

Spring MVC Tutorial – Contact List Application

Step 10: Client-Side View Functionality

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Step 10: Client-Side View Functionality

Overview

The Search screen is similar to the Home screen. The Search screen shows the Contact Summary table and allows the user to view and edit contacts, and the only difference is that it has a search form instead of a new contact form. Because these screens are so similar, we'll be able to reuse all of the JavaScript and much of the HTML developed for the Home screen here. Reuse of the JavaScript is straightforward — we simply reference **contactList.js** in **search.jsp**. Reuse of the HTML is also quite simple, but it will require us to move some of the HTML currently in **home.jsp** out to a **JSP fragment** file that we will include in both **home.jsp** and **search.jsp**.

Creating Reusable JSP Fragments

Before we start with the Search screen, we are going to pull the reusable JSP fragments from **home.jsp** and put them into separate files that will be included in both **home.jsp** and **search.jsp**.

We'll first create the new JSP files. Please create **detailsEditModalFragment.jsp** and **contactSummaryTableFragment.jsp** in the **jsp** folder. Delete all content from these files.

We will move the Details and Edit modal HTML first. Now, open **home.jsp** and cut out the HTML for the Details and Edit modals. Paste this content into **detailsEditModalFragment.jsp**. The fragment file should now have the following content:

```
<!-- Details Modal -->
<!--
    The aria- attributes are for Accessible Rich Internet Applications standards - their purpose is
    to make web applications more accessible to people with disabilities.
-->
<div class="modal fade" id="detailsModal" tabindex="-1" role="dialog" aria-labelledby="detailsModalLabel" aria-
hidden="true">
    <div class="modal-dialog">
        <div class="modal-content">
            <div class="modal-header">
                <button type="button" class="close" data-dismiss="modal">
                    <span aria-hidden="true">&times;</span>
                    <span class="sr-only">Close</span>
                </button>
                <h4 class="modal-title" id="detailsModalLabel">Contact Details</h4>
            </div>
```

```

<div class="modal-body">
  <h3 id="contact-id"></h3>
  <table class="table table-bordered">
    <tr>
      <th>First Name:</th>
      <td id="contact-firstName"></td>
    </tr>
    <tr>
      <th>Last Name:</th>
      <td id="contact-lastName"></td>
    </tr>
    <tr>
      <th>Company:</th>
      <td id="contact-company"></td>
    </tr>
    <tr>
      <th>Phone:</th>
      <td id="contact-phone"></td>
    </tr>
    <tr>
      <th>Email:</th>
      <td id="contact-email"></td>
    </tr>
  </table>
</div>
<div class="modal-footer">
  <button type="button" class="btn btn-default" data-dismiss="modal">Close</button>
</div>
</div>
</div>
</div>

<!-- Edit Modal -->
<div class="modal fade" id="editModal" tabindex="-1" role="dialog" aria-labelledby="detailsModalLabel" aria-
hidden="true">
  <div class="modal-dialog">
    <div class="modal-content">
      <div class="modal-header">
        <button type="button" class="close" data-dismiss="modal">
          <span aria-hidden="true">&times;</span>
          <span class="sr-only">Close</span>
        </button>
        <h4 class="modal-title" id="detailsModalLabel">Edit Contact</h4>
      </div>
      <div class="modal-body">
        <h3 id="contact-id"></h3>
        <form class="form-horizontal" role="form">
          <div class="form-group">
            <label for="edit-first-name" class="col-md-4 control-label">
              First Name:
            </label>
            <div class="col-md-8">
              <input type="text" class="form-control" id="edit-first-name"
                placeholder="First Name">
            </div>
          </div>
        </form>
      </div>
    </div>
  </div>
</div>

```

```

<div class="form-group">
  <label for="edit-last-name" class="col-md-4 control-label">Last Name:</label>
  <div class="col-md-8">
    <input type="text" class="form-control" id="edit-last-name"
      placeholder="Last Name">
  </div>
</div>
<div class="form-group">
  <label for="edit-company" class="col-md-4 control-label">Company:</label>
  <div class="col-md-8">
    <input type="text" class="form-control" id="edit-company"
      placeholder="Company">
  </div>
</div>
<div class="form-group">
  <label for="edit-email" class="col-md-4 control-label">Email:</label>
  <div class="col-md-8">
    <input type="email" class="form-control" id="edit-email"
      placeholder="Email">
  </div>
</div>
<div class="form-group">
  <label for="edit-phone" class="col-md-4 control-label">Phone:</label>
  <div class="col-md-8">
    <input type="tel" class="form-control" id="edit-phone"
      placeholder="Phone">
  </div>
</div>
<div class="form-group">
  <div class="col-md-offset-4 col-md-8">
    <button type="submit" id="edit-button" class="btn btn-default"
      data-dismiss="modal">
      Edit Contact
    </button>
    <button type="button" class="btn btn-default"
      data-dismiss="modal">
      Cancel
    </button>
  </div>
</div>
</form>
</div>
</div>
</div>
</div>

