Learn Spring framework:

- Understand the core of Spring
- Understand Spring MVC
- Understand Spring AOP
- Understand Spring Data JPA
- Spring Dependency Injection (XML)
- Spring Dependency Injection (Annotations)

config)

- Spring & Struts Integration (XML)
- Spring & Struts Integration (Java config)
- 14 Tips for Writing Spring MVC Controller

Spring MVC + Spring Data JPA + Hibernate - CRUD Example

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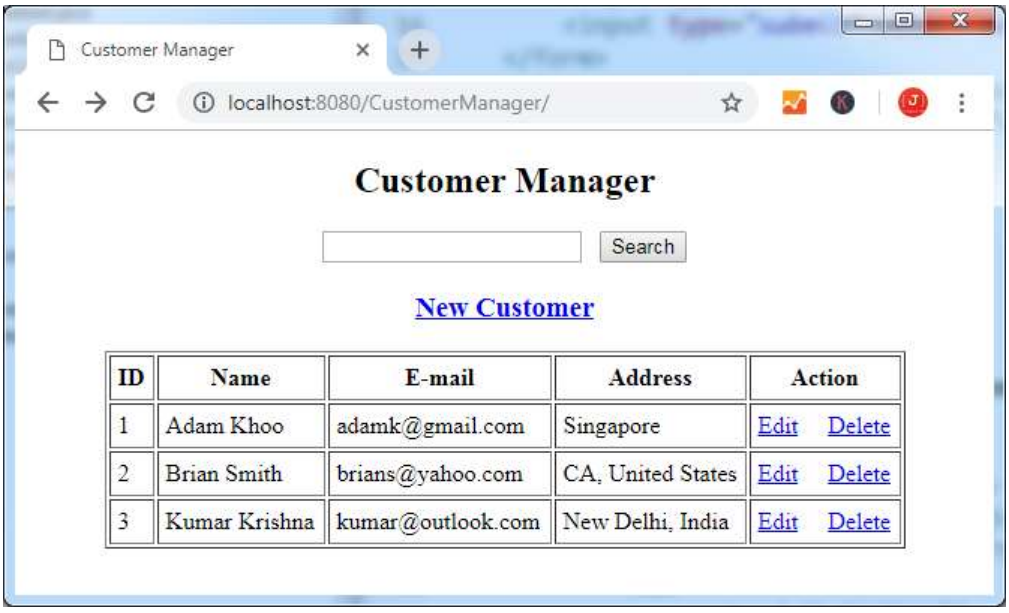
In this Java Spring tutorial, you will learn how to configure a Spring MVC application to work with Spring Data JPA by developing a sample web application that manages information about customers.

By completing this tutorial, you will be able to create a Java web application powered by SpringMVC-Spring Data JPA that looks like this:



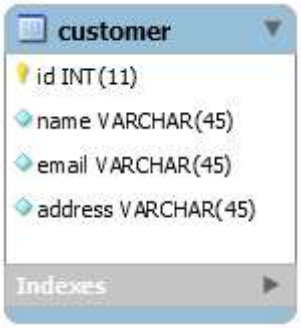
The software programs and technologies used in this tutorial are: Java 8, Apache Tomcat 9, MySQL Server 5.7, Eclipse IDE 4.7 (Oxygen), Spring framework 5.1, Hibernate framework 5.4, Spring Data JPA 2.1.5 and Servlet 3.1.

Here's the table of content:

Let's start with the database first.

1. Create Database

We use MySQL database. The sample application will manage data in a table named **customer** which is in the schema named **sales**. The table **customer** has 4 fields: **id**, **name**, **email** and **address**:



You can execute the following MySQL script to create the database schema and table:

```
CREATE DATABASE `sales`;
CREATE TABLE `customer` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `name` varchar(45) NOT NULL,
  `email` varchar(45) NOT NULL,
  `address` varchar(45) NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

2. Create Project in Eclipse

te a Dynamic Web Project in Eclipse, and convert it to Maven project: right-click on the ct, select **Configure > Convert to Maven Project**. The *Create new POM* dialog appears. Enter the following information:

- Group Id: `net.codejava`

- Artifact Id: `CustomerManager`

Make sure that the JRE version for the project is Java 8 or newer.

Next, open the Maven's project file `pom.xml` to configure the dependencies for the project. Declare properties for the version of Spring and Hibernate frameworks:

```
<properties>
    <spring.version>5.1.5.RELEASE</spring.version>
    <hibernate.version>5.4.1.Final</hibernate.version>
</properties>
```

Specify the following dependency for the core of Spring framework:

```
<dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring-context</artifactId>
    <version>${spring.version}</version>
</dependency>
```

For web development with Spring MVC:

```
<dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring-webmvc</artifactId>
    <version>${spring.version}</version>
</dependency>
```

To use Spring Data JPA, we need to specify the following dependencies:

```
<dependency>
    <groupId>org.springframework</groupId>
    <artifactId>spring-orm</artifactId>
    <version>${spring.version}</version>
</dependency>
<dependency>
    <groupId>org.springframework.data</groupId>
    <artifactId>spring-data-jpa</artifactId>
    <version>2.1.5.RELEASE</version>
</dependency>
```

We use Hibernate as a provider of JPA, so add the following dependency:

```
<dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>${hibernate.version}</version>
</dependency>
```

t the application work with MySQL database, we need to have the dependecy for QL JDBC driver:

```
<dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <version>8.0.14</version>
    <scope>runtime</scope>
</dependency>
```

And for Java Servlet, JSP and JSTL:

```
<dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>javax.servlet-api</artifactId>
    <version>3.1.0</version>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>javax.servlet.jsp</groupId>
    <artifactId>javax.servlet.jsp-api</artifactId>
    <version>2.3.1</version>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>jstl</groupId>
    <artifactId>jstl</artifactId>
    <version>1.2</version>
</dependency>
```

You can see the complete code of the `pom.xml` file in the sample project attached along this tutorial.

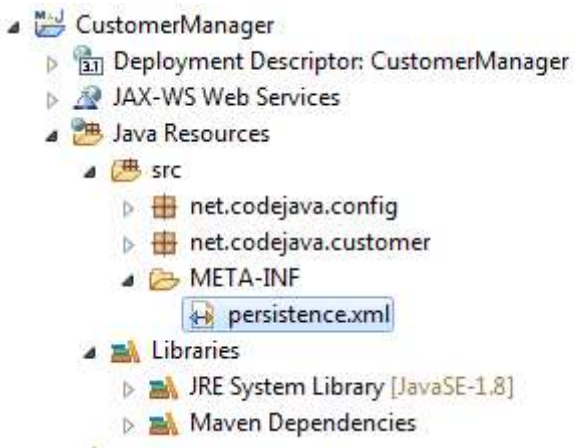
Create two Java packages under the source folder:

- `net.codejava.config`: for configuration classes.

- `net.codejava.customer`: for application-specific classes.

3. Create JPA Configuration File

Since JPA is used, we need to specify database connection properties in the `persistence.xml` file instead of `hibernate.cfg.xml` file. Create a new directory named `META-INF` in the source folder to put the `persistence.xml` file as follows:



write XML code for the `persistence.xml` file like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<persistence xmlns="http://xmlns.jcp.org/xml/ns/persistence"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/persistence
          http://xmlns.jcp.org/xml/ns/persistence/persistence_2_1.xsd"
    version="2.1">

    <persistence-unit name="SalesDB">
        <properties>
            <property name="javax.persistence.jdbc.url" value="jdbc:mysql://l
            <property name="javax.persistence.jdbc.user" value="root" />
            <property name="javax.persistence.jdbc.password" value="password"
            <property name="javax.persistence.jdbc.driver" value="com.mysql.j
            <property name="hibernate.show_sql" value="true" />
            <property name="hibernate.format_sql" value="true" />
        </properties>
    </persistence-unit>

</persistence>
```

As you can see, we specify database connection properties such as URL, user, password and JDBC driver class. Note that the persistence unit name `SalesDB` will be used in the configuration code.

4. Code Model Class

Create the domain class **`Customer`** to map with the table customer in the database as following:

```
package net.codejava.customer;

import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.GenerationType;
import javax.persistence.Id;

@Entity
public class Customer {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    private Long id;

    private String name;
    private String email;
    private String address;

    protected Customer() {
    }

    protected Customer(String name, String email, String address) {
        this.name = name;
        this.email = email;
        this.address = address;
    }

    // getters and setters are not shown for brevity

}
```

ou can see, we use the annotation @Entity to map this class to the table customer (the has same name as the table). All the class' field names are also identical to the table's ones. The field `id` is annotated with `@Id` and `@GeneratedValue` annotations to indicate that this field is primary key and its value is auto generated.

