

CPSC 476: ASSIGNMENT 3

SHARED EVENTS CALENDAR

CSPC 476 Assignment 3

Mussa Mubarki

893536896

DESCRIPTION

The assignment architecture is Spring web MVC framework. It provides model-view-controller architecture , and It “is designed around a DispatcherServlet that dispatches requests to handlers, with configurable handler mappings, view resolution, locale and theme resolution as well as support for uploading files. The default handler is based on the @Controller and @RequestMapping annotations, offering a wide range of flexible handling methods.”¹

The central Servlet -DispatcherServlet- configure in web.xml as any other servlet:

```
<servlet>
  <servlet-name>EventsDispatcher</servlet-name>
  <servlet-class>
    org.springframework.web.servlet.DispatcherServlet
  </servlet-class>
  <load-on-startup>1</load-on-startup>
  <init-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/EventsDispatcher-servlet.xml</param-value>
  </init-param>
</servlet>
```

¹ <http://docs.spring.io/autorepo/docs/spring/3.2.x/spring-framework-reference/html/mvc.html>

```

<servlet-mapping>
  <servlet-name>EventsDispatcher</servlet-name>
  <url-pattern>/</url-pattern>
  <url-pattern>/Events</url-pattern>
  <url-pattern>/Events*</url-pattern>
</servlet-mapping>

```

The contextConfigLocation initial parameter indicate where context can be found.

The context EventsDispatcher-servlet is contains all beans in Assignment3 application.

```

<mvc:annotation-driven />
<context:component-scan base-package="master.cpsc476" />
<bean id="dataSource" class="org.apache.commons.dbcp.BasicDataSource">
  <property name="driverClassName" value="org.hsqldb.jdbcDriver"/>
  <property name="url" value="jdbc:hsqldb:hsqldb:/localhost/test"/>
  <property name="username" value="A"/>
  <property name="password" value=""/>
  <property name="initialSize" value="10"/>
  <property name="testOnBorrow" value="true"/>
</bean>

<jdbc:initialize-database data-source="dataSource" ignore-failures="ALL">
  <jdbc:script execution="INIT" location="/META-INF/schema.sql" />
  <jdbc:script execution="INIT" location="/META-INF/test-data.sql" />
</jdbc:initialize-database>

<bean name="EventDAOImp" class="master.cpsc476.dao.EventDAOImp" >
  <property name="dataSource" ref="dataSource" />
</bean>
<bean name="UserDAOImp" class="master.cpsc476.dao.UserDAOImp" >
  <property name="dataSource" ref="dataSource" />
</bean>
<bean id="viewResolver"
  class="org.springframework.web.servlet.view.InternalResourceViewResolver" >
  <property name="prefix">
    <value>/WEB-INF/jsp/</value>
  </property>

```

```
<property name="suffix">
  <value>.jsp</value>
</property>
</bean>
```

`<mvc:annotation-driven />` : declares explicit support for annotation-driven MVC controllers such as `@RequestMapping`, `@Controller`.

`<context:component-scan base-package="master.cpsc476" />`: enable auto scanning feature in Spring to find out the Spring components.

```
<bean id="viewResolver"
      class="org.springframework.web.servlet.view.InternalResourceViewResolver" >
  <property name="prefix"><value>/WEB-INF/jsp/</value></property>
  <property name="suffix"><value>.jsp</value></property>
</bean>
```

ViewResolver is for resolve JSP name return string from methods in controller to actual JSP full path by adding prefix and suffix.

Controller

EventsServlets refactored to use EventsController. Add `@Controller` in header and `@PostConstruct` before `init()` method to initialize DAOs object.

```
@Controller
public class EventsController {
  @Autowired
  private ApplicationContext applicationContext;

  private EventDAO eventDAO;
  private UserDAO userDAO;
```

```
@PostConstruct
public void init(){
    eventDAO = (EventDAO) applicationContext.getBean("EventDAOImp");
    userDAO = (UserDAO) applicationContext.getBean("UserDAOImp");
}
```

Not like Servlet, in Spring controller we no longer need complex switched². Instead, requests are automatically routed to the proper controller and methods using `@RequestMapping`.

