

Lab RSMortgage Spring Boot Person Service 🡪 REST Microservice

**RSMortgage Spring Boot Person Service**

Udemy Spring Cloud Course

Presented By

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**Rolling Stone Technology**

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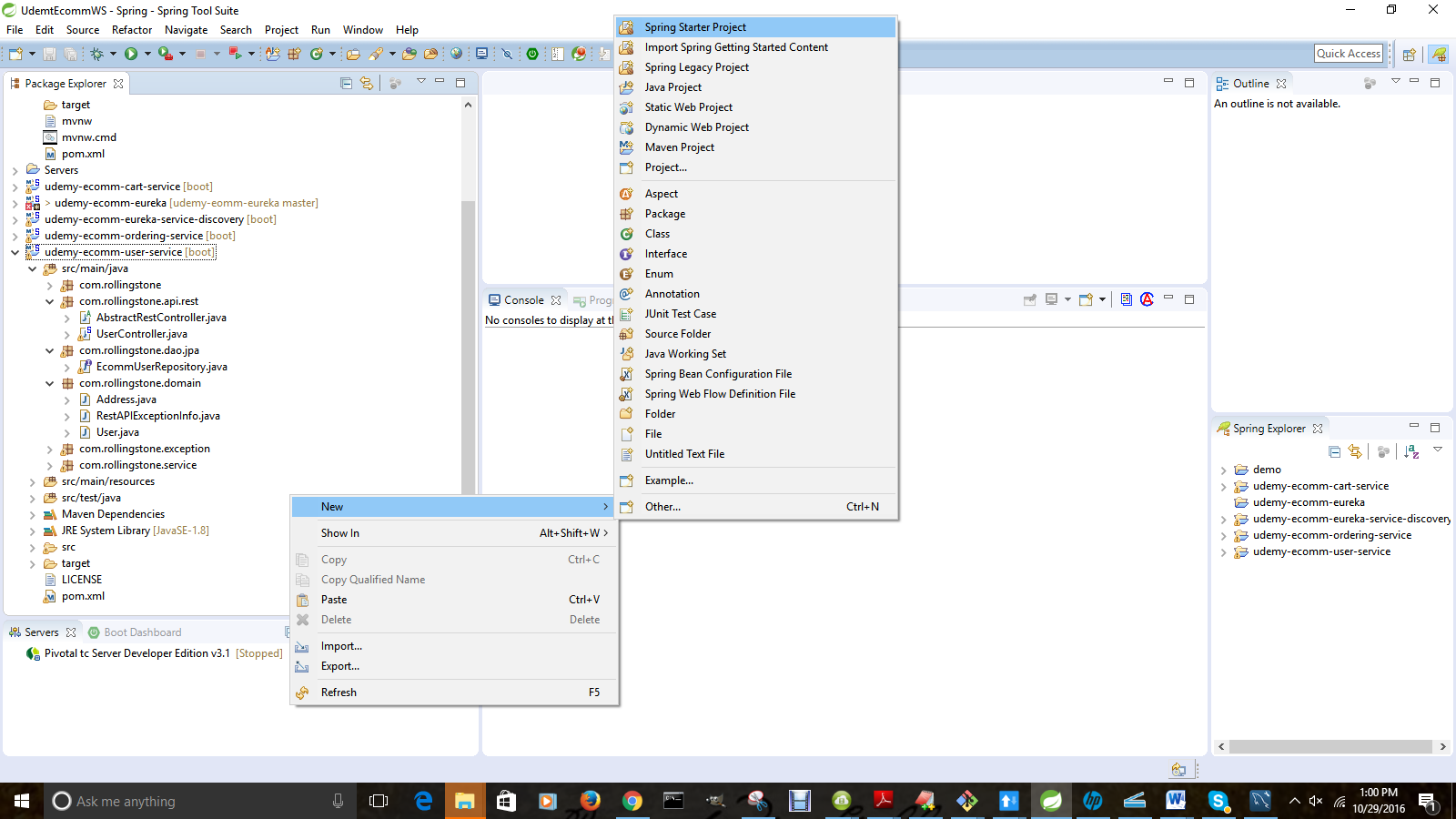
Chapter 1