5. Code Configuration Classes

Next, let's write some Java code to configure Spring MVC and Spring Data JPA. We use Java-based configuration as it's simpler than XML.

Configure Spring Dispatcher Servlet:

To use Spring MVC for our Java web application, we need to register the Spring Dispatcher Servlet upon application's startup by coding the following class:

```
1  package net.codejava.config;
2
3  import javax.servlet.ServletContext;
4  import javax.servlet.ServletException;
5  import javax.servlet.ServletRegistration;
6
7  import org.springframework.web.WebApplicationInitializer;
8  import org.springframework.web.context.support.AnnotationConfigWebApplicatio
9  import org.springframework.web.servlet.DispatcherServlet;
10
11 public class WebAppInitializer implements WebApplicationInitializer {
12     @Override
13     public void onStartup(ServletContext servletContext) throws ServletExcep
14         AnnotationConfigWebApplicationContext appContext = new AnnotationCon
15         appContext.register(WebMvcConfig.class);
16
17         ServletRegistration.Dynamic dispatcher = servletContext.addServlet(
18                 "SpringDispatcher", new DispatcherServlet(appContext));
19         dispatcher.setLoadOnStartup(1);
20         dispatcher.addMapping("/");
21
22     }
23 }
```

The `onStartup()` method of this class will be automatically invoked by the servlet container when the application is being loaded. The Spring Dispatcher Servlet handles all the requests via the URL mapping "/" and it looks for configuration in the `WebMvcConfig` class, which is described below.

Configure Spring MVC:

Create the **`WebMvcConfig`** class under the `net.codejava.config` package with the following code:

```
package net.codejava.config;

import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.ComponentScan;
import org.springframework.context.annotation.Configuration;
import org.springframework.web.servlet.view.InternalResourceViewResolver;

@Configuration
@ComponentScan("net.codejava ")
public class WebMvcConfig {
    @Bean(name = "viewResolver")
    public InternalResourceViewResolver getViewResolver() {
        InternalResourceViewResolver viewResolver = new InternalResourceViewR
        viewResolver.setPrefix("/WEB-INF/views/");
        viewResolver.setSuffix(".jsp");
        return viewResolver;
    }
}
```

This class is annotated with the @Configuration annotation to tell Spring framework that this is a configuration class. The `@ComponentScan` annotation tells Spring to scan for configuration classes in the `net.codejava` package.

In this class, we simply create a view resolver bean that specifies the prefix and suffix for view files. So create the directory `views` under `WebContent/WEB-INF` directory to store JSP files.

You can add more Spring MVC configurations here.

Configure Spring Data JPA:

To enable Spring Data JPA, we need to create two beans: `EntityManagerFactory` and `JpaTransactionManager`. So create another configuration class named **`JpaConfig`** with the following code:

```java
package net.codejava.config;

import javax.persistence.EntityManagerFactory;

import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
import org.springframework.data.jpa.repository.config.EnableJpaRepositories;
import org.springframework.orm.jpa.JpaTransactionManager;
import org.springframework.orm.jpa.LocalEntityManagerFactoryBean;
import org.springframework.transaction.annotation.EnableTransactionManagement

@Configuration
@EnableJpaRepositories(basePackages = {"net.codejava.customer"})
@EnableTransactionManagement
public class JpaConfig {
    @Bean
    public LocalEntityManagerFactoryBean entityManagerFactory() {
        LocalEntityManagerFactoryBean factoryBean = new LocalEntityManagerFac
        factoryBean.setPersistenceUnitName("SalesDB");

        return factoryBean;
    }

    @Bean
    public JpaTransactionManager transactionManager(EntityManagerFactory ent
        JpaTransactionManager transactionManager = new JpaTransactionManager
        transactionManager.setEntityManagerFactory(entityManagerFactory);

        return transactionManager;
    }
}
```

Here, two important annotations are used:

- **`@EnableJpaRepositories`**: this tells Spring Data JPA to look for repository classes in the specified package (net.codejava) in order to inject relevant code at runtime.

- **`@EnableTransactionManagement`**: this tells Spring Data JPA to generate code for transaction management at runtime.

In this class, the first method creates an instance of `EntityManagerFactory` to manage the persistence unit `SalesDB` (this name is specified in the `persistence.xml` file above).

