

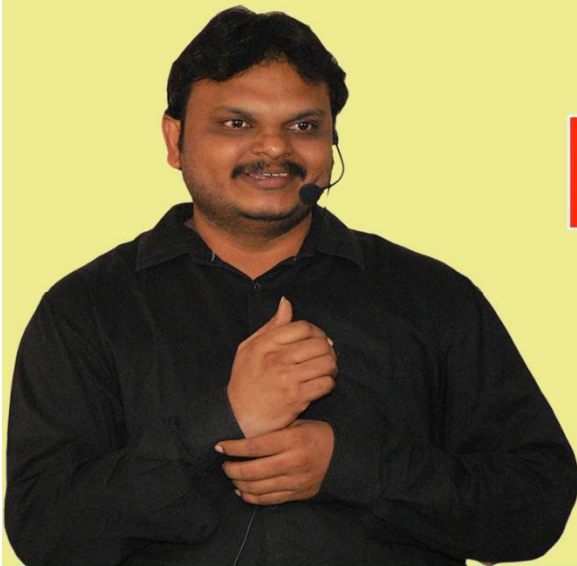
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11.Batch Updations



Mr. Nagoor Babu M.Tech

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Batch Updations

In general in Jdbc applications, it is required to provide number of SQL queries according to application requirement.

With the above, if we execute the Jdbc application then JVM will send all the SQL queries to the database in a sequential manner.

If we use the above convention to execute SQL queries in Jdbc application we have to spend a lot of time only to carry or transfer SQL queries from Java application to database, this approach will reduce the performance of Jdbc application.

In the above context, to improve the performance of the Jdbc applications we have to use Batch updations.

In batch updations, we will gather or collect all the updation group SQL queries as a single unit called as Batch and we will send batch of updation group SQL queries at a time from Java application to database.

At database, Database Engine may execute all the SQL queries and generate respective row count values in the form of an array to Java application.

To add an SQL query to batch we have to use the following method from Statement.

```
public void addBatch(String query)
```

To send batch of updation group SQL queries at a time from Java application to database and to make the Database Engine to execute all the batch of updation group SQL queries we have to use the following method from Statement.

```
public int[] executeBatch()
```

Where int[] will represent all the row count values generated from the updation group SQL queries.



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Batch updations with Statement:

```
JdbcApp30:
package com.durgasoft;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.Statement;

public class JdbcApp30 {
    public static void main(String[] args) throws Exception {
        Class.forName("oracle.jdbc.OracleDriver");
        Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe",
        "system", "durga");
        Statement st=con.createStatement();
        st.addBatch("insert into emp1 values(666,'FFF',9000,'Hyd')");
        st.addBatch("update emp1 set esal=esal-500 where esal<10000");
        st.addBatch("delete from emp1 where eno=555");
        // st.addBatch("select * from emp1");--> java.sql.BatchUpdateException
        int[] rowCounts=st.executeBatch();
        for(int i=0;i<rowCounts.length;i++){
            System.out.println("Records Manipulated   :"+rowCounts[i]);
        }
        st.close();
        con.close();
    }
}
```



Batch Updations with PreparedStatement:

```
JdbcApp31:
```

```
package com.durgasoft;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;

public class JdbcApp31 {
    public static void main(String[] args)throws Exception {
        Class.forName("com.mysql.jdbc.Driver");
        Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/durgadb",
"root","root");
        PreparedStatement pst=con.prepareStatement("insert into emp1 values(?,?,?,?)");
        pst.setInt(1,666);
        pst.setString(2, "FFF");
        pst.setFloat(3, 6000);
        pst.setString(4, "Hyd");
        pst.addBatch();

        pst.setInt(1,777);
        pst.setString(2, "GGG");
        pst.setFloat(3, 7000);
        pst.setString(4, "Hyd");
        pst.addBatch();

        pst.setInt(1,888);
        pst.setString(2, "HHH");
        pst.setFloat(3, 8000);
        pst.setString(4, "Hyd");
        pst.addBatch();
        int[] rowCounts=pst.executeBatch();
        for(int i=0;i<rowCounts.length;i++){
            System.out.println("Records Manipulated   :"+rowCounts[i]);
        }
        con.close();
    }
}
```

Note: If we include selection group SQL query in a batch then JVM will raise an Exception like
ava.sql.BatchUpdateException: invalid batch command: invalid SELECT batch command.

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