What is RowSet in Java JDBC?

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RowSet is an interface in java that is present in the javax.sql package. Geek do note not to confuse RowSet with ResultSet.

> ***Note:*** *RowSet is present in package javax.sql while ResultSet is present in package java.sql.*

The instance of RowSet is the java bean component because it has properties and a java bean notification mechanism. It is introduced in JDK5. A JDBC RowSet provides a way to store the data in tabular form. It makes the data more flexible and easier than a ResultSet. The connection between the RowSet object and the data source is maintained throughout its life cycle.

RowSets are classified into five categories based on how they are implemented which are listed namely as below:

- JdbcRowSet
- CachedRowSet
- WebRowSet
- FilteredRowSet
- JoinRowSet

The advantage of RowSet is as follows:

1. It is easy and flexible to use.
2. It is by default scrollable and can be updated by default whereas ResultSet by default is only forwardable and read-only operation is

valid there only.

The JDBC RowSet interface is a RowSet extension. It's a wrapper for the ResultSet object that adds some extra features.

Syntax: Declaration of Jdbc RowSet interface

```
public interface JdbcRowSet
extends RowSet, Joinable
```

In order to connect RowSet with the database, the RowSet interface provides methods for configuring Java bean properties which are depicted below:

```
void setURL(String url):
void setUserName(String user_name):
void setPassword(String password):
```

Lastly, we just need to create a JdbcRowSet object where a sample is shown below illustration as follows:

Illustration:

```
JdbcRowSetrowSet =
RowSetProvider.newFactory().createJdbcRowSet();

// 1. Oracle database considered
rowSet.setUrl("jdbc:oracle:thin:@localhost:1521:xe");

// 2. username is set customly as - root
rowSet.setUsername("root");

// 3. Password is set customly as - pass
rowSet.setPassword("pass");

// 4. Query
rowSet.setCommand("select * from Students");
```

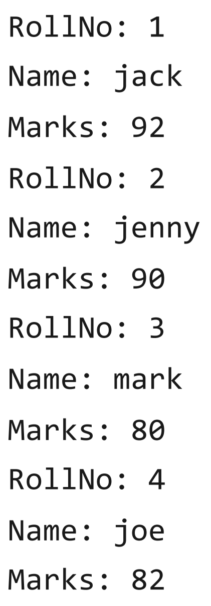
Implementation: Assume we have a table named **student** in the database as:

```
+--------------+-------------+
|  RollNo |    Name    | Marks |
+--------------+-------------+
|    1    |  jack   |    92      |
|    2    |  jenny  |    90      |
|    3    |  mark   |    80      |
|    4    |  joe    |    82      |
+--------------+-------------+
```

Implementing JdbcRowSet and retrieving the records

```java
// Java Program to Illustrate RowSet in JDBC

// Importing database
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.sql.RowSetEvent;
import javax.sql.RowSetListener;
import javax.sql.rowset.JdbcRowSet;
import javax.sql.rowset.RowSetProvider;

// Main class
class RowSetDemo {

    // Main driver method
    public static void main(String args[])
    {

        // Try block to check for exceptions
        try {

            // Loading and registering drivers
            Class.forName(
                "oracle.jdbc.driver.OracleDriver");

            // Creating a RowSet
            JdbcRowSetrowSet = RowSetProvider.newFactory()
                                   .createJdbcRowSet();

            // Setting URL, username, password
            rowSet.setUrl(
                "jdbc:oracle:thin:@localhost:1521:xe");
            rowSet.setUsername("root");
            rowSet.setPassword("pass");

            // Creating a query
            rowSet.setCommand("select * from Student");

            // Executing the query
            rowSet.execute();

            // Processing the results
            while (rowSet.next()) {

                // Print and display commands
                System.out.println("RollNo: "
                                   + rowSet.getInt(1));
                System.out.println("Name: "
                                   + rowSet.getString(2));
                System.out.println("Marks: "
                                   + rowSet.getString(3));
            }
        }

        // Catch block to handle the exceptions
        catch (Exception e) {

            // Print and display the exception along with
            // line number using printStackTrace() method
            e.printStackTrace();
        }
    }
}
```

Output:



```
RollNo: 1
Name: jack
Marks: 92
RollNo: 2
Name: jenny
Marks: 90
RollNo: 3
Name: mark
Marks: 80
RollNo: 4
Name: joe
Marks: 82
```