And the last method creates an instance of JpaTransactionManagerfor the `EntityManagerFactory` created by the first method.

That's the minimum required configuration for using Spring Data JPA.

6. Code Respository Interface

Next, create the `CustomerRepository` interface that extends the `CrudRepository` interface defined by Spring Data JPA with the following code:

```java
package net.codejava.customer;

import java.util.List;

import org.springframework.data.repository.CrudRepository;
import org.springframework.data.repository.query.Param;

public interface CustomerRepository extends CrudRepository<Customer, Long> {

}
```

You see, this is almost the code we need for the data access layer. Deadly simple, right? As with Spring Data JPA, you don't have to write any DAO code. Just declare an interface that extends the `CrudRepository` interface, which defines CRUD methods like `save()`, `findAll()`, findById(), `deleteById()`, etc. At runtime, Spring Data JPA automatically generates the implementation code.

Note that we must specify the type of the model class and type of the primary key field when extending the `CrudRepository` interface: `CrudRepository<Customer, Long>`

7. Code Service Class

Next, code the `CustomerService` class in the business/service layer with the following code:

```java
package net.codejava.customer;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import org.springframework.transaction.annotation.Transactional;

@Service
@Transactional
public class CustomerService {
    @Autowired CustomerRepository repo;

    public void save(Customer customer) {
        repo.save(customer);
    }

    public List<Customer> listAll() {
        return (List<Customer>) repo.findAll();
    }

    public Customer get(Long id) {
        return repo.findById(id).get();
    }

    public void delete(Long id) {
        repo.deleteById(id);
    }

}
```

Note that this class is annotated with the `@Transactional` annotation so all of its methods will be intercepted by Spring Data JPA for transaction management. And an instance of

`omerRepository` interface will be injected into this class:

```
@Autowired CustomerRepository repo;
```

This is like magic, as we don't write any DAO code but Spring Data JPA will generate an implementation automatically at runtime.

And as you can see, all the methods in this class are for CRUD operations. It simply delegates all the call to a CustomerRepositoryobject. This class seems to be redundant, but it is needed to decouple the business/service layer from the repository/DAO layer.

8. Code Spring MVC Controller Class

Next, in the controller layer, create the `CustomerController` class to handle all requests from the clients with the following code:

```
package net.codejava.customer;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;


@Controller
public class CustomerController {

    @Autowired
    private CustomerService customerService;

    // handler methods will go here...
}
```

This is a typical Spring MVC controller class, which is annotated with the @Controller annotation. You can see an instance of `CustomerService` is injected into this class using the `@Autowired` annotation.

We will write code for the handler methods in the following sections.

9. Code List Customer Feature

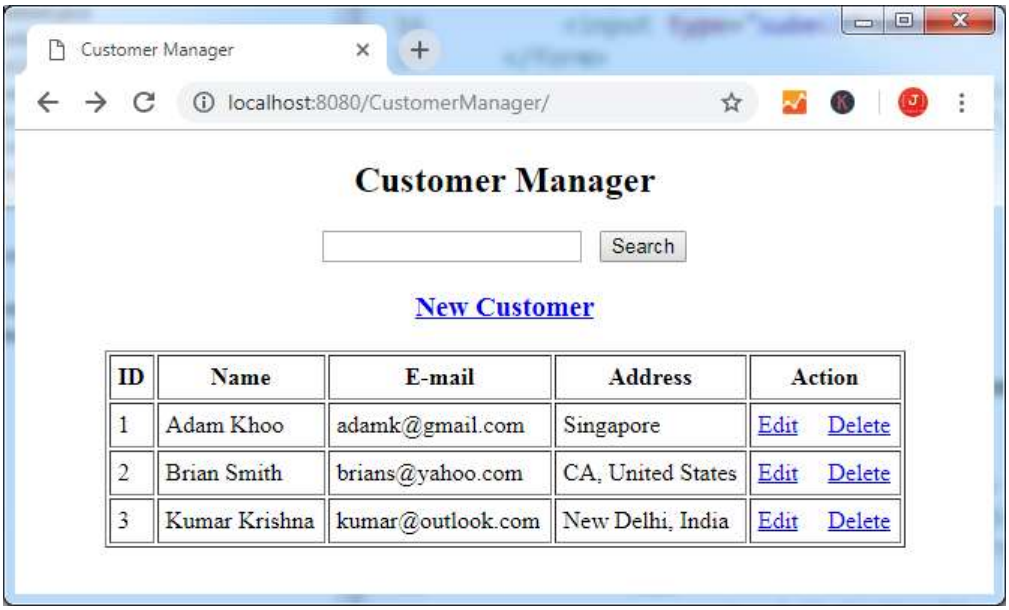
The application's home page displays all customers, so add the following handler method to the `CustomerController` class:

```
@RequestMapping("/")
public ModelAndView home() {
    List<Customer> listCustomer = customerService.listAll();
    ModelAndView mav = new ModelAndView("index");
    mav.addObject("listCustomer", listCustomer);
    return mav;
}
```