*Spring Boot Person Service Project Creation*

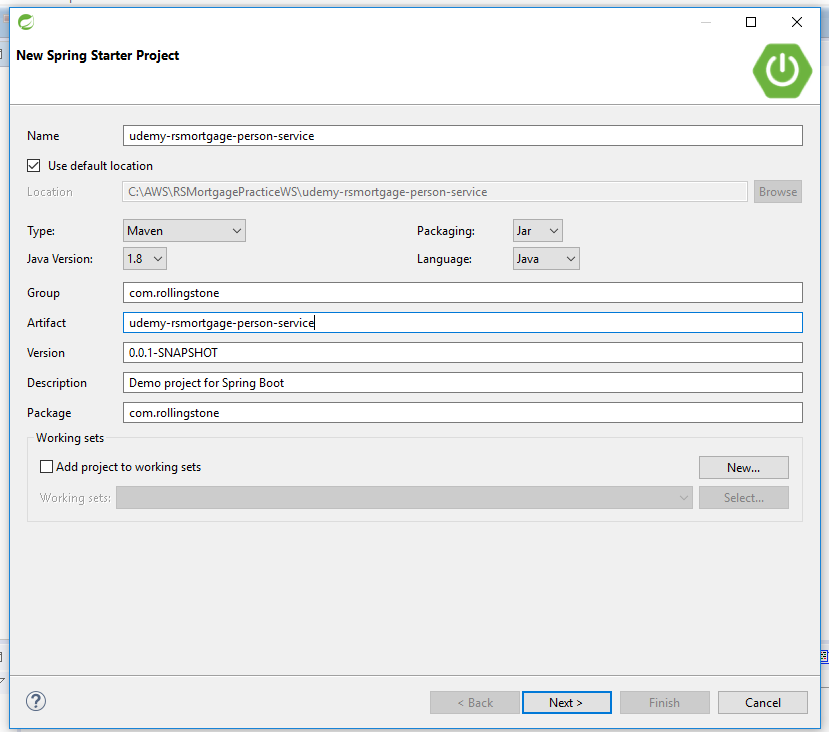
1.0 - Introduction

The purpose of this guide is to help walk through the process of creating a Spring Boot based Person Service REST Application so that the reader / learner becomes completely familiar with Spring Boot and its associated features such as actuator etc.

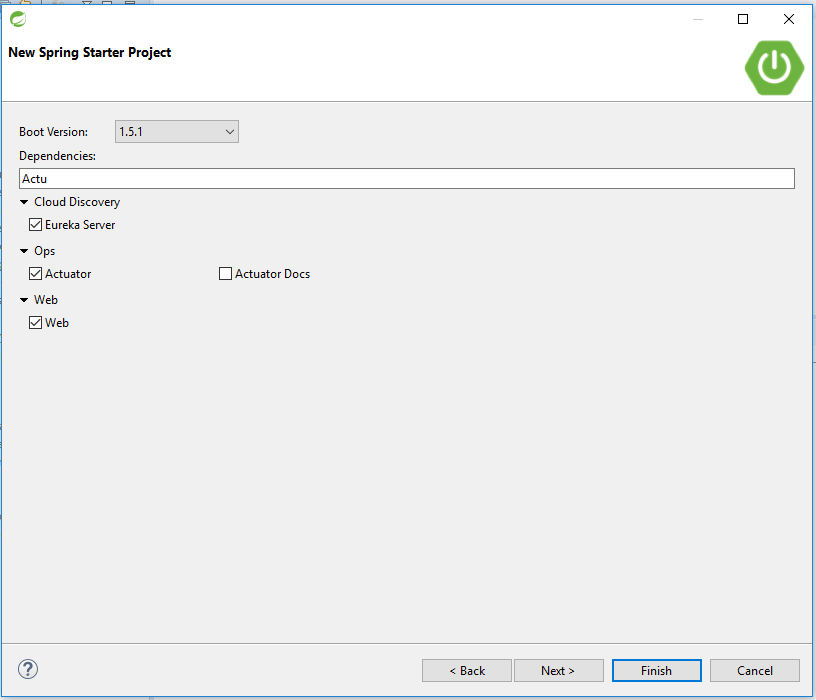
1.1 – Create a new Spring Starter Project