```

We must reference this HTML code so that our modals still appear on the Home screen. The mechanism that we will use to do this is the **include directive** which follows this form:

```
<%@include file="name-of-file-to-include"%>
```

Insert the following code into **home.jsp** where the HTML for the modals used to be:

```
<%@include file="detailsEditModalFragment.jsp"%>
```

After you have made these changes and saved all files, the Home screen should work just as it did before. All we did was move some HTML code to another file and then include that file in **home.jsp**. This will work out great because we can do the same thing for **search.jsp**.

Next, we'll pull out the HTML code for the Contact Summary table so it can be used on both pages. Cut the following code from **home.jsp** and insert it into **contactSummaryTableFragment.jsp**:

```
<table id="contactTable" class="table table-hover">
  <tr>
    <th width="40%">Contact Name</th>
    <th width="30%">Company</th>
    <th width="15%"></th>
    <th width="15%"></th>
  </tr>
  <!--
    This holds the list of contacts - we will add rows dynamically
    using jQuery
  -->
  <tbody id="contentRows"></tbody>
</table>
```

And insert the following line into **home.jsp** where the table used to be:

```
<%@include file="contactSummaryTableFragment.jsp"%>
```

At this point, **home.jsp** should look like this:

```
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<%@ taglib prefix="s" uri="http://www.springframework.org/tags" %>
<%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <title>Company Contacts</title>
        <!-- Bootstrap core CSS -->
        <link href="${pageContext.request.contextPath}/css/bootstrap.min.css" rel="stylesheet">

        <!-- SWC Icon -->
        <link rel="shortcut icon" href="${pageContext.request.contextPath}/img/icon.png">

    </head>
    <body>
        <div class="container">
            <h1>Company Contacts</h1>
            <hr/>
            <div class="navbar">
                <ul class="nav nav-tabs">
                    <li role="presentation" class="active">
                        <a href="${pageContext.request.contextPath}/home">Home</a>
                    </li>
                    <li role="presentation">
                        <a href="${pageContext.request.contextPath}/search">Search</a>
                    </li>
                    <li role="presentation">
                        <a href="${pageContext.request.contextPath}/stats">Stats</a>
                    </li>
                </ul>
            </div>
            <!--
                Add a row to our container - this will hold the summary table and the new
                contact form.
            -->
            <div class="row">
                <!--
                    Add a col to hold the summary table - have it take up half the row
                -->
                <div class="col-md-6">
                    <h2>My Contacts</h2>
                    <%@include file="contactSummaryTableFragment.jsp" %>
                </div> <!-- End col div -->
            </div>
        </div>
    </body>
</html>
```

```

<!--
    Add col to hold the new contact form - have it take up the other
    half of the row
-->
<div class="col-md-6">
    <h2>Add New Contact</h2>
    <form class="form-horizontal" role="form">
        <div class="form-group">
            <label for="add-first-name" class="col-md-4 control-label">
                First Name:
            </label>
            <div class="col-md-8">
                <input type="text" class="form-control" id="add-first-name"
                    placeholder="First Name"/>
            </div>
        </div>
        <div class="form-group">
            <label for="add-last-name" class="col-md-4 control-label">
                Last Name:
            </label>
            <div class="col-md-8">
                <input type="text" class="form-control" id="add-last-name"
                    placeholder="Last Name"/>
            </div>
        </div>
        <div class="form-group">
            <label for="add-company" class="col-md-4 control-label">Company:</label>
            <div class="col-md-8">
                <input type="text" class="form-control" id="add-company"
                    placeholder="Company"/>
            </div>
        </div>
        <div class="form-group">
            <label for="add-email" class="col-md-4 control-label">Email:</label>
            <div class="col-md-8">
                <input type="email" class="form-control" id="add-email"
                    placeholder="Email"/>
            </div>
        </div>
        <div class="form-group">
            <label for="add-phone" class="col-md-4 control-label">Phone:</label>
            <div class="col-md-8">
                <input type="tel" class="form-control" id="add-phone"
                    placeholder="Phone"/>
            </div>
        </div>
        <div class="form-group">
            <div class="col-md-offset-4 col-md-8">
                <button type="submit" id="add-button" class="btn btn-default">
                    Create Contact
                </button>
            </div>
        </div>
    </form>
</div> <!-- End col div -->

</div> <!-- End row div -->

</div>

