```java
1 package expenses.manager;
2 import static  expenses.manager.Log.logger;
10
11 public class Derbydb {
12     public static String driver =
  "org.apache.derby.jdbc.EmbeddedDriver";
13     public static String protocol =
  "jdbc:derby:expensesDB;create=true";
14     public Connection connection = null;
15     public Statement statement = null;
16
17     public Derbydb() {
18     try
19         {
20             Class.forName(driver);
21             connection = DriverManager.getConnection(protocol);
22              synchronized(logger){
23                 logger.info("Derbydb Connection established");
24              }
25             statement = connection.createStatement();
26             tablesExist(connection);
27         }
28         catch (Exception except)
29         {
30          synchronized(logger){
31             logger.error("Derbydb connection failed");
32         }
33         if(connection!=null) try{connection.close();}
  catch(Exception e){}
34         }
35     }
36
37 public void tablesExist(Connection conn) {
38
39     int numRows = 0;
40     String sql;
41     try {
42         DatabaseMetaData dbmd = conn.getMetaData();
43         ResultSet rs = dbmd.getTables( null, null, "EXPENSES",
  null);
44          synchronized(logger){
45             logger.info("Derbydb EXPENSES Table Generate if not
  exists");
46          }
47         while( rs.next() ) ++numRows;
48         if(numRows == 0) {
49             statement = connection.createStatement();
50             sql = "CREATE TABLE EXPENSES " +
51                     "(ID int not null generated always as
```

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     identity, " +
52                 " type VARCHAR(255), " +
53                 " date DATE, " +
54                 " amount DOUBLE, " +
55                 " PRIMARY KEY ( ID ))";
56             statement.execute(sql);
57         }
58         numRows = 0;
59         rs = dbmd.getTables( null, null, "INCOME", null);
60         synchronized(logger){
61             logger.info("Derbydb INCOME Table Generate if not
     exists");
62          }
63         while( rs.next() ) ++numRows;
64         if(numRows == 0) {
65             sql = "CREATE TABLE INCOME " +
66                     "(ID int not null generated always as
     identity, " +
67                     " date DATE, " +
68                     " amount DOUBLE, " +
69                     " PRIMARY KEY ( ID ))";
70             statement.execute(sql);
71         }
72
73     } catch (Exception except)
74     {
75
76         except.printStackTrace();
77     }
78 }
79
80 }
81
```