4.**Processing the Results returned by SQL Queries:**

* **Whenever we issue SQL Queries to RDBMS Application via JDBC there are two kinds of results executed out of RDBMS Application**

1. **No. of Rows Affected Count**
2. **DB Results**

* **JDBC returns**
* **No. of Rows Affected Count “ As a “integer Value”**
* **DB Results in the form of “ResultSet Object”**

**java.sql.ResultSet**

* **Its an interface & an Object of ResultSet is an “Object representation of DB Results” produced by Select SQL query.**
* **ResultSet object is produced by invoking “executeQuery()” Method on any of the JDBC Statements objects.**
* **ResultSet consists of N number of Rows with each row containing N number of Colum’s.**
* **Number of rows and columns in ResultSet directly depends on “Where condition” & “column list” respectively in “Select Sql query”**
* **ResultSet object may consist of “Zero/More” Or “Zero/One” rows**
* **If resultSet consist of zero/more rows of data then we must use “while loop”**
* **If ResultSet consist of zero/one row of data then we can use either “while loop” or “if block” (preferred)**
* **Once the ResultSet is produced, data from ResultSet can be extracted as follow**

1. **Move to describe Row by calling necessary ResultSet methods:**

**For Ex: next(), first(),last(),etc**

1. **Retrieve the desired column value using**

**getxxx(<Position of the Column in Sql Query as Integer Value>);**

**Where xxx = java Data type corresponding to DB Table column data type**

**Note: getxxx() methods are the ONLY way to retrieve data from ResultSet object.**

**5.Closing Ceremony**

Why we need to Close Necessary JDBC Objects:

* JDBC Objects such as
* Connection
* JDBC Statements and
* ResultSet

Make use of memory

* In case of Connection Object, further RDBMS Application resources are cosumed
* Also memory consumed by ResultSet object is comparatively more compared to other JDBC objects
* Hence forgetting to close any of JDBC objects “ will heavily impact the application performance” and “Garbage Collection” should not be relied upon
* So it’s important to close any of the JDBC Object as soon as their job is done.
* To close any of the JDBC Objects invoke “close()” method

Syntax:

Public void close() throws SQLException

**Summary:**

* While making use of JDBC we MUST follow 5 steps and out of 5, only once
* We need to load the Driver (step 1)
* We have to get the DB Connection (Step 2 )
* We have to Close JDBC Objects (Step 5)
* But ,Step 3 and 4 (i.e. Issuing SQL QUERIES & processing Results) can happen “N” number of times depending on our use
* Sets 1 to 4 will be in “try block” and step 5 will be in “finally block”.
* Commonly used JDBC Objects are

1. Java.sql.DriverManger
2. Java.sql.Connection
3. Java.sql.Statement
4. Java.sql.PreparedStatement
5. Java.sql.CallableStatement
6. Java.sql.ResultSet
7. Java.sql.SQLEcxeption

* Out of these apart from DriverManager & SQLException rest of them are “Interfaces”. Where as DriverManager & SQLException are “Concrete Classes”
* SQLException is a Concrete Class which extends “java.lang.Exception” & it’s a “Checked Exception”