Each methods in controller have `ModelMap` as parameter variable. `ModelMap` is map that uses to save data, and it is passed to view. Used `model.addAttribute(key, object)` to passing data. Also, before show form view (`EventForm.jsp` or `SignupForm.jsp`): we have to add form backing object (e.g. `EventDetail`) to model as

```
model.addAttribute("eventDetail", new EventDetail());
```

And in view we have to use spring tags to build the form:

```
<%@ taglib prefix="form" uri="http://www.springframework.org/tags/form"%>
..
<form:form modelAttribute="eventDetail" method="POST"
action="${pageContext.request.contextPath}/Events/createEvent" name="createEventForm">
...
<form:input path="title"/>
...
```

For “POST” form action, in controller’s methods: use `@ModelAttribute` to supply form backing object to a Controller method as following:

```
@ModelAttribute("eventDetail") EventDetail eventDetail
```

For parameters that are passed with the url : we use `@PathVariable` as following:

² Text Book: Professional Java for Web Applications page 356.

```
@RequestMapping(value="/Events/view/{id}", method = RequestMethod.GET)
public String viewEvent(@PathVariable Long id, Model model, HttpSession session){
```

The Assignment3 application has the following routings:

- @RequestMapping(value={"/Events/list", "/Events/", "/Events"}, method = RequestMethod.GET): for list all active event with get method: to show all events list. It is the default action if action value is null. It is not required login.
- @RequestMapping(value="/Events/view/{id}", method = RequestMethod.GET): view event with get method: to show event detail by redirect to /jsp/EventView.jsp. Event Id is passed as parameter. It is required login.
- @RequestMapping(value="/Events/create", method = RequestMethod.GET) : create with get method: to show event create form by redirect to /jsp/EventForm.jsp. It is required login.
- @RequestMapping(value="/Events/createEvent", method = RequestMethod.POST) : createEvent with post method: to create new event. It is required login.
- @RequestMapping(value="/Events/createUser", method = RequestMethod.POST): createUser with post method: to create new user.
- @RequestMapping(value={"/Events/signup*"}, method = RequestMethod.GET) : signup with get method: to show signup form by redirect to /jsp/SignupForm.jsp.
- @RequestMapping(value="/Events/signin", method = RequestMethod.POST): signin with post method: to login process. Call UserDaoImp.isMach(User) then store user detail in HttpSession that getted by declaration it in method header.
- @RequestMapping(value="/Events/signout", method = RequestMethod.GET): signout with get method: to logout by remove user bean form HttpSession
- @RequestMapping(value="/Events/userHome/{id}", method = RequestMethod.GET): userHome + parameter id: to show user detail by redirect to /jsp/User.jsp. User Id is passed as parameter. It is required login.
- @RequestMapping(value="/Events/likeEvent/{userId}/{eventId}", method =

RequestMethod.GET): likeEvent with get method to add event to user interested list.

User id and event id are passed as parameters. It is required login.

- @RequestMapping(value="/Events/unlikeEvent/{userId}/{eventId}", method = RequestMethod.GET): unlikeEvent with get method: to remove event from user interested list. User id and event id are passed as parameters. It is required login.

BUILD INSTRUCTIONS

To packaging and deploying this assignment using Maven, we have to do the following:

- Update Assignment 2 pom.xml by add dependencies.
- for package execute

```
mvn package
```

- or for deploy execute after start tomcat manager

```
mvn tomcat7:deploy
```

- Or because I set the default goal, you can just

```
mvn
```

```
<defaultGoal>tomcat7:deploy</defaultGoal>
```

Note: sometime When I redeploy the application to the web server using Netbeans the .lck file is not properly released and the HSQL server cannot load the file. So we have to delete test.lck under \${tomcatHome}/bin/hsqldb/localhost to avoid this issue.

Prepare pom.xml:

1. Add Maven dependencies for spring MVC

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


DEMONSTRATING

Because nothing change in view layer, the screens are same as in Assignment 1.

Assignment URL is `http://localhost:8080/assignment3`

Main screen without login contains events list, and top page contains login form and link sign-up link. The title in events list is link to event detail.