And code the view page (`index.jsp`) as follows:

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01
    Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Customer Manager</title>
</head>
<body>
<div align="center">
    <h2>Customer Manager</h2>
    <form method="get" action="search">
        <input type="text" name="keyword" />  
        <input type="submit" value="Search" />
    </form>
    <h3><a href="/new">New Customer</a></h3>
    <table border="1" cellpadding="5">
        <tr>
            <th>ID</th>
            <th>Name</th>
            <th>E-mail</th>
            <th>Address</th>
            <th>Action</th>
        </tr>
        <c:forEach items="${listCustomer}" var="customer">
        <tr>
            <td>${customer.id}</td>
            <td>${customer.name}</td>
            <td>${customer.email}</td>
            <td>${customer.address}</td>
            <td>
                <a href="/edit?id=${customer.id}">Edit</a>
                   
                <a href="/delete?id=${customer.id}">Delete</a>
            </td>
        </tr>
        </c:forEach>
    </table>
</div>
</body>
</html>
```

Now you can run the website application. Add some rows in the table customer and access the URL *http://localhost:8080/CustomerManager/*, you should see something like this:



10. Code Create New Customer Feature

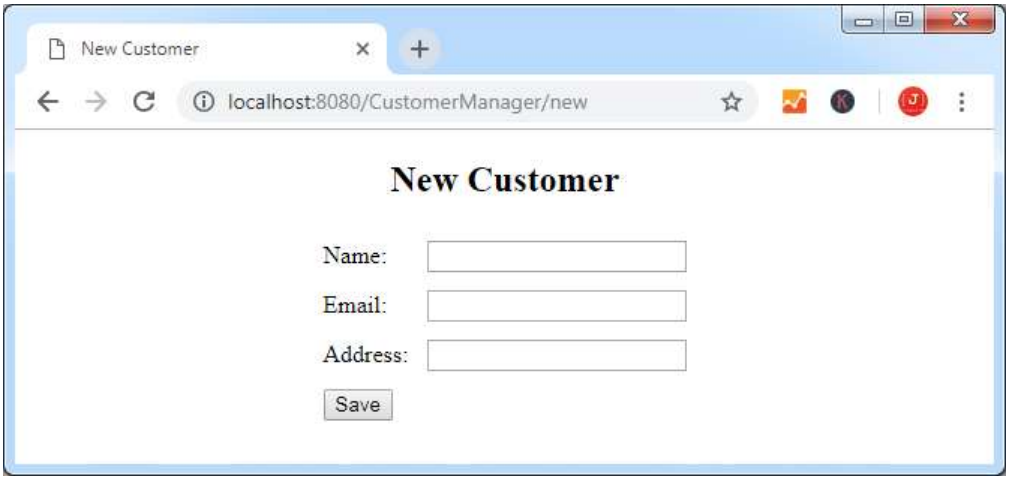
To implement the create new customer feature, we need to write two handler methods. The first one is to display the new customer form:

```
@RequestMapping("/new")
public String newCustomerForm(Map<String, Object> model) {
    Customer customer = new Customer();
    model.put("customer", customer);
    return "new_customer";
}
```

And write code for the JSP page `new_customer.jsp` as follows:

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="form" uri="http://www.springframework.org/tags/form"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>New Customer</title>
</head>
<body>
    <div align="center">
        <h2>New Customer</h2>
        <form:form action="save" method="post" modelAttribute="customer">
            <table border="0" cellpadding="5">
                <tr>
                    <td>Name: </td>
                    <td><form:input path="name" /></td>
                </tr>
                <tr>
                    <td>Email: </td>
                    <td><form:input path="email" /></td>
                </tr>
                <tr>
                    <td>Address: </td>
                    <td><form:input path="address" /></td>
                </tr>
                <tr>
                    <td colspan="2"><input type="submit" value="Save"></td>
                </tr>
            </table>
        </form:form>
    </div>
</body>
</html>
```