```



```

<%@include file="detailsEditModalFragment.jsp"%>

<!-- Placed at the end of the document so the pages load faster -->
<script src="${pageContext.request.contextPath}/js/jquery-1.11.1.min.js"></script>
<script src="${pageContext.request.contextPath}/js/bootstrap.min.js"></script>
<script src="${pageContext.request.contextPath}/js/contactList.js"></script>

</body>
</html>

```

Now that we've packaged our code into reusable components, we can start building the Search Screen.

Main Layout

The layout of the Search screen is similar to the Home screen — we'll have a summary table on the left and a form on the right. The difference is that this screen has a search form instead of a new contact form. The steps for building this screen will be like those we took when creating the Home screen but much simpler because we will take advantage of the reusable components we just created. Modify your **search.jsp** so that it looks like this:

```

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<%@ taglib prefix="s" uri="http://www.springframework.org/tags" %>
<%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <title>Company Contacts</title>
        <!-- Bootstrap core CSS -->
        <link href="${pageContext.request.contextPath}/css/bootstrap.min.css" rel="stylesheet">

        <!-- SWC Icon -->
        <link rel="shortcut icon" href="${pageContext.request.contextPath}/img/icon.png">
    </head>
    <body>
        <div class="container">
            <h1>Company Contacts</h1>
            <hr/>
            <div class="navbar">
                <ul class="nav nav-tabs">
                    <li role="presentation">
                        <a href="${pageContext.request.contextPath}/home">Home</a>
                    </li>
                    <li role="presentation" class="active">
                        <a href="${pageContext.request.contextPath}/search">Search</a>
                    </li>
                    <li role="presentation">
                        <a href="${pageContext.request.contextPath}/stats">Stats</a>
                    </li>
                </ul>
            </div>
            <!--

```

```

Add a row to our container - this will hold the summary table and the
search form.
-->
<div class="row">
  <!--
    Add a col to hold the summary table - have it take up half the row
  -->
  <div class="col-md-6">
    <h2>Search Results</h2>
    <!-- Include the summary table HTML -->
    <%@include file="contactSummaryTableFragment.jsp" %>
  </div> <!-- End col div -->
  <!--
    Add col to hold the search form - have it take up the other
    half of the row
  -->
  <div class="col-md-6">
    <h2>Search</h2>
    <form class="form-horizontal" role="form">
      <div class="form-group">
        <label for="add-first-name" class="col-md-4 control-label">
          First Name:
        </label>
        <div class="col-md-8">
          <input type="text" class="form-control" id="add-first-name"
            placeholder="First Name"/>
        </div>
      </div>
      <div class="form-group">
        <label for="add-last-name" class="col-md-4 control-label">
          Last Name:
        </label>
        <div class="col-md-8">
          <input type="text" class="form-control" id="add-last-name"
            placeholder="Last Name"/>
        </div>
      </div>
      <div class="form-group">
        <label for="add-company" class="col-md-4 control-label">Company:</label>
        <div class="col-md-8">
          <input type="text" class="form-control" id="add-company"
            placeholder="Company"/>
        </div>
      </div>
      <div class="form-group">
        <label for="add-email" class="col-md-4 control-label">Email:</label>
        <div class="col-md-8">
          <input type="email" class="form-control" id="add-email"
            placeholder="Email"/>
        </div>
      </div>
    </div>
  </div>