←

→

↻

localhost:8080/assignment1/Events?action=list

Welcome Guest

email

Email Id

Password

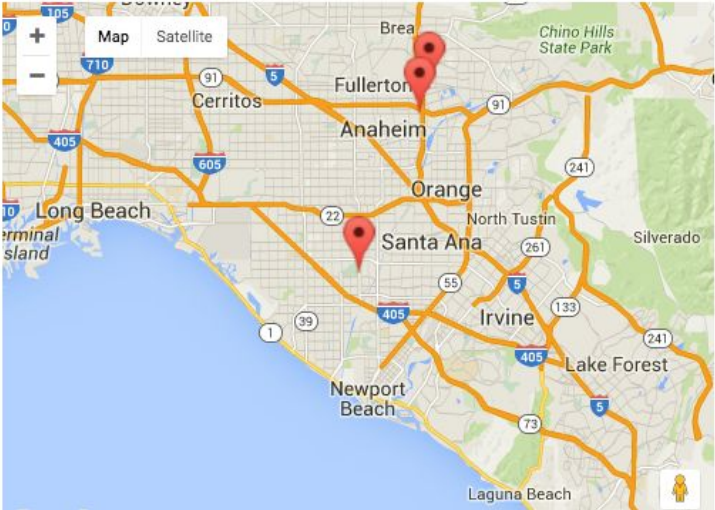
Password

Login

Signup

Events List

Title	Time	Location
Summit Event Productions	Jan 21,2017 13:00	2627 e la palma ave
Impulse Event Lighting	Dec 01,2016 11:30	516 Cameron St, Placentia
Fun On Wheels	Feb 29,2016 13:00	16801 Euclid Street



To login: user the following information:

email: mmubarki@gmail.com

password: 123456

After login: controller method: signin() forward into user detail screen. It contains user information, user's interested events list, and user created events list. User has option to drop unlike events from interested events list. Also each event has link to its detail. Each event in interested or created can be add to google calendar.

[←](#) [→](#) [↻](#) [📄](#) localhost:8080/assignment1/Events?action=userHome&userId=1

Welcome mussa

[Your Detail](#) | [Events List](#) | [Signout](#)

User Detail:

Name: mussa
Name: mmubarki@gmail.com

Interested Events

- [Impulse Event Lighting in : Dec 01,2016 11:30 at : 516 Cameron St, Placentia](#) [✖](#) [📅](#)
- [Summit Event Productions in : Jan 21,2017 13:00 at : 2627 e la palma ave](#) [✖](#) [📅](#)

Mine Events

- [Impulse Event Lighting in : Dec 01,2016 11:30 at : 516 Cameron St, Placentia](#) [📅](#)
- [Summit Event Productions in : Jan 21,2017 13:00 at : 2627 e la palma ave](#) [📅](#)

[create new event](#)

Main page if login contains event list and link to create new event, and top page contains three links: to user detail page, to events list, and sign-out link.

←

→

↺

localhost:8080/assignment1/Events?action=list

Welcome ali

[Your Detail](#) | [Events List](#) | [Signout](#)

Events List

[create event](#)

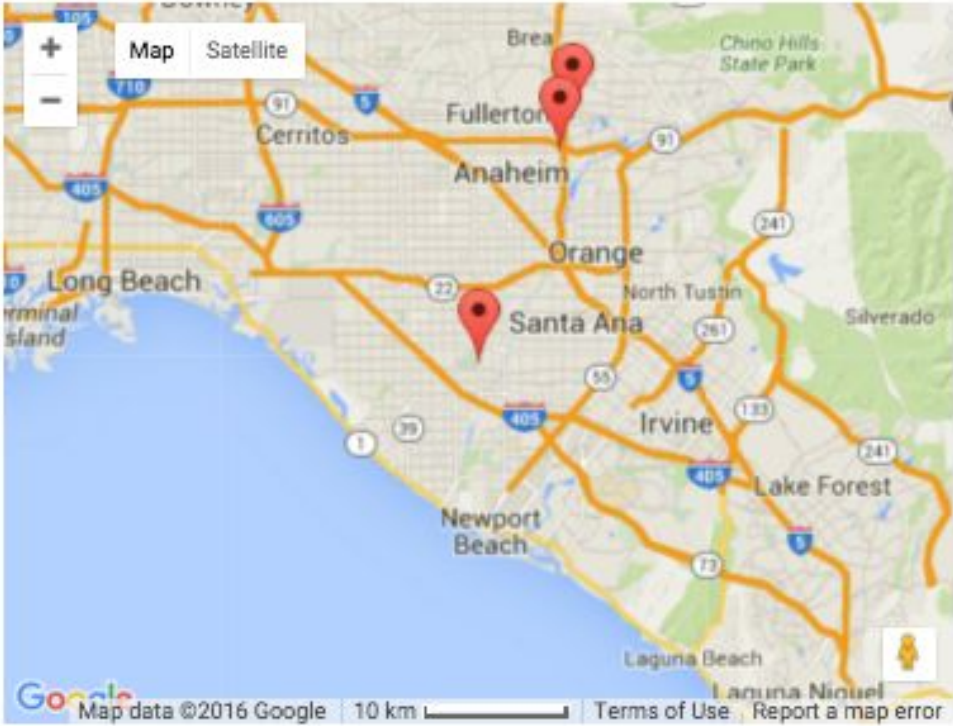
Title	Time	Location	
Summit Event Productions	Jan 21,2017 13:00	2627 e la palma ave	✓
Impulse Event Lighting	Dec 01,2016 11:30	516 Cameron St, Placentia	✓
Fun On Wheels	Feb 29,2016 13:00	16801 Euclid Street	✓