Click the link **New Customer** in the home page, you should see the new customer form looks like this:



And the second handler method is to handle the Save button on this form:

```
@RequestMapping(value = "/save", method = RequestMethod.POST)
public String saveCustomer(@ModelAttribute("customer") Customer customer) {
    customerService.save(customer);
    return "redirect:/";
}
```

As you can see, it will redirect the client to the home page after the customer has been saved successfully.

11. Code Edit Customer Feature

To implement the edit/update customer feature, add the following handler method to the `CustomerController` class:

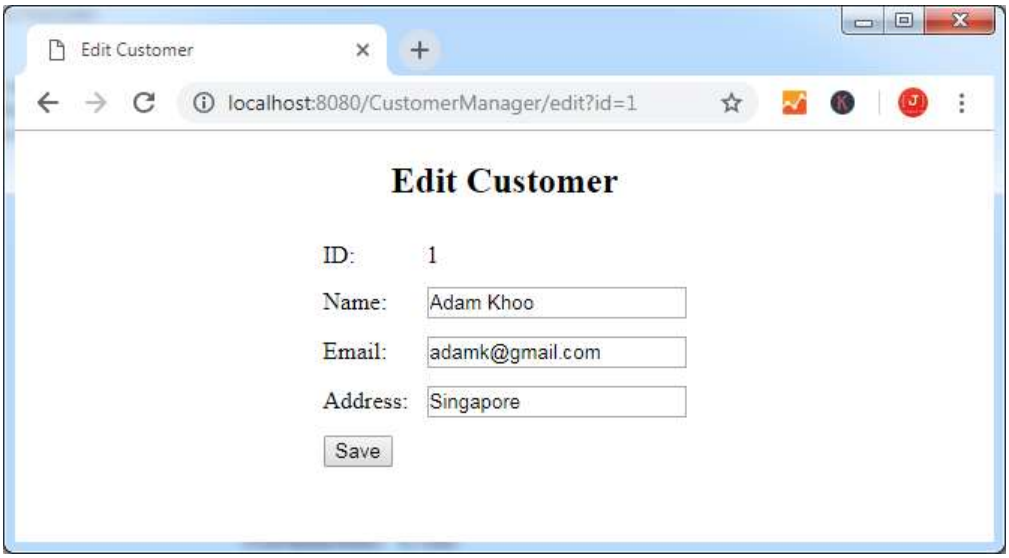
```
@RequestMapping("/edit")
public ModelAndView editCustomerForm(@RequestParam long id) {
    ModelAndView mav = new ModelAndView("edit_customer");
    Customer customer = customerService.get(id);
    mav.addObject("customer", customer);

    return mav;
}
```

This method will show the Edit customer form, so code the `edit_customer.jsp` file as follows:

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="form" uri="http://www.springframework.org/tags/form"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Edit Customer</title>
</head>
<body>
    <div align="center">
        <h2>Edit Customer</h2>
        <form:form action="save" method="post" modelAttribute="customer">
            <table border="0" cellpadding="5">
                <tr>
                    <td>ID: </td>
                    <td>${customer.id}
                        <form:hidden path="id"/>
                    </td>
                </tr>
                <tr>
                    <td>Name: </td>
                    <td><form:input path="name" /></td>
                </tr>
                <tr>
                    <td>Email: </td>
                    <td><form:input path="email" /></td>
                </tr>
                <tr>
                    <td>Address: </td>
                    <td><form:input path="address" /></td>
                </tr>
                <tr>
                    <td colspan="2"><input type="submit" value="Save"></td>
                </tr>
            </table>
        </form:form>
    </div>
</body>
</html>
```

Click the **Edit** hyperlink next to a customer in the home page, the edit customer form should appear like this:



The handler method for the Save button is still the `saveCustomer()` method.

12. Code Delete Customer Feature

To implement the delete customer feature, add the following code to the `CustomerController` class:

```
@RequestMapping("/delete")
public String deleteCustomerForm(@RequestParam long id) {
    customerService.delete(id);
    return "redirect:/";
}
```

Click the **Delete** link next to a customer in the home page, it will be deleted and the list is refreshed.

13. Code Search Customer Feature

Finally, let's implement the search feature that allows the user to search for customers by typing a keyword. The search function looks for matching keywords in either three fields name, email or address so we need to write a custom method in the `CustomerRepository` interface like this:

```
package net.codejava.customer;

import java.util.List;

import org.springframework.data.jpa.repository.Query;
import org.springframework.data.repository.CrudRepository;
import org.springframework.data.repository.query.Param;

public interface CustomerRepository extends CrudRepository<Customer, Long> {

    @Query(value = "SELECT c FROM Customer c WHERE c.name LIKE '%' || :keywo
            + " OR c.email LIKE '%' || :keyword || '%'"
            + " OR c.address LIKE '%' || :keyword || '%'")
    public List<Customer> search(@Param("keyword") String keyword);
}
```

You see, the search()method is just an abstract method annotated with the `@Query` annotation. The search query is JPA query.

Then, add the following method in the `CustomerService` class:

```
public List<Customer> search(String keyword) {
    return repo.search(keyword);
}
```

Implement the handler method in the controller class as follows:

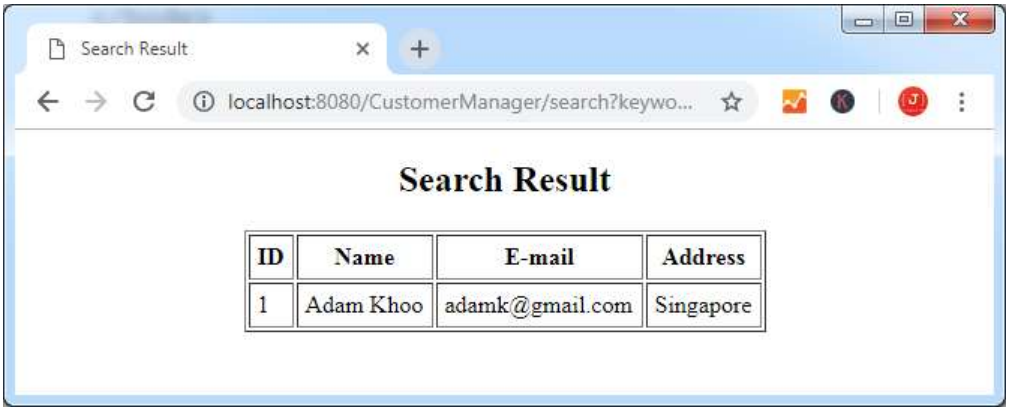
```
    @RequestMapping("/search")
    public ModelAndView search(@RequestParam String keyword) {
        List<Customer> result = customerService.search(keyword);
        ModelAndView mav = new ModelAndView("search");
        mav.addObject("result", result);