```

```

        <div class="form-group">
            <label for="add-phone" class="col-md-4 control-label">Phone:</label>
            <div class="col-md-8">
                <input type="tel" class="form-control" id="add-phone"
                    placeholder="Phone" />
            </div>
        </div>
        <div class="form-group">
            <div class="col-md-offset-4 col-md-8">
                <button type="submit" id="add-button" class="btn btn-default">
                    Search
                </button>
            </div>
        </div>
    </form>
</div> <!-- End col div -->

</div> <!-- End row div -->

</div>

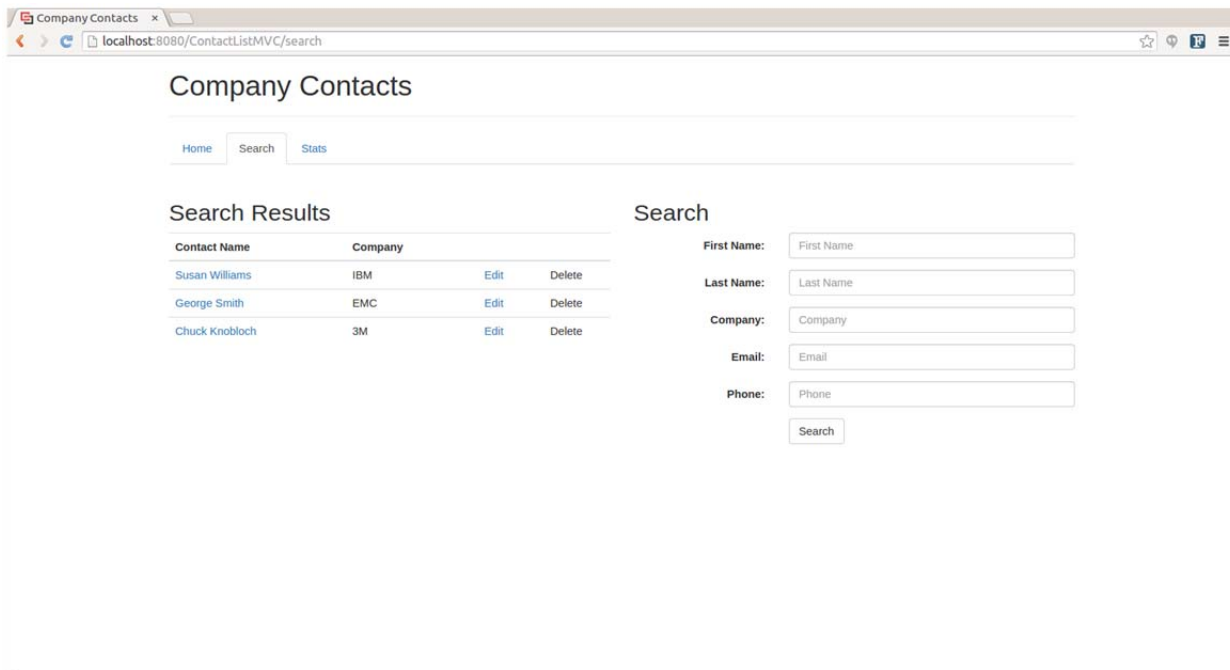
<!-- Include the HTML for the details and edit modal dialog boxes -->
<%%include file="detailsEditModalFragment.jsp" %>

<!-- Placed at the end of the document so the pages load faster -->
<script src="${pageContext.request.contextPath}/js/jquery-1.11.1.min.js"></script>
<script src="${pageContext.request.contextPath}/js/bootstrap.min.js"></script>
<script src="${pageContext.request.contextPath}/js/contactList.js"></script>

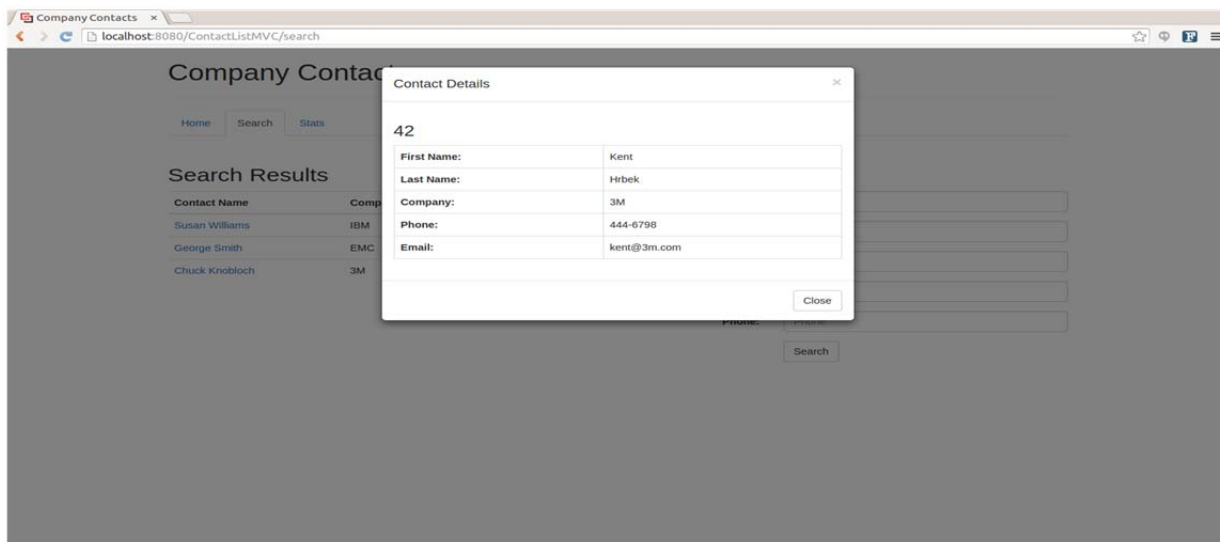
</body>
</html>