+

Map

Satellite

-



Google Map data ©2016 Google 10 km Terms of Use Report a map error

Event view without login. It contains link to events list.

localhost:8080/assignment1/Events?action=view&eventId=1

Welcome Guest

email

Email Id

password

Password

Login

Signup

Events List

Event View

Title

Summit Event Productions

Description

We are a boutique lighting design production company based in the MD/DC/VA area

Time

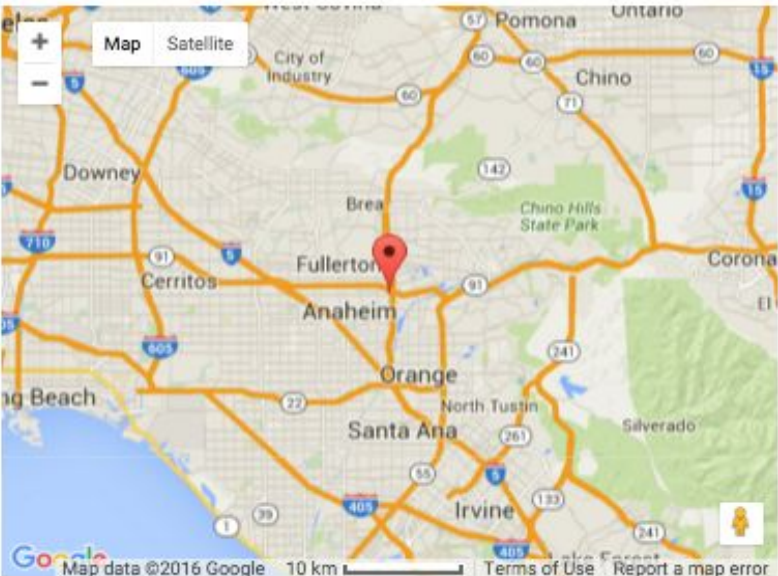
Jan 21,2017 13:00

Location

2627 e la palma ave

Map

Satellite



Map data ©2016 Google 10 km Terms of Use Report a map error

Event view if login. It contains link to create event.

[←](#) [→](#) [↻](#) [localhost:8080/assignment1/Events?action=view&eventId=1](#)

Welcome mussa

[Your Detail](#) | [Events List](#) | [Signout](#)

[create event](#)

Event View

Title
Summit Event Productions

Description
We are a boutique lighting design production company based in the MD/DC/VA area

Time
Jan 21,2017 13:00

Location
2627 e la palma ave



Sing-up form with validation

← → ↻ localhost:8080/assignment1/Events?action=signup&email=ali@gmail.com

[Home](#)

Signup Form

Your Name

email

Password

Confirm

! Please match the requested format.
length must be six or more

[Cancel](#)

create new event form

[←](#) [→](#) [↻](#) [localhost:8080/assignment1/Events?action=create](#)

Welcome mussa

[Your Detail](#) | [Events List](#) | [Signout](#)

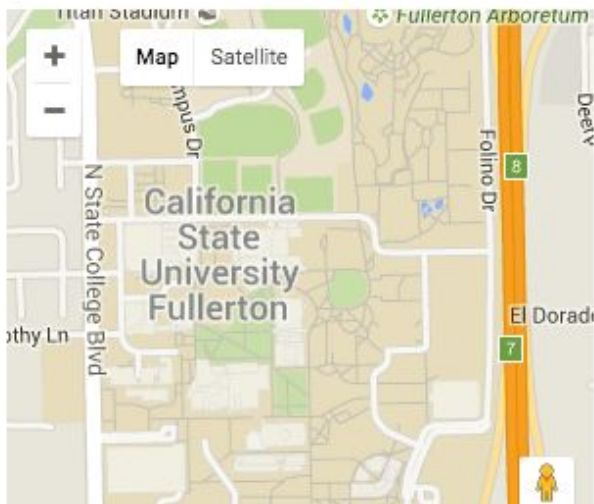
Create New Event

Title

Description

Time

Location
 [show](#)



In create new event form: uses dateTime-local input type. It is not supported in Firefox and Internet Explorer.

