Assisted project 3:

Create a Java program to demonstrate JDBC and Spring Integration:

Pom.xml:

```
cproject 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
http://maven.apache.org/maven-v4 0 0.xsd">
 <modelVersion>4.0.0</modelVersion>
 <groupId>SpringSetup/groupId>
 <artifactId>SpringSetup</artifactId>
 <packaging>war</packaging>
 <version>0.0.1-SNAPSHOT
 <name>SpringSetup Maven Webapp</name>
 <url>http://maven.apache.org</url>
  cproperties>
   <org.springframework.version>5.1.6.RELEASE</org.springframework.version>
 </properties>
 <dependencies>
  <dependency>
    <groupId>junit</groupId>
     <artifactId>junit</artifactId>
     <version>3.8.1
     <scope>test</scope>
   </dependency>
  <dependency>
      <groupId>org.springframework
      <artifactId>spring-core</artifactId>
     <version>${org.springframework.version}</version>
   </dependency>
  <dependency>
     <groupId>org.springframework
     <artifactId>spring-expression/artifactId>
     <version>${org.springframework.version}</version>
   </dependency>
   <dependency>
     <groupId>org.springframework</groupId>
     <artifactId>spring-beans/artifactId>
     <version>${org.springframework.version}</version>
   </dependency>
   <dependency>
```

```
<groupId>org.springframework</groupId>
 <artifactId>spring-context/artifactId>
 <version>${org.springframework.version}</version>
</dependency>
<dependency>
  <groupId>org.springframework
 <artifactId>spring-context-support/artifactId>
 <version>${org.springframework.version}</version>
</dependency>
<dependency>
  <groupId>org.springframework/groupId>
 <artifactId>spring-jdbc/artifactId>
 <version>${org.springframework.version}</version>
</dependency>
<dependency>
  <groupId>org.springframework
 <artifactId>spring-orm/artifactId>
 <version>${org.springframework.version}</version>
</dependency>
<dependency>
  <groupId>org.springframework</groupId>
  <artifactId>spring-web</artifactId>
  <version>${org.springframework.version}</version>
</dependency>
<dependency>
  <groupId>org.springframework</groupId>
  <artifactId>spring-webmvc</artifactId>
  <version>${org.springframework.version}</version>
</dependency>
<dependency>
   <groupId>log4j
   <artifactId>log4j</artifactId>
   <version>1.2.16</version>
   <scope>runtime</scope>
 </dependency>
<dependency>
    <groupId>javassist
    <artifactId>javassist</artifactId>
    <version>3.12.1.GA
</dependency>
```

USE ecommerce:

```
--
-- Table structure for table `eproduct`
--
```

```
DROP TABLE IF EXISTS `eproduct`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE <u>TABLE</u> `eproduct` (
  `ID` bigint(20) NOT NULL AUTO INCREMENT,
`date added` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP,
 PRIMARY KEY ('ID')
) ENGINE=InnoDB AUTO_INCREMENT=4 DEFAULT CHARSET=latin1;
/*!40101 SET character_set_client = @saved cs client_*/;
-- Dumping data for table `eproduct`
LOCK TABLES `eproduct` WRITE;
/*!40000 ALTER TABLE `eproduct` DISABLE KEYS */;
INSERT INTO `eproduct` VALUES (1, 'HP Laptop ABC', 21900.00, '2019-06-04
07:18:57'),(2,'Acer Laptop ABC',23300.00,'2019-06-04 07:19:07'),(3,'Lenovo Laptop
ABC',33322.00,'2019-06-04 07:19:19');
/*!40000 ALTER TABLE `eproduct` ENABLE KEYS */;
UNLOCK TABLES;
EProduct:
package com.ecommerce.entity;
import java.math.BigDecimal;
import java.util.Date;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Table;
public class EProductEntity {
       private long ID;
        private String name;
       private BigDecimal price;
       private Date 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;}
```

EProductDAO:

```
package com.ecommerce.entity;
import java.math.BigDecimal;
import java.util.Date;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Table;
public class EProductEntity {
        private long ID;
        private String name;
        private BigDecimal price;
        private Date 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;}
}
MainContoller:
package com.ecommerce.controller;
import org.apache.log4j.Logger;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.ModelMap;
import org.springframework.validation.BindingResult;
import org.springframework.web.bind.annotation.ModelAttribute;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
import com.ecommerce.entity.EProduct;
```

```
import com.ecommerce.dao.EProductDAO;
@Controller
public class MainController {
           @Autowired
            EProductDAO eproductDAO;
           @RequestMapping(value = "/listProducts", method = RequestMethod.GET)
            public String listProducts(ModelMap map)
            {
                    List<EProduct> list= eproductDAO.getProducts();
                model.addAttribute("list",list);
                return "listProducts";
            }
           }
main-servlet.xml:
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"</pre>
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:aop="http://www.springframework.org/schema/aop"
    xmlns:context="http://www.springframework.org/schema/context"
    xmlns:jee="http://www.springframework.org/schema/jee"
    xmlns:lang="http://www.springframework.org/schema/lang"
    xmlns:p="http://www.springframework.org/schema/p"
    xmlns:tx="http://www.springframework.org/schema/tx"
    xmlns:util="http://www.springframework.org/schema/util"
    xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-2.5.xsd
http://www.springframework.org/schema/aop
http://www.springframework.org/schema/aop/spring-aop-2.5.xsd
http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context-2.5.xsd
http://www.springframework.org/schema/tx
http://www.springframework.org/schema/tx/spring-tx-2.5.xsd">
    <context:annotation-config />
    <context:component-scan base-package="com.ecommerce.controller" />
    <bean id="jspViewResolver"</pre>
        class="org.springframework.web.servlet.view.InternalResourceViewResolver">
        roperty name="viewClass"
            value="org.springframework.web.servlet.view.JstlView"></property>
        roperty name="prefix" value="/WEB-INF/view/">
        cproperty name="suffix" value=".jsp"></property>
    </bean>
    <bean id="messageSource"</pre>
class="org.springframework.context.support.ReloadableResourceBundleMessageSource">
        roperty name="basename" value="classpath:messages">/property>
        roperty name="defaultEncoding" value="UTF-8">/property>
    </bean>
```

```
<bean id="dataSource"</pre>
        class="org.apache.commons.dbcp.BasicDataSource" destroy-method="close"
        p:driverClassName="${jdbc.driverClassName}"
        p:url="${jdbc.databaseurl}" p:username="${jdbc.username}"
        p:password="${jdbc.password}"></bean>
    <bean id="ds"</pre>
class="org.springframework.jdbc.datasource.DriverManagerDataSource">
                cproperty name="driverClassName"
value="com.mysql.jdbc.Driver">
                roperty name="url"
value="jdbc:mysql://localhost:3306/ecommerce">/property>
                roperty name="username" value="root">/property>
                cproperty name="password" value="master">///property>
        </bean>
        <bean id="jt" class="org.springframework.jdbc.core.JdbcTemplate">
                cproperty name="dataSource" ref="ds"></property>
        </bean>
        <bean id="dao" class="com.ecommerce.dao.EProductDAO">
                cproperty name="template" ref="jt"></property>
        </bean>
    <tx:annotation-driven />
    <bean id="transactionManager"</pre>
        class="org.springframework.orm.hibernate3.HibernateTransactionManager">
        cproperty name="sessionFactory" ref="sessionFactory"></property>
    </bean>
</beans>
Index.jsp:
<html>
<body>
<h2>Spring Application</h2>
<a href="listProducts">List Products</a>
</body>
</html>
Listproducts.jsp:
<%@ page language="java" contentType="text/html; charset=UTF-8"</pre>
    pageEncoding="UTF-8"%>
   <%@ taglib uri="http://www.springframework.org/tags/form"_prefix="form"%>
   <%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
```

```
<head>
<meta charset="UTF-8">
<title>List Products</title>
</head>
<body>
<c:forEach var="product" items="${list}">
 <u>$</u>{product.name}, <u>$</u>{product.price}, <u>$</u>{product.dateAdded<u>}</u><br>
</c:forEach>
</body>
</html>
Web.xml:
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="http://java.sun.com/xml/ns/javaee"</pre>
version="2.5"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd">
 <display-name>Archetype Created Web Application/display-name>
    <welcome-file-list>
        <welcome-file>/WEB-INF/view/index.jsp</welcome-file>
    </welcome-file-list>
    <servlet>
        <servlet-name>main</servlet-name>
        <servlet-class>
            org.springframework.web.servlet.DispatcherServlet
        </servlet-class>
        <load-on-startup>1</load-on-startup>
    </servlet>
    <servlet-mapping>
        <servlet-name>main/servlet-name>
        <url-pattern>/</url-pattern>
    </servlet-mapping>
    <context-param>
        <param-name>contextConfigLocation</param-name>
        <param-value>/WEB-INF/main-servlet.xml</param-value>
    </context-param>
    tener>
        class>org.springframework.web.context.ContextLoaderListener/listener-class>
   <u>≺</u>/listener>
</web-app>
```