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Spring Controller Unit Testing

Posted on October 3, 2015 by Arulkumaran Kumaraswamipillai

This Spring controller unit test is based on

HATEOAS RESTFul Service with Spring tutorial. The request URL and JSON response content are shown below.

REQUEST URL: http://localhost:8080/simpleSpring/greeting?name=John
RESPONSE JSON: {“content”:”Hello, John!”,”links”:[{“rel”:”self”,”href”:”http://localhost:8080/simpleSpring/greeting?name=John”}]}

REQUEST URL: http://localhost:8080/simpleSpring/greeting
RESPONSE JSON:{“content”:”Hello, World!”,”links”:[{“rel”:”self”,”href”:”http://localhost:8080/simpleSpring/greeting?name=World”}]}

The first step is to have the relevant jars for testing in the pom.xml file.

Step 1: The pom.xml for the testing.

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```
<project xmlns="http://maven.apache.org/POM/4.0.
    xsi:schemaLocation="http://maven.apache.org/
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.mytutorial</groupId>
    <artifactId>simpleSpringRestWeb</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>war</packaging>

    <name>simpleSpringRestWeb</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</pro
        <slf4j.version>1.7.10</slf4j.version>
        <commons-logging.version>1.1.1</commons-
    </properties>

    <dependencies>
        <!-- JUnit -->
        <dependency>
            <groupId>junit</groupId>
            <artifactId>junit</artifactId>
            <version>4.11</version>
            <scope>test</scope>
        </dependency>

        <!-- Mockito -->
        <dependency>
            <groupId>org.mockito</groupId>
            <artifactId>mockito-all</artifactId>
            <version>1.9.0</version>
            <scope>test</scope>
        </dependency>

        <!-- Hamcrest -->
        <dependency>
            <groupId>org.hamcrest</groupId>
            <artifactId>hamcrest-all</artifactId
            <version>1.3</version>
            <scope>test</scope>
        </dependency>

        <!-- Spring test -->
        <dependency>
            <groupId>org.springframework</groupI
            <artifactId>spring-test</artifactId>
            <version>4.0.9.RELEASE</version>
            <scope>test</scope>
        </dependency>

        <!-- JSON test -->
        <dependency>
            <groupId>com.jayway.jsonpath</groupI
            <artifactId>json-path</artifactId>
            <version>0.8.1</version>
            <scope>test</scope>
        </dependency>
        <dependency>
            <groupId>com.jayway.jsonpath</groupI
            <artifactId>json-path-assert</artifa
            <version>0.8.1</version>
            <scope>test</scope>
        </dependency>

```

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```
        //... othe Spring, logging depenedncies

    </dependencies>
</project>
```

Step 2: The unit testing

```
package com.mytutorial;

import static org.springframework.test.web.servl

import org.hamcrest.Matchers;
import org.junit.Before;
import org.junit.Test;
import org.junit.runner.RunWith;
import org.springframework.beans.factory.annotat
import org.springframework.test.context.ContextC
import org.springframework.test.context.junit4.S
import org.springframework.test.context.web.WebA
import org.springframework.test.web.servlet.Mock
import org.springframework.test.web.servlet.requ
import org.springframework.test.web.servlet.resu
import org.springframework.web.context.WebApplic


@WebAppConfiguration
@ContextConfiguration(
    classes = SimpleConfig.class)

@RunWith(SpringJUnit4ClassRunner.class)
public class HelloControllerImplTest {


    private MockMvc mockMvc;

    @Autowired
    private WebApplicationContext applicationCon

    @Before
    public void setUp() throws Exception {
        mockMvc = webAppContextSetup(application
    }

    @Test
    public void testSayHello() throws Exception
        mockMvc.perform(MockMvcRequestBuilders
               .get("/greeting")).andExpect(Mock
               .isOk());

    }

    @Test
    public void testSayHello2() throws Exception
        mockMvc.perform(MockMvcRequestBuilders
               .get("/greeting/?name=John")).and
               .isOk())
               .andExpect(MockMvcResultMatchers.
               .andExpect(MockMvcResultMatchers.
                .andExpect(MockMvcResultMatchers
    }
}
```

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Step 3: The Spring MVC controller class being tested

```
package com.mytutorial;

//linkTo & methodOn static methods are from Cont
import static org.springframework.hateoas.mvc.Co
import static org.springframework.hateoas.mvc.Co

import org.springframework.http.HttpEntity;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.stereotype.Controller
import org.springframework.web.bind.annotation.R
import org.springframework.web.bind.annotation.R
import org.springframework.web.bind.annotation.R


@Controller
public class HelloControllerImpl {

    private static final String FORMAT = "Hello,

    @RequestMapping("/greeting")
    @ResponseBody
    public HttpEntity<Hello> sayHello(@RequestPa
        value = "name",
        required = false,
        defaultValue = "World") String name) {

        Hello hello = new Hello(String.format(FO
        hello.add(linkTo(methodOn(HelloControlle
        return new ResponseEntity<Hello>(hello,
    }
}
```

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