*Dt : 8/11/2023*

**imp*

*ResultSet in JDBC:*

*=>ResultSet is an interface from java.sql package and which is instantiated using executeQuery() method.*

*syntax using Statement:*

```
ResultSet rs = stm.executeQuery("select-query");
```

*syntax using PreparedStatement:*

```
ResultSet rs = ps.executeQuery();
```

*=>This ResultSet-Object will hold the result generated from Select-queries*

---

*Types of ResultSet Objects:*

*=>Based on the control over the ResultSet objects,the ResultSet objects are categorized into two types:*

*(a)NonScrollable ResultSet Objects*

*(b)Scrollable ResultSet Objects*

*(a)NonScrollable ResultSet Objects:*

*=>In NonScrollable ResultSet Objects the cursor is moved only in one*

*direction,which means only forward-direction.*

*Ex:*

*above programs related to Select-queries*

*(b)Scrollable ResultSet Objects:*

*=>In Scrollable ResultSet objects the cursor can be moved in both directions,which means forward and backward.*

*=>we use the following syntaxes to generate Scrollable ResultSet Objects:*

*syntax using Statement:*

```
Statement stm = con.createStatement(type,mode);
```

*syntax using PreparedStatement:*

```
PreparedStatement ps = con.prepareStatement("qyery-structure",type,mode);
```

*define 'type'?*

*=>'type' specifies the movement of Cursor on ResultSet object.*

*=>ResultSet provides the following fields related to 'type':*

*public static final int TYPE_FORWARD_ONLY;------>1003*

*public static final int TYPE_SCROLL_INSENSITIVE;---->1004*

*public static final int TYPE_SCROLL_SENSITIVE;------>1005*

*define 'mode'?*

*=>'mode' specifies the action to be performed on ResultSet Object.*

*=>ResultSet provides the following fields related to 'mode':*

*public static final int CONCUR_READ_ONLY;---->1007*

*public static final int CONCUR_UPDATABLE;---->1008*

*Note:*

*=>In 'TYPE_SCROLL_INSENSITIVE',the background buffer is not modified.*

*=>In 'TYPE_SCROLL_SENSITIVE',the backgound buffer is modified.*

*---*

*=>The following are some important method to control cursor on Scrollable ResultSet object:*

*1.afterLast()*

*2.beforeFirst()*

*3.last()*

*4.first()*

*5.previous()*

*6.next()*

*7.absolute()*

*8.relative()*

***1.afterLast():***

***=>afterLast() method will move cursor after the last row of ResultSet***

***2.beforeFirst():***

***=>beforeFirst() method will move the cursor before the first row of ResultSet***

***3.last():***

***=>last() method make the cursor point to the last row of ResultSet.***

***4.first():***

***=>first() method make the cursor point to the first row of ResultSet.***

***5.previous():***

***=>previous() method will move the cursor in backward direction.***

***6.next():***

***=>next() method will move the cursor in forward direction.***

***7.absolute(int):***

***=>absolute(int) method is used move the cursor to the specified row number on the ResultSet object***

***8.relative():***

***=>relative() method is used to move the cursor from current position to forward or backward by taking incre/decre value as parameter.***

***Ex:***

***rs.relative(+2);***

***rs.relative(-4);***

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***Ex-1:***

***program : DBCon5.java***

```
package test;
import java.sql.*;
public class DBCon5 {
    public static void main(String[] args) {
       try {

Class.forName("oracle.jdbc.driver.OracleDriver");
         Connection con = DriverManager.getConnection
          ("jdbc:oracle:thin:@localhost:1521:xe",
                "system","manager");
         Statement stm = con.createStatement
                 (ResultSet.TYPE_SCROLL_INSENSITIVE,
                          ResultSet.CONCUR_READ_ONLY);
         /*

System.out.println(ResultSet.TYPE_FORWARD_ONLY);


System.out.println(ResultSet.TYPE_SCROLL_INSENSITIVE);


System.out.println(ResultSet.TYPE_SCROLL_SENSITIVE);
```

```
            System.out.println(ResultSet.CONCUR_READ_ONLY);
            System.out.println(ResultSet.CONCUR_UPDATABLE);
            */
            ResultSet rs = stm.executeQuery
                     ("select * from Customer57");
            rs.afterLast();
            //Cursor pointing after the last row
            System.out.println("****Details****");
            while(rs.previous())
            {
                 System.out.println(rs.getString(1)+"\t"+

rs.getString(2)+"\t"+rs.getString(3)+
                                "\t"+rs.getString(4)+"\t"+

rs.getInt(5)+"\t"+rs.getString(6)+"\t"+
                                rs.getLong(7));
            }
            System.out.println("====row-2=====");
            rs.absolute(2);
            System.out.println(rs.getString(1)+"\t"+

rs.getString(2)+"\t"+rs.getString(3)+
                            "\t"+rs.getString(4)+"\t"+

rs.getInt(5)+"\t"+rs.getString(6)+"\t"+
                            rs.getLong(7));

System.out.println("====relative(+2)=====");
                    rs.relative(+2);
                   System.out.println(rs.getString(1)+"\t"+

rs.getString(2)+"\t"+rs.getString(3)+
                            "\t"+rs.getString(4)+"\t"+

rs.getInt(5)+"\t"+rs.getString(6)+"\t"+
                            rs.getLong(7));

        }catch(Exception e) {e.printStackTrace();}
    }
```

}

o/p:

****Details****

B123 RETY Hyd TS 61234r@ 6767671234

A234 Alex Hyd TS 65432a@gmail.com 7676761234

E22 Raj Hyd TS 612345 rj@gmail.com 7878781234

E111 Ram Hyd TS 612345 r@gmail.com 9898981234

====row-2=====

E22 Raj Hyd TS 612345 rj@gmail.com 7878781234

====relative(+2)=====

B123 RETY Hyd TS 61234r@ 6767671234

---

Ex-2:

Program : DBCon6.java

```
package test;
import java.sql.*;
public class DBCon6 {
    public static void main(String[] args) {
      try {
       Class.forName("oracle.jdbc.driver.OracleDriver");
         Connection con = DriverManager.getConnection
          ("jdbc:oracle:thin:@localhost:1521:xe",
                  "system","manager");
        PreparedStatement ps = con.prepareStatement
            ("select * from Product57",1004,1007);
        ResultSet rs = ps.executeQuery();
        rs.first();
        System.out.println(rs.getString(1)+"\t"+
```

```
            rs.getString(2)+"\t"+rs.getFloat(3)+"\t"+
                  rs.getInt(4));
        }catch(Exception e) {e.printStackTrace();}
    }
}
```

*o/p:*

```
A111  Mouse       1200.0       12

=================================================================
===
```