id as primary key

**Solution :**

**Step 1: Use mysql to create the database userDB and table user**

**Create a database userDB**

CREATE DATABASE USERDB;

**Create a table user**

CREATE TABLE USER(

id varchar(30) NOT NULL PRIMARY KEY,

pwd varchar(30) NOT NULL,

fullname varchar(50),

email varchar(50)

);