

Phase 3

Total session 9

Spring framework and Spring boot, Unit testing, Rest full web service and micro service using Spring framework/spring boot

Day 3

Spring MVC (Model View Controller). Spring mvc module is use to create web application using spring framework. It provided lot of pre defined api which help to improve view, controller and model layer.

Spring MVC internally follow MVC architecture framework.

Before spring, struts or JSF we were/are using controller as servlet.

Limitation of servlet if we use as controller.

1. Servlet is complex. We need to create normal java class and extends or implements type of servlet and we need to override pre defined method ie init, service, destroy, doGet, doPost etc.
2. Inside one servlet we can't write doGet or doPost method.
3. Servlet class is heavy class. because we extends or type of servlet which automatically all methods are inherited.

In Spring MVC if we want to create controller we need to create normal class and on top of that class we need to write pre defined annotation **@Controller** . Inside this class we can write user defined method with few annotation and method return type can be **ModelAndView** or **String** class.

@Controller

```
public class MyController {

    @RequestMapping(value="/hi",method=RequestMethod.GET)

    public ModelAndView sayHi() {

        // coding ....

        ModelAndView mav = new ModelAndView();

        mav.setView("display1.jsp");

        return mav;

    }

    @RequestMapping(value="/hello",method=RequestMethod.GET)

    public ModelAndView sayHello() {

        // coding ....

        ModelAndView mav = new ModelAndView();

        mav.setView("display2.jsp");

        return mav;

    }

}
```

Hi is url pattern. Whenever any request end with **hi** or **hello**. Then this method get called.

ModelAndView is a pre-defined class provided by Spring MVC which help to keep the track between view and model.

By default this method consider as doGet. But if we want to mention get or post we need to use some attribute part of @RequestMapping annotation.

Inside @RequestMapping(value="/msg")

This msg help use to invoke specific method from request or from client to call.

In Servlet we will write URL pattern on class level using web.xml file or annotation.

But in Spring MVC we will write URL pattern on method level using @RequestMapping annotation

In Spring MVC we need to create dynamic web project and then convert this project to maven project.

In Spring MVC project we need to configure pre defined servlet class ie **DispatcherServlet** in web.xml file or using some configuration class.

This class behave like front controller. It is a type of design pattern which controller more than one controller flow.

```
<servlet>
```

```
    <servlet-name>B</servlet-name>
```

```
    <servlet-  
class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
```

```
</servlet>
```

```
<servlet-mapping>
```

```
    <servlet-name>B</servlet-name>
```

```
    <url-pattern>/</url-pattern>
```

```
</servlet-mapping>
```

Here url-pattern / mean any request come to this application that request receive by DispatcherServlet pre defined class.

This class search spring configuration file (ie xml file start with name as **dispatcher-servlet.xml**)

A-servlet.xml

B-servlet.xml

File name must be start with **servlet-name**

Flow of Spring MVC Project

Index.jsp is first page

```
<a href="hi">Click Here</a>
```

Once you click on hyperlink or button request pass to web.xml file.

In web.xml file we are given url pattern as / means any request receive by DispatcherServlet as front controller.

Then Frontcontroller search spring configuration file start with servletname-servlet.xml file. Inside this file using context component scan we enable @controller annotation.

Then spring container load all classes part of com package with annotation @Controller. Container do the di for that class.

This class contains more than one method with @RequestMapping annotation which contains value attribute to map request and method is use to map the method. once url mapping done. That method get invoked. Inside this method we can do simple or complex coding and return model and view class reference which help to retrieve the specific view with our without conditions.

Spring MVC with JdbcTemplate for SignIn and SignUp

Create Dynamic web project with name as
SpringMVCLoginAppUsingJdbcTemplate