← → ↻ localhost:8080/assignment1/Events?action=create

Welcome ali

[Your Detail](#) | [Events List](#) | [Signout](#)

Create New Event

Title

Description

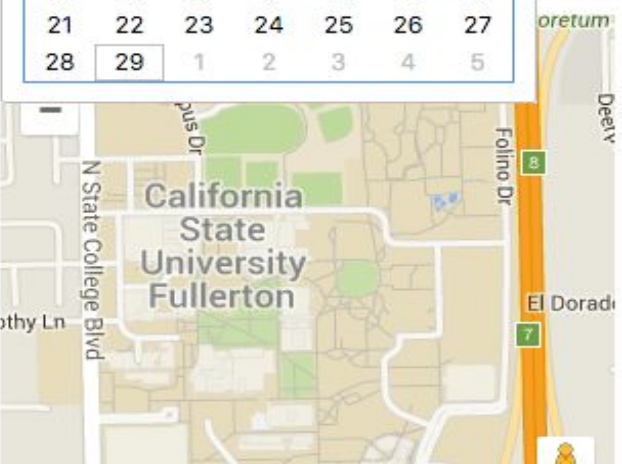
Time

mm/dd/yyyy, --:--:--

February 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	1	2	3	4	5

[show](#)



The map shows the campus of California State University Fullerton, with streets like N State College Blvd and Folino Dr. A location pin is placed on the map.

Create new event after filled

← → ↻

localhost:8080/assignment1/Events?action=create

Welcome ali

[Your Detail](#) | [Events List](#) | [Signout](#)

Create New Event

Title

Fun On Wheels

Description

Fun on Wheels Mobile Recreation Program is a free drop-in program designed to bring recreation and other resources into the neighborhoods for children, ages 5-18. The program offers homework assistance, fitness fun, art enrichment, and resource materials. No registration is needed! All programs

Time

02/29/2016, 01:00 PM

Location

16801 Euclid Street

[show](#)


Create

+

Map

Satellite

-



Mile Square Regional Park

Heil Ave

Begonia Ave

Lavender Ave

Stonecress Ave

Warner Ave

Sugarloaf St

View event after creation



Welcome all

[Your Detail](#) | [Events List](#) | [Signout](#)

successfull created event:Fun On Wheels

[create event](#)

Event View

Title

Fun On Wheels

Description

Fun on Wheels Mobile Recreation Program is a free drop-in program designed to bring recreation and other resources into the neighborhoods for children, ages 5-18. The program offers homework assistance, fitness fun, art enrichment, and resource materials. No registration is needed! All programs are closed on holidays and days of inclement weather

Time

Feb 29,2016 13:00

Location

16801 Euclid Street



Add event into interested list

localhost:8080/assignment1/Events?action=list

Welcome ali

[Your Detail](#)

|

[Events List](#)

|

[Signout](#)

event:Impulse Event Lighting added to interested list

Events List

[create event](#)

Title	Time	Location	
Summit Event Productions	Jan 21,2017 13:00	2627 e la palma ave	✓
Impulse Event Lighting	Dec 01,2016 11:30	516 Cameron St, Placentia	
Fun On Wheels	Feb 29,2016 13:00	16801 Euclid Street	✓

MapSatellite




Map data ©2016 Google

10 km

Terms of Use

Report a map error

Drop event from interested list



localhost:8080/assignment1/Events?action=userHome&userId=2

Welcome ali

[Your Detail](#) | [Events List](#) | [Signout](#)

event:Impulse Event Lighting removed from interested list

User Detail:

Name: ali
Name: ali@gmail.com

Interested Events

You are not select any events

Mine Events

- [Fun On Wheels in : Feb 29,2016 13:00 at : 16801 Euclid Street](#)

[create new event](#)