4. Demonstrate Hibernate logging by Log4j.

**Index.html**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Hibernate Configuration Example</title>

</head>

<body>

<a href=*"init"*>Initialize Hibernate</a><br>

</body>

</html>

**Log4.properties**

# 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

**hibernate.cfg.xml**

<?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.cj.jdbc.Driver</property>

<property name=*"connection.url"*>jdbc:mysql://localhost:3306/ecommerce</property>

<property name=*"connection.username"*>root</property>

<property name=*"connection.password"*>Annu!a@123456</property>

</session-factory>

</hibernate-configuration>

**EProduct.java**

import java.math.BigDecimal;

import java.util.Date;

public class EProduct {

private long ID;

private String name;

private BigDecimal price;

private Date dateAdded;

public EProduct() {

}

public EProduct(long id, String name, BigDecimal price, Date dateAdded) {

this.ID = id;

this.name = name;

this.price = price;

this.dateAdded = dateAdded;

}

public long getID() {return this.ID; }

public String getName() { return this.name;}

public BigDecimal getPrice() { return this.price;}

public Date getDateAdded() { return this.dateAdded;}

public void setID(long id) { this.ID = id;}

public void setName(String name) { this.name = name;}

public void setPrice(BigDecimal price) { this.price = price;}

public void setDateAdded(Date date) { this.dateAdded = date;}}

**HibernateInit.java**

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.simpli.HibernateUtil;

import ecommerce.EProduct;

/\*\*

\* Servlet implementation class InitHibernate

\*/

@WebServlet("/init")

public class HibernateInit extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public HibernateInit() {

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);

}

}

**HibernateUtil**

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;

}

}