1.2 – Fill initial values

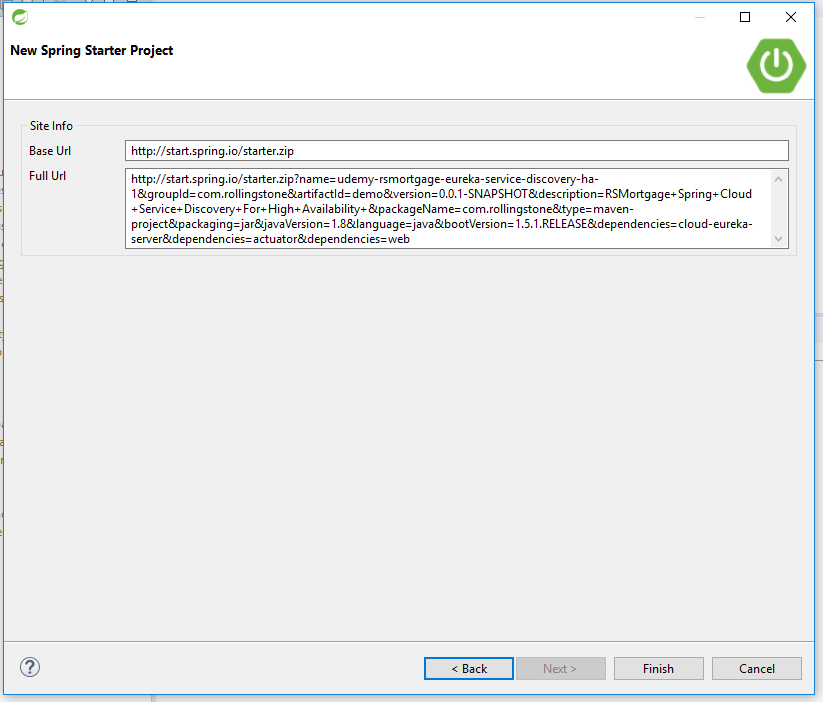


1.3 – Do not choose anything

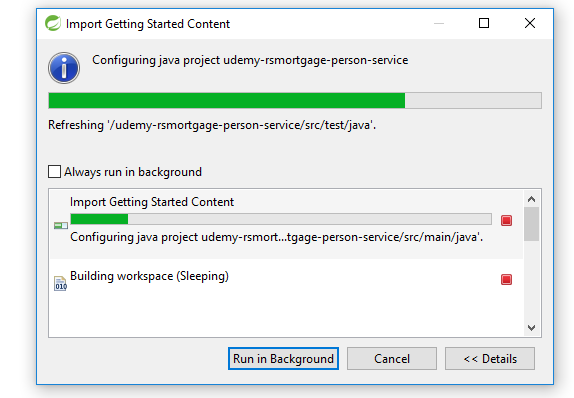


.

1.4 – Click Finish Now



1.5 – Let Spring Tool Suite Prepare the Project



1.6 – Verify the project identification in the pom.xml

<groupId>com.rollingstone</groupId>

<artifactId>udemy-rsmortgage-person-service</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>udemy-rsmortgage-person-service</name>

<description>Demo project for Spring Boot</description>

1.7 – Add Parent project

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>1.3.6.RELEASE</version>

</parent>

1.8 – Add Properties

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

<project.reporting.outputEncoding>UTF-8</project.reporting.outputEncoding>

<java.version>1.8</java.version>

<start-class>com.rollingstone.Application</start-class>

<!-- <slf4j.version>1.6.4</slf4j.version>

<logback.version>1.0.1</logback.version> -->

</properties>

1.9– Add web and actuator Dependencies

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-actuator</artifactId>

</dependency>

<!-- web development, including Tomcat and spring-webmvc -->

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

1.10 – Add security and tomcat dependencies

<!-- Spring security -->

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-security</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-tomcat</artifactId>

<scope>provided</scope>

</dependency>

1.11 – Add jpa orm and h2 db dependencies

<!-- spring-data-jpa, spring-orm and Hibernate -->

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-data-jpa</artifactId>

</dependency>

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<version>1.4.181</version>

</dependency>

<dependency>

<groupId>org.hsqldb</groupId>

<artifactId>hsqldb</artifactId>

<scope>runtime</scope>

</dependency>

1.12 – Add spring test dependencies

<!-- spring-test, hamcrest, ... -->

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

<!-- attribute level json comparisons -->

<dependency>

<groupId>com.jayway.jsonpath</groupId>

<artifactId>json-path</artifactId>

<version>0.9.1</version>

<scope>test</scope>

</dependency>

<dependency>

<groupId>com.jayway.jsonpath</groupId>

<artifactId>json-path-assert</artifactId>

<version>0.9.1</version>

<scope>test</scope>

</dependency>

1.13 – Add Jackson databind dependencies

<dependency>

<groupId>com.fasterxml.jackson.core</groupId>

<artifactId>jackson-databind</artifactId>

</dependency>

1.14 – Add HAL Browser dependencies

<dependency>

<groupId>org.springframework.data</groupId>

<artifactId>spring-data-rest-hal-browser</artifactId>

</dependency>

1.15 – Add Swagger dependencies

<dependency>

<groupId>io.springfox</groupId>

<artifactId>springfox-swagger2</artifactId>

<version>2.3.1</version>

</dependency>

<dependency>

<groupId>io.springfox</groupId>

<artifactId>springfox-swagger-ui</artifactId>

<version>2.3.1</version>

</dependency>

1.16 – Add MySQL Driver dependencies

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<version>5.1.40</version>

</dependency>

1.17 – Add maven build section

<build>

<resources>

<resource>

<directory>src/main/resources</directory>

<filtering>true</filtering>

</resource>

</resources>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.1</version>

<configuration>

<source>1.8</source>

<target>1.8</target>

</configuration>

</plugin>

<!-- Spring boot support -->

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

<configuration>

<addResources>false</addResources>

</configuration>

</plugin>

</plugins>

</build>

1.18 –Add properties for application.properties resource directory

logging.level.org.springframework.web=INFO

logging.level.guru.springframework.blogs.controllers=INFO

logging.level.org.hibernate=ERROR

logging.file=logs/spring-boot-logging.log

1.19 –Create application.yml under resource directory

spring.jmx:

enabled: **false**

spring.datasource:

driverClassName: org.h2.Driver

url: jdbc:h2:mem:bootexample;MODE=MySQL

server:

port: 8090

#todo: make sure to always enable security in production

security:

basic:

enabled: **false**

#management endpoints on a separate port

management:

port: 8091

security:

enabled: **false** # management port is internal only. no need to secure it.

#default project info followed by actual injected pom-specified values.

project:

name: udemy-rsmortgage-person-service

version: 0.1

description: udemy-rsmortgage-person-service

info:

build:

artifact: ${project.artifactId}

name: ${project.name}

description: ${project.description}

version: ${project.version}

spring.jpa:

hibernate.ddl-auto: create-drop

---

spring:

profiles: mysql

datasource:

driverClassName: com.mysql.jdbc.Driver

url: jdbc:mysql://localhost/rsmortgage

username: root

password: root

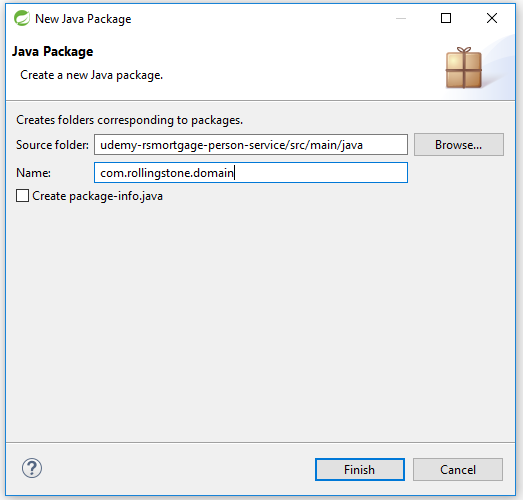
jpa:

hibernate:

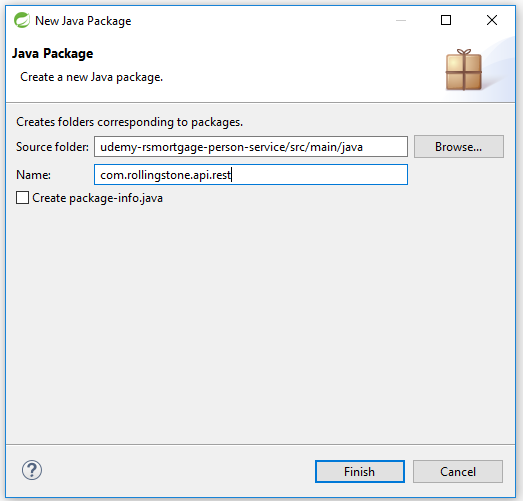
dialect: org.hibernate.dialect.MySQLInnoDBDialect

ddl-auto: update # todo: in non-dev environments, comment this out:

