

4. Demonstrate Hibernate logging by Log4j.

Source Code:

```
<?xml version='1.0' encoding='utf-8'?>
<!DOCTYPE hibernate-configuration PUBLIC
"-//Hibernate/Hibernate Configuration DTD 3.0//EN"
"http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
  <session-factory>
    <!-- Database connection settings -->
    <property name="connection.driver_class">com.mysql.jdbc.Driver</property>
    <property name="connection.url">jdbc:mysql://localhost:3306/ecommerce</property>
    <property name="connection.username">mysql user id</property>
    <property name="connection.password">mysql password</property>
  </session-factory>
</hibernate-configuration>
```

Direct log messages to a log file

log4j.appender.file=org.apache.log4j.RollingFileAppender

log4j.appender.file.File=/home/oem/Downloads/hibernate.log

log4j.appender.file.MaxFileSize=1MB

log4j.appender.file.MaxBackupIndex=1

log4j.appender.file.layout=org.apache.log4j.PatternLayout

log4j.appender.file.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n

```
# Direct log messages to stdout
log4j.appender.stdout=org.apache.log4j.ConsoleAppender
log4j.appender.stdout.Target=System.out
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
log4j.appender.stdout.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n
```

```
# Root logger option
log4j.rootLogger=INFO, file, stdout
```

```
# Log everything. Good for troubleshooting
log4j.logger.org.hibernate=INFO
```

```
# Log all JDBC parameters
log4j.logger.org.hibernate.type=ALL
```

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Hibernate Configuration Example</title>
</head>
<body>
<a href="init">Initialize Hibernate</a><br>

</body>
</html>
```

```

package com.ecommerce;

import org.hibernate.SessionFactory;
import org.hibernate.boot.Metadata;
import org.hibernate.boot.MetadataSources;
import org.hibernate.boot.registry.StandardServiceRegistry;
import org.hibernate.boot.registry.StandardServiceRegistryBuilder;

public class HibernateUtil {

    private static final SessionFactory sessionFactory;

    static {
        try {
            StandardServiceRegistry standardRegistry = new StandardServiceRegistryBuilder()
                .configure("hibernate.cfg.xml").build();

            Metadata metaData = new
MetadataSources(standardRegistry).getMetadataBuilder().build();

            sessionFactory = metaData.getSessionFactoryBuilder().build();
        } catch (Throwable th) {
            throw new ExceptionInInitializerError(th);
        }
    }

    public static SessionFactory getSessionFactory() {
        return sessionFactory;
    }
}

```

```
}
```

```
import java.io.IOException;
```

```
import java.io.PrintWriter;
```

```
import javax.servlet.ServletConfig;
```

```
import javax.servlet.ServletException;
```

```
import javax.servlet.annotation.WebServlet;
```

```
import javax.servlet.http.HttpServlet;
```

```
import javax.servlet.http.HttpServletRequest;
```

```
import javax.servlet.http.HttpServletResponse;
```

```
import javax.transaction.*;
```

```
import javax.xml.bind.*;
```

```
import java.io.Serializable;
```

```
import java.util.List;
```

```
import org.hibernate.Session;
```

```
import org.hibernate.SessionFactory;
```

```
import org.hibernate.Transaction;
```

```
import org.hibernate.cfg.Configuration;
```

```
import com.ecommerce.EProduct;
```

```
import com.ecommerce.HibernateUtil;
```

```
/**
```

```
 * Servlet implementation class InitHibernate
```

```
 */
```

```

@WebServlet("/InitHibernate")

public class InitHibernate extends HttpServlet {

    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public InitHibernate() {

        super();

        // TODO Auto-generated constructor stub

    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub

        try {

            PrintWriter out = response.getWriter();

            out.println("<html><body>");

            SessionFactory factory = HibernateUtil.getSessionFactory();

            Session session = factory.openSession();

            out.println("Hibernate Session opened.<br>");

            session.close();

            out.println("Hibernate Session closed.<br>");


            out.println("</body></html>");

```

```

        } catch (Exception ex) {

            throw ex;

        }

    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub
        doGet(request, response);

    }

}

```

```

<?xml version="1.0" encoding="UTF-8"?>

<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd" id="WebApp_ID" version="4.0">

    <display-name>HibernateLogging</display-name>

    <welcome-file-list>

        <welcome-file>index.html</welcome-file>

        <welcome-file>index.htm</welcome-file>

```

```
<welcome-file>index.jsp</welcome-file>
<welcome-file>default.html</welcome-file>
<welcome-file>default.htm</welcome-file>
<welcome-file>default.jsp</welcome-file>
</welcome-file-list>
<servlet>
  <servlet-name>InitHibernate</servlet-name>
  <servlet-class>InitHibernate</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>InitHibernate</servlet-name>
  <url-pattern>/init</url-pattern>
</servlet-mapping>
</web-app>
```

Output:

