ICON OF JAVA

ADV. JAVA

JDBC

7.Prepared Statement

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7.Prepared Statement

1)PreparedStatement with insert sql query

2)PreparedStatement with update sql query

3)PreparedStatement with select sql query

1.Create PreparedStatement object by providing generalised SQL Query:

To create PreparedStatement object,we have to use the following method from Connection.

public PreparedStatement prepareStatement(String SQL_format)

Eg:

PreparedStatement pst=con.PrepareStatement("insert into emp1 values(?,?,?)");

When JVM encounter the above instruction,JVM will pickup the provided SQL query and send to DB engine through Jdbc Driver and connection.

Upon receiving SQL query,DB engine will perform query processing and prepare query plan with the parameters,as a result PreparedStatement object will be created at Java application with the parameters

2.Set values to the parameters available in PreparedStatement object as per the applicationrequirement.

To set values to the PreparedStatement object,we have to the following method from PreparedStatement

```
public void setXXX(int parameter_Numb,xxx value)
where xxx may be byte,short,int....
Eg:
        pst.setInt(1,111);
        pst.setString(2,"Laddu");
        pst.setFloat(3,30000.0f);
```

When JVM encounter the above instructions then JVM will set the specified values to the respective parameters in PreparedStatement object,where these values are reflected to Query plan parameters automatically through the Jdbc driver and connection.

3.Make Database engine to pickup the values from Query plan and perform the respective operationas per the generalised SQL query which we provided

If the generalised SQL query belongs to selection group,then we have to use the following method.

public ResultSet executeQuery() throws Exception

If the generalised SQL query belongs to updation group,then we have to use the following method

public int executeUpdate() throws SQLException

Eg: int rowCount=pst.executeUpdate();

```
JdbcApp26:
 package com.durgasoft;
import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;

public class JdbcApp26 {

   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(?,?,?,?)");
      BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
      while(true){
        System.out.print("Employee Number    :");
        int eno=Integer.parseInt(br.readLine());
        System.out.print("Employee Name      :");
        String ename=br.readLine();
        System.out.print("Employee Salary      :");
        float esal=Float.parseFloat(br.readLine());
        System.out.print("Employee Address   :");
        String eaddr=br.readLine();

        pst.setInt(1, eno);
        pst.setString(2, ename);
        pst.setFloat(3, esal);
        pst.setString(4, eaddr);

        pst.executeUpdate();
        System.out.println("Employee Inserted Successfully");
        System.out.print("Onemore Employee[yes/no]   :");
        String option=br.readLine();
        if(option.equals("no")){
```

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```
        break;
      }
    }
    con.close();
  }}
```

```
JdbcApp27
 package com.durgasoft;
 import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;

public class JdbcApp27 {

  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("update emp1 set esal=esal+? where
esal<?");
    pst.setInt(1, 500);
    pst.setFloat(2, 10000.0f);
    int rowCount=pst.executeUpdate();
    System.out.println("Records Updated     :"+rowCount);
    con.close();
  }

}
```

```
JdbcApp28:
package com.durgasoft;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;

public class JdbcApp28 {
  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("select * from emp1 where esal<?");
    pst.setFloat(1, 10000.0f);
    ResultSet rs=pst.executeQuery();
```

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```
System.out.println("ENO   ENAME   ESAL   EADDR");
System.out.println("------------------------------------");
while(rs.next()){
   System.out.println(rs.getInt(1)+"   "+rs.getString(2)+"   "+rs.getFloat(3)+"
"+rs.getString(4));
}
con.close();
}


}
```

```
JdbcApp29:

package com.durgasoft;
 import java.sql.Connection;
import java.sql.Date;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.util.Properties;

public class JdbcApp29 {
   public static void main(String[] args) throws Exception{
      Class.forName("com.mysql.jdbc.Driver");
      Properties p=new Properties();
      p.setProperty("user", "root");
      p.setProperty("password", "root");
      Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/durgadb",p);
      PreparedStatement pst=con.prepareStatement("insert into student values(?,?,?,?)");
      pst.setString(1, "S-111");
      pst.setString(2, "Durga");
      pst.setString(3, "Java");
      Date  d=Date.valueOf("2015-01-25");
      pst.setDate(4, d);
      pst.executeUpdate();

      pst.setString(1, "S-222");
      pst.setString(2, "Anil");
      pst.setString(3, "Oracle");
      java.util.Date date=new java.util.Date();
      int val=date.getDate();
      java.sql.Date dt=new java.sql.Date(val);
      pst.setDate(4, dt);
      pst.executeUpdate();
```

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```
        con.close();

    }

}
```

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