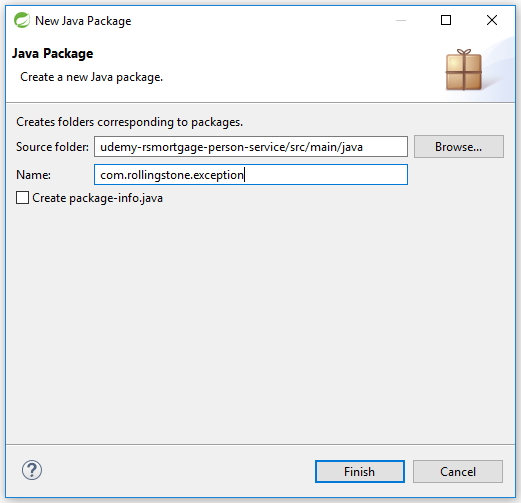
1.20 –Create domain package



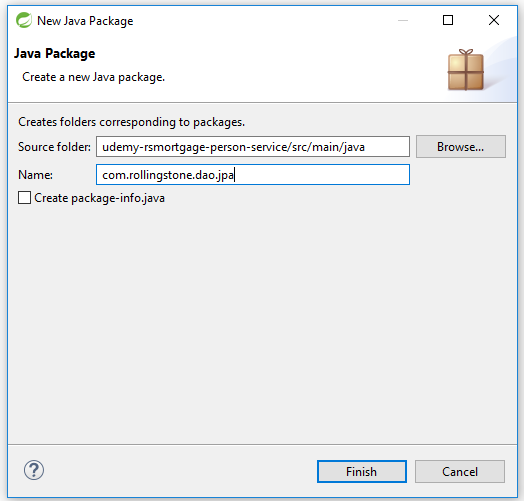
1.21 –Create api.rest package



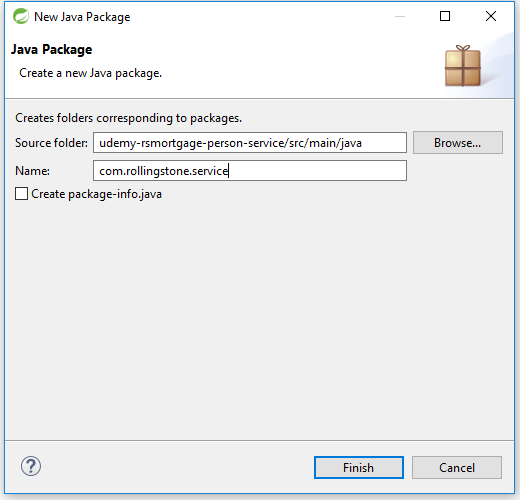
1.22 –Create exception package



1.23 –Create dao.jpa package



1.24 –Create service package



1.25 –Create Person domain class in domain package

**package** com.rollingstone.domain;

**import** java.util.Date;

**import** javax.persistence.\*;

**import** javax.xml.bind.annotation.\*;

/\*

\* a simple domain entity doubling as a DTO

\*/

@Entity

@Table(name = "rsmortgage\_person")

@XmlRootElement

@XmlAccessorType(XmlAccessType.***FIELD***)

**public** **class** Person {

@Id

@GeneratedValue()

**private** **long** id;

@Column(nullable = **false**)

**private** String firstName;

@Column(nullable = **false**)

**private** String lastName;

@Temporal(TemporalType.***DATE***)

@Column(name = "dob", unique = **true**, nullable = **false**, length = 10)

**private** Date dateOfBirth;

@Column(nullable = **false**)

**private** **int** age;

@Column(nullable = **false**)

**private** String socialSecurityNumber;

**public** Person() {

}

}

1.26 –Do the following for the Person domain class

* Generate a non-default constructor using all fields
* Generate a hashCode methos
* Generate an equals method
* Generate a toString method using all fields
* Generate getter and setters for all fields

1.27 –Create RESTAPIErrorInfo domain class

**package** com.rollingstone.domain;

**import** javax.xml.bind.annotation.XmlRootElement;

@XmlRootElement

**public** **class** RESTAPIErrorInfo {

**public** **final** String errorDetail;

**public** **final** String errorMessage;

**public** RESTAPIErrorInfo(Exception ex, String detail) {

**this**.errorMessage = ex.getLocalizedMessage();

**this**.errorDetail = detail;

}

}

1.28 –Create HTTP400Exception class in the exception pckage

**package** com.rollingstone.exception;

/\*\*

\* for HTTP 400 Bad Request errors

\*/

**public** **final** **class** HTTP400Exception **extends** RuntimeException {

**public** HTTP400Exception() {

**super**();

}

**public** HTTP400Exception(String message, Throwable cause) {

**super**(message, cause);

}

**public** HTTP400Exception(String message) {

**super**(message);

}

**public** HTTP400Exception(Throwable cause) {

**super**(cause);

}

}

1.29 –Create HTTP404Exception class in the exception pckage

**package** com.rollingstone.exception;

/\*\*

\* For HTTP 404 Not Found errros

\*/

**public** **class** HTTP404Exception **extends** RuntimeException {

/\*\*

\*

\*/

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**public** HTTP404Exception() {

**super**();

}

**public** HTTP404Exception(String message, Throwable cause) {

**super**(message, cause);

}

**public** HTTP404Exception(String message) {

**super**(message);

}

**public** HTTP404Exception(Throwable cause) {

**super**(cause);

}

}

1.30 –Create PersonRepository interface in the dao.jpa package

package com.rollingstone.dao.jpa;

import java.util.List;

import org.springframework.data.domain.Page;

import org.springframework.data.domain.Pageable;

import org.springframework.data.repository.PagingAndSortingRepository;

import com.rollingstone.domain.Person;

public interface PersonRepository extends PagingAndSortingRepository<Person, Long> {

Person findPersopnByage(int age);

List<Person> findPersonByLastName(String lastName);

Page findAll(Pageable pageable);

}

1.31 –Create ServiceProperties class in the service package

package com.rollingstone.service;

import org.springframework.boot.context.properties.ConfigurationProperties;

import org.springframework.stereotype.Component;

import javax.validation.constraints.NotNull;