```

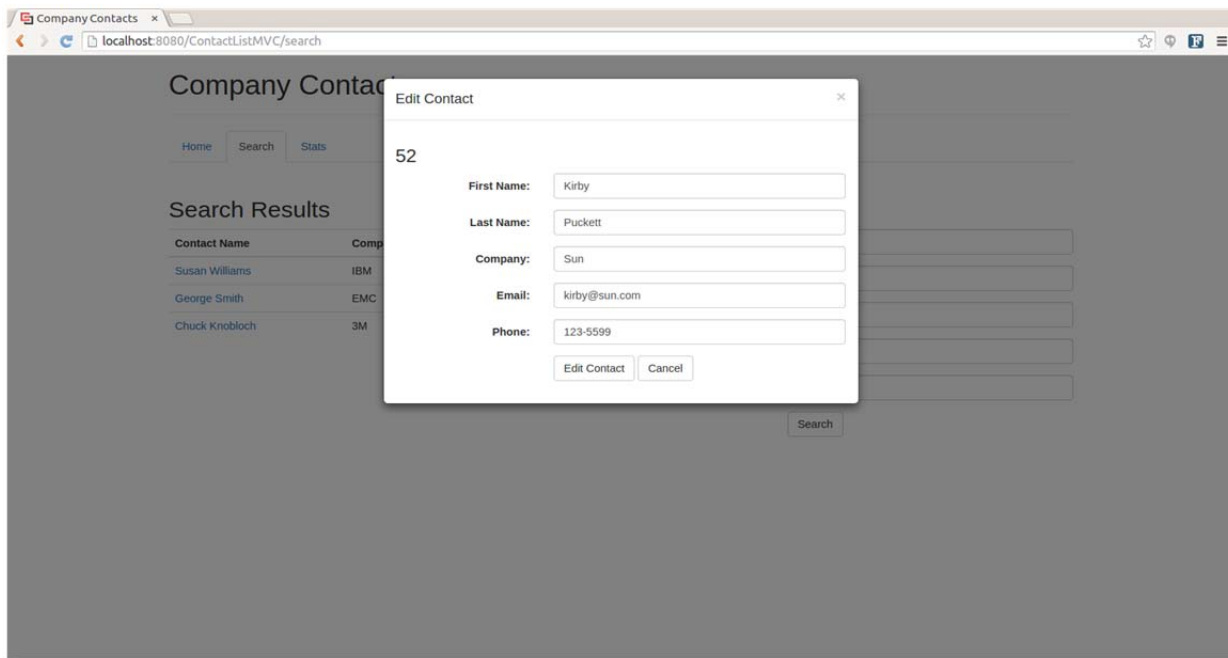
That should do it. The only difference between the screens is some of the headings and what the forms do. If things went well, you should see the following when the Search screen is initially displayed:



You should see the following after clicking on one of the contact names:



Finally, you should see this after clicking on one of the “Edit” links:



Wrap-up

That does it for this step. In this portion of the tutorial, we did the following:

1. Learned how to package HTML fragments so they can be used in several places
2. Refactored the Home screen to make use of HTML fragments
3. Created the initial layout for the Search screen, making use of HTML fragments and the JavaScript code developed in the last step

In the next step, we'll wrap up the initial version of the view components by implementing version one of the Stats screen.