        return mav;
    }
```

And write code for the search result page as follows:

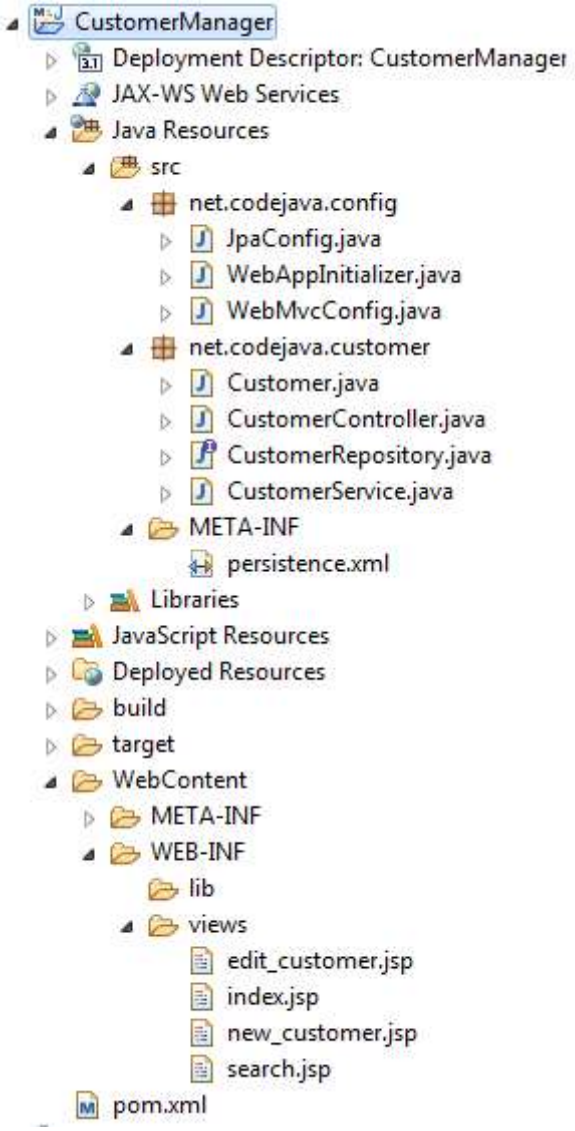
```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Search Result</title>
</head>
<body>
<div align="center">
    <h2>Search Result</h2>
    <table border="1" cellpadding="5">
        <tr>
            <th>ID</th>
            <th>Name</th>
            <th>E-mail</th>
            <th>Address</th>
        </tr>
        <c:forEach items="${result}" var="customer">
        <tr>
            <td>${customer.id}</td>
            <td>${customer.name}</td>
            <td>${customer.email}</td>
            <td>${customer.address}</td>
        </tr>
        </c:forEach>
    </table>
</div>
</body>
</html>
```

To test the search function, type a keyword into the search box in the home page, and hit Enter. You should see the search result page looks like this:



That's how to develop a Spring MVC web application using Spring Data JPA for the data access layer. You've seen Spring Data JPA greatly simplifies the code we need to write.

our reference, here's the final structure of the project in Eclipse IDE:



And you can download the sample project in the Attachments section below.

Spring MVC + Spring Data JPA + Hibernate - CRUD Sa...

Related Spring and Database Tutorials:

- Spring MVC with JdbcTemplate Example
- How to configure Spring MVC JdbcTemplate with JNDI Data Source in Tomcat
- Spring and Hibernate Integration Tutorial (XML Configuration)
- Understand Spring Data JPA with Simple Example

Other Spring Tutorials:

- Understand the core of Spring framework
- Understand Spring MVC
- Understand Spring AOP
- Spring MVC beginner tutorial with Spring Tool Suite IDE
- Spring MVC Form Handling Tutorial
- Spring MVC Form Validation Tutorial
- 14 Tips for Writing Spring MVC Controller
- Spring Web MVC Security Basic Example (XML Configuration)

About the Author:

Nam Ha Minh is certified Java programmer (SCJP and SCWCD). He started programming with Java in the time of Java 1.4 and has been falling in love with Java since then. Make friend with him on Facebook.

Attachments:

SpringMVC-SpringData-JPA.zip	**[Sample Project for Spring MVC and Spring Data JPA]**	**14 kB**

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Comments

#11**Ainul** 2019-10-25 09:55
Sir,You are great. I learn a lot of things by your cantent...

Quote

#10**Manuel** 2019-10-15 17:27
Estimado Nam, muchas gracias por tu aporte.
acabo de compilar tu proyecto y me sale el siguiente error:
==========
GRAVE: StandardWrapper.Throwable
org.springframework.beans.factory.UnsatisfiedDependencyException: Error creating bean with name 'customerController': Unsatisfied dependency expressed through field 'customerService';
Error creating bean with name 'customerService': Unsatisfied dependency expressed through field 'repo';

Quote

#9**Neshi** 2019-07-31 09:36
Hey I've also downloaded your code/app zip file and trying deploy it on Tomcat 9.0.22 and got Error with dependencies as my predecessor mentioned... unsatisf depend except. could not create custommerController because is problem with field customerService and it cannot be created because there is problem with field customer repository and there it says cannot create inner bean.... any ideas ? maybe is problem tat it is just an interface ? Ive tried to add @Repository on it but dont work eighter

Quote

#8**Victor Márquez** 2019-07-30 00:13
00:03:49,789 ERROR Error creating bean with name 'customerService': Unsatisfied dependency expressed through field 'repo'; nested exception is org.springframework.beans.factory.BeanCreationException: Error creating bean with name 'customerRepository': Invocation of init method failed; nested exception is java.lang.IllegalArgumentException: Not a managed type: class com.mvit.jpa.customer.Customer

Quote

#7**amit** 2019-07-16 13:56
org.springframework.beans.factory.UnsatisfiedDependencyException: Error creating bean with name 'customerController': Unsatisfied dependency expressed

Quote

1 2 3

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