/\*

\* demonstrates how service-specific properties can be injected

\*/

@ConfigurationProperties(prefix = "person.service", ignoreUnknownFields = false)

@Component

public class ServiceProperties {

@NotNull // you can also create configurationPropertiesValidator

private String name = "Empty";

public String getName() {

return this.name;

}

public void setName(String name) {

this.name = name;

}

}

1.32 –Create PersonServiceHealth class in the service package

package com.rollingstone.service;

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

import org.springframework.boot.actuate.health.Health;

import org.springframework.boot.actuate.health.HealthIndicator;

import org.springframework.stereotype.Component;

/\*\*

\* This is an optional class used to inject application specific health check

\* into the Spring Boot health management endpoint.

\*/

@Component

public class PersonServiceHealth implements HealthIndicator {

@Autowired

private ServiceProperties configuration;

// extend this to create an application-specific health check according to http://goo.gl/vt8I7O

@Override

public Health health() {

return Health.up().withDetail("details", "{ 'internals' : 'getting close to limit', 'profile' : '" + this.configuration.getName() + "' }").status("itsok!").build();

}

}

1.33 –Create PersonServiceEvent class in the service package

package com.rollingstone.service;

import org.springframework.context.ApplicationEvent;

import com.rollingstone.domain.Person;

/\*\*

\* This is an optional class used in publishing application events.

\* This can be used to inject events into the Spring Boot audit management endpoint.

\*/

public class PersonServiceEvent extends ApplicationEvent {

Person eventPerson;

String eventType;

public PersonServiceEvent(Object source, String eventType, Person person) {

super(source);

this.eventType = eventType;

this.eventPerson = person;

}

public String toString() {

return "My PErsonService Event";

}

public Person getEventPerson() {

return eventPerson;

}

public void setEventPerson(Person eventPerson) {

this.eventPerson = eventPerson;

}

public String getEventType() {

return eventType;

}

public void setEventType(String eventType) {

this.eventType = eventType;

}

}

1.34 –Create PersonServiceListener class in the service package

package com.rollingstone.service;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.context.ApplicationListener;

import org.springframework.stereotype.Component;

@Component

public class PersonEventListener implements ApplicationListener<PersonServiceEvent>

{

private final Logger logger = LoggerFactory.getLogger(this.getClass());

public void onApplicationEvent(PersonServiceEvent event)

{

PersonServiceEvent personEvent = (PersonServiceEvent) event;

logger.info("Person " + event.getEventType() + " with details : " + event.getEventPerson());

System.out.println("Person " + event.getEventType() + " with details : " + event.getEventPerson());

}

}

1.35 –Create PersonService class in the service package

package com.rollingstone.service;

import com.rollingstone.dao.jpa.PersonRepository;

import com.rollingstone.domain.Person;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

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

import org.springframework.boot.actuate.metrics.CounterService;

import org.springframework.boot.actuate.metrics.GaugeService;

import org.springframework.data.domain.Page;

import org.springframework.data.domain.PageRequest;

import org.springframework.stereotype.Service;

@Service

public class PersonService {

private static final Logger log = LoggerFactory.getLogger(PersonService.class);

@Autowired

private PersonRepository personRepository;

@Autowired

CounterService counterService;

@Autowired

GaugeService gaugeService;

public PersonService() {

}

public Person createPerson(Person person) {

return personRepository.save(person);

}

public Person getPerson(long id) {

return personRepository.findOne(id);

}

public void updatePerson(Person person) {

personRepository.save(person);

}

public void deletePerson(Long id) {

personRepository.delete(id);

}

public Page<Person> getAllPersons(Integer page, Integer size) {

Page pageOfPersons = personRepository.findAll(new PageRequest(page, size));

// example of adding to the /metrics

if (size > 50) {

counterService.increment("com.rollingstone.PersonService.getAll.largePayload");

}

return pageOfPersons;

}

}

1.36 –Create AbstractRestHandler class in the rest.api package

package com.rollingstone.api.rest;

import javax.servlet.http.HttpServletResponse;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

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

import org.springframework.boot.actuate.metrics.CounterService;

import org.springframework.context.ApplicationEventPublisher;

import org.springframework.context.ApplicationEventPublisherAware;

import org.springframework.http.HttpStatus;

import org.springframework.web.bind.annotation.ExceptionHandler;

import org.springframework.web.bind.annotation.ResponseBody;

import org.springframework.web.bind.annotation.ResponseStatus;

import org.springframework.web.context.request.WebRequest;

import com.rollingstone.domain.RESTAPIErrorInfo;

import com.rollingstone.exception.HTTP400Exception;

import com.rollingstone.exception.HTTP404Exception;

/\*\*

\* This class is used as a super class to be extended by all REST API "controllers".

