```
01 package DBLayer;
02 import java.sql.*;
03 public class DbConnection
04 {
05     //constants used to get access to the database
06          //SQL Server
07       private static final String  driver =  "jdbc:sqlserver:
08       //balder.ucn.dk:1433";
09       private static final String  databaseName = ";
10       databaseName=dm79_3";
11    //jdbc:sqlserver://URL\SQLEXPRESS/Databases/EPS:1357;
12    user=epsingall;password=welkom1;
13        //SQL Server
14      //  private static String  userName = ";user=DM79_3";
15        private static String  userName = "; user=DM79_3";
16        private static String password = ";password=MaaGodt";
17
18
19        private DatabaseMetaData dma;
20        private static Connection con;
21        // an instance of the class is generated
22        private static DbConnection  instance = null;
23
24        // the constructor is private to ensure that only one
25        object of this class is created
26        private DbConnection()
27        {
28          String url = driver + databaseName + userName +
29          password;
30
31            try{
32                //load driver
33                //SQL Server
34                Class.forName("com.microsoft.sqlserver.jdbc.
35                SQLServerDriver");
36                System.out.println("Load of class ok");
37
38            }
39            catch(Exception e){
40                System.out.println("Cannot find the driver");
41                System.out.println(e.getMessage());
42            }//end catch
43            try{
44                //connection to the database
45
46                con = DriverManager.getConnection(url);
47                //set auto commit
48                con.setAutoCommit(true);
49                dma = con.getMetaData(); // get meta data
50                System.out.println("Connection to " + dma.
51                getURL());
52                System.out.println("Driver " + dma.
53                getDriverName());
54                System.out.println("Database product name " +
55                dma.getDatabaseProductName());
56            }//end try
57            catch(Exception e){
58
59                System.out.println("Problems with the
60                connection to the database");
61                System.out.println(e.getMessage());
62                System.out.println(url);
63            }//end catch
64        }//end  constructor
```

```
65
66      //closeDb: Closes the connection to the database
67        public static void closeConnection()
68        {
69                try{
70                con.close();
71                System.out.println("The connection is closed");
72            }
73             catch (Exception e){
74                System.out.println("Error trying to close the
75                database " +  e.getMessage());
76             }
77        }//end closeDB
78
79        //getDBcon: Returns the connection to the Database
80        public  Connection getDBcon()
81        {
82           return con;
83        }
84        //this method is used to get the instance of the
85        connection
86        public static DbConnection getInstance()
87        {
88            if (instance == null)
89            {
90              instance = new DbConnection();
91            }
92            return instance;
93        }
94        public static void startTransaction()
95        { try{
96            con.setAutoCommit(false);
97            }
98          catch(Exception e){
99            System.out.println("fejl start transaction");
100           System.out.println(e.getMessage());
101         }
102       }
103       public static void commitTransaction()
104       { try{
105           con.setAutoCommit(true);
106           }
107         catch(Exception e){
108           System.out.println("fejl commit transaction");
109           System.out.println(e.getMessage());
110         }
111       }
112       public static void rollbackTransaction()
113       { try{
114           con.rollback();
115           con.setAutoCommit(true);
116           }
117         catch(Exception e){
118           System.out.println("fejl rollback transaction");
119           System.out.println(e.getMessage());
120         }
121       }
122   }//end DbConnection
```