Adding a New Product in the Database

DESCRIPTION

Project objective:

Create a servlet-based web application that shows a form to add new products. A MySQL database will be created to store product data. The form data will be validated, and a row will be added to the database. All database processing will be done using Hibernate.

Background of the problem statement:

As a part of developing an e-commerce web application, you have to create a database table for storing product information. A form is needed to add new products. The form submission is validated, and a new record is created in the product table.

You must use the following:

- Eclipse as the IDE

- Apache Tomcat as the web server

- JSP pages for the front end

- Servlets for backend processing

- Hibernate to store data into the database

Following requirements should be met:

- Show an add product form in JSP

- Handle the form submission in a servlet. Validate it for any missing information

- Add the product information into the database using Hibernate

- Set up Hibernate configuration files using XML for the product table

- A class has to be created to store product data. This class will be linked to Hibernate via an hbm.xml file

- The servlet will put the form data into the product class and then pass the product class into Hibernate to add into the database

- The step-by-step process involved in completing this task should be documented.

SOURCE CODE

AddProduct.jsp:-

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
```

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
 <form action=read-product" method="get" >
                <label for="id">id:</label><br> <input type="text" id="id"
                        name="id"><br>
                <label for="name">Name:</label><br> <input type="text" id="name"
                        name="name"><br>
                 <label for="location">Price:</label><br> <input type="text" id="location"
                        name="location"><br>
                <br> <input type="submit" value="Submit"
                        onclick="addproduct_onclick()">
        </form>
        <p style="text-align: center">
                <a href="index2.html">Back to Home Page</a>
        </p>
</body>
</html>
```

Index.html:-
```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
```

```html
    <h1> Add Product</h1>
    <form method="get" action=aaa">
        <fieldset>
            <legend>Add Product form</legend>
            Product Name: <input type="text" name="name" id="name" /><br/><br/>
            Product Price: <input type="text" name="price" id = "price" /> <br/><br/>
            <input type="submit" value="Add Product">
        </fieldset>
    </form>
</body>
</html>
```

Index2.html:-

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <h1>Welcome to Hibernate CRUD application</h1>
  <h2>Welcome to eCommerce Website</h2>
  <h2>Add Product</h2>
  <a href="aaa">List Products</a> <br>
  <a href="addproduct.jsp">Add New Product</a><br>
</body>
</html>
```

Web.xml:-

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE hibernate-configuration SYSTEM
```

```xml
"http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">

<hibernate-configuration>

        <session-factory>

                <property
name="hibernate.connection.driver_class">com.mysql.cj.jdbc.Driver</property>

                <property
name="hibernate.connection.url">jdbc:mysql://localhost:3306/mphasis_practice</property>

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

                <property name="hibernate.connection.password">1234</property>

                <!--  Optional properties -->

                <property name="hibernate.show_sql">true</property>

                <property name="hibernate.format_sql">true</property>

                <property name="hbm2ddl.auto">update</property>

        </session-factory>

</hibernate-configuration>
```

Web2.xml:-

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">

  <modelVersion>4.0.0</modelVersion>

  <groupId>Hibernate_27012022</groupId>

  <artifactId>Hibernate_27012022</artifactId>

  <version>0.0.1-SNAPSHOT</version>

  <packaging>war</packaging>

  <build>

    <plugins>

      <plugin>

        <artifactId>maven-compiler-plugin</artifactId>

        <version>3.8.1</version>

        <configuration>

          <release>17</release>
```

```xml
          </configuration>

        </plugin>

        <plugin>

          <artifactId>maven-war-plugin</artifactId>

          <version>3.2.3</version>

        </plugin>

      </plugins>

    </build>

    <dependencies>

      <dependency>

                <groupId>org.hibernate</groupId>

                <artifactId>hibernate-core</artifactId>

                <version>5.6.5.Final</version>

        </dependency>

        <dependency>

                <groupId>mysql</groupId>

                <artifactId>mysql-connector-java</artifactId>

                <version>8.0.28</version>

        </dependency>

    </dependencies>

</project>
```