\*/

public abstract class AbstractRestHandler implements ApplicationEventPublisherAware {

protected final Logger log = LoggerFactory.getLogger(this.getClass());

protected ApplicationEventPublisher eventPublisher;

protected static final String DEFAULT\_PAGE\_SIZE = "100";

protected static final String DEFAULT\_PAGE\_NUM = "0";

@Autowired

CounterService counterService;

@ResponseStatus(HttpStatus.BAD\_REQUEST)

@ExceptionHandler(HTTP400Exception.class)

public

@ResponseBody

RESTAPIErrorInfo handleDataStoreException(HTTP400Exception ex, WebRequest request, HttpServletResponse response) {

log.info("Converting Data Store exception to RestResponse : " + ex.getMessage());

counterService.increment("com.rollingstone.http.400.count");

return new RESTAPIErrorInfo(ex, "You messed up.");

}

@ResponseStatus(HttpStatus.NOT\_FOUND)

@ExceptionHandler(HTTP404Exception.class)

public

@ResponseBody

RESTAPIErrorInfo handleResourceNotFoundException(HTTP404Exception ex, WebRequest request, HttpServletResponse response) {

log.info("ResourceNotFoundException handler:" + ex.getMessage());

counterService.increment("com.rollingstone.http.404.count");

return new RESTAPIErrorInfo(ex, "Sorry I couldn't find it.");

}

@Override

public void setApplicationEventPublisher(ApplicationEventPublisher applicationEventPublisher) {

this.eventPublisher = applicationEventPublisher;

}

public static <T> T checkResourceFound(final T resource) {

if (resource == null) {

throw new HTTP404Exception("resource not found");

}

return resource;

}

}

1.37 –Add PersonController in the rest.api package

package com.rollingstone.api.rest;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

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

import org.springframework.data.domain.Page;

import org.springframework.http.HttpStatus;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.RequestBody;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import org.springframework.web.bind.annotation.RequestParam;

import org.springframework.web.bind.annotation.ResponseBody;

import org.springframework.web.bind.annotation.ResponseStatus;

import org.springframework.web.bind.annotation.RestController;

import com.rollingstone.domain.Person;

import com.rollingstone.exception.HTTP404Exception;

import com.rollingstone.service.PersonService;

import com.rollingstone.service.PersonServiceEvent;

@RestController

@RequestMapping(value = "/rsmortgage-personservice/v1/person")

public class PersonController extends AbstractRestHandler {

@Autowired

private PersonService personService;

@RequestMapping(value = "",

method = RequestMethod.POST,

consumes = {"application/json", "application/xml"},

produces = {"application/json", "application/xml"})

@ResponseStatus(HttpStatus.CREATED)

public void createPerson(@RequestBody Person person,

HttpServletRequest request, HttpServletResponse response) {

Person createdPerson = this.personService.createPerson(person);

eventPublisher.publishEvent(new PersonServiceEvent(this,"PersonCreated",createdPerson));

response.setHeader("Location", request.getRequestURL().append("/").append(createdPerson.getId()).toString());

}

@RequestMapping(value = "",

method = RequestMethod.GET,

produces = {"application/json", "application/xml"})

@ResponseStatus(HttpStatus.OK)

public

@ResponseBody

Page<Person> getAllPerson(@RequestParam(value = "page", required = true, defaultValue = DEFAULT\_PAGE\_NUM) Integer page,

@RequestParam(value = "size", required = true, defaultValue = DEFAULT\_PAGE\_SIZE) Integer size,

HttpServletRequest request, HttpServletResponse response) {

return this.personService.getAllPersons(page, size);

}

@RequestMapping(value = "/{id}",

method = RequestMethod.GET,

produces = {"application/json", "application/xml"})

@ResponseStatus(HttpStatus.OK)

public

@ResponseBody

Person getPerson(@PathVariable("id") Long id,

HttpServletRequest request, HttpServletResponse response) throws Exception {

Person person = this.personService.getPerson(id);

checkResourceFound(person);

return person;

}

@RequestMapping(value = "/{id}",

method = RequestMethod.PUT,

consumes = {"application/json", "application/xml"},

produces = {"application/json", "application/xml"})

@ResponseStatus(HttpStatus.NO\_CONTENT)

public void updatePerson(@PathVariable("id") Long id, @RequestBody Person person,

HttpServletRequest request, HttpServletResponse response) {

checkResourceFound(this.personService.getPerson(id));

if (id != person.getId()) throw new HTTP404Exception("ID doesn't match!");

this.personService.updatePerson(person);

}

@RequestMapping(value = "/{id}",

method = RequestMethod.DELETE,

produces = {"application/json", "application/xml"})

@ResponseStatus(HttpStatus.NO\_CONTENT)

public void deletePerson(@PathVariable("id") Long id, HttpServletRequest request,

HttpServletResponse response) {

checkResourceFound(this.personService.getPerson(id));

this.personService.deletePerson(id);

}

}

1.38 –Add RestControllerAspect in the com.rollingstone package

package com.rollingstone;

import java.util.NoSuchElementException;

import org.aspectj.lang.JoinPoint;

import org.aspectj.lang.annotation.AfterReturning;

import org.aspectj.lang.annotation.AfterThrowing;

import org.aspectj.lang.annotation.Aspect;

import org.aspectj.lang.annotation.Before;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

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

import org.springframework.boot.actuate.metrics.CounterService;

import org.springframework.stereotype.Component;

@Aspect

@Component

public class RestControllerAspect {

private final Logger logger = LoggerFactory.getLogger(this.getClass());

@Autowired

CounterService counterService;

@Before("execution(public \* com.rollingstone.api.rest.\*Controller.\*(..))")

public void logBeforeRestCall(JoinPoint pjp) throws Throwable {

logger.info(":::::AOP Before REST call:::::" + pjp);

}

@AfterReturning("execution(public \* com.rollingstone.api.rest.\*Controller.createPerson\*(..))")

public void afterCallingCreatePerson(JoinPoint pjp) {

logger.info(":::::AOP @AfterReturning Create REST call:::::" + pjp);

counterService.increment("com.rollingstone.api.rest.PersonController.createPerson");

}

@AfterReturning("execution(public \* com.rollingstone.api.rest.\*Controller.getAllPerson\*(..))")

public void afterCallinggetAllPerson(JoinPoint pjp) {

logger.info(":::::AOP @AfterReturning getAllPerson REST call:::::" + pjp);

counterService.increment("com.rollingstone.api.rest.PersonController.getAllPerson");

}

@AfterReturning("execution(public \* com.rollingstone.api.rest.\*Controller.getPerson\*(..))")

public void afterCallinggetPerson(JoinPoint pjp) {

logger.info(":::::AOP @AfterReturning getPErson REST call:::::" + pjp);

counterService.increment("com.rollingstone.api.rest.PersonController.getPerson");

}

@AfterReturning("execution(public \* com.rollingstone.api.rest.\*Controller.updatePerson\*(..))")

public void afterCallingupdatePerson(JoinPoint pjp) {

logger.info(":::::AOP @AfterReturning update PErson REST call:::::" + pjp);

counterService.increment("com.rollingstone.api.rest.PersonController.updatePerson");

}

@AfterThrowing(pointcut = "execution(public \* com.rollingstone.api.rest.\*Controller.\*(..))", throwing = "e")

public void afterGetGreetingThrowsException(NoSuchElementException e) {

counterService.increment("counter.errors.person.controller");

}

}

1.39 –Add Application class in the com.rollingstone package

package com.rollingstone;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.EnableAutoConfiguration;

import org.springframework.boot.builder.SpringApplicationBuilder;

import org.springframework.boot.context.web.SpringBootServletInitializer;

import org.springframework.context.annotation.ComponentScan;

import org.springframework.data.jpa.repository.config.EnableJpaRepositories;

/\*

\* This is the main Spring Boot application class. It configures Spring Boot, JPA, Swagger

\*/

@EnableAutoConfiguration // Sprint Boot Auto Configuration

@ComponentScan(basePackages = "com.rollingstone")

@EnableJpaRepositories("com.rollingstone.dao.jpa") // To segregate MongoDB and JPA repositories. Otherwise not needed.

public class Application extends SpringBootServletInitializer {

private static final Class<Application> applicationClass = Application.class;

private static final Logger log = LoggerFactory.getLogger(applicationClass);

public static void main(String[] args) {

SpringApplication.run(applicationClass, args);

}

@Override

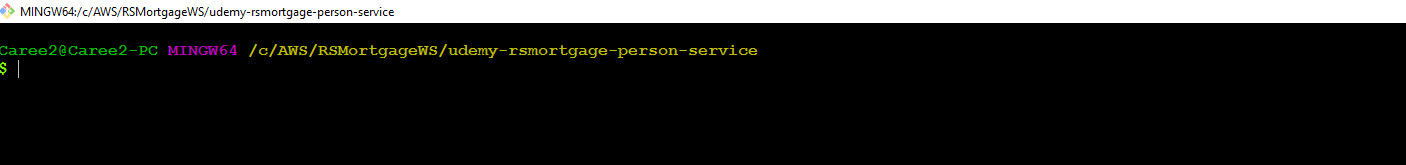
protected SpringApplicationBuilder configure(SpringApplicationBuilder application) {

return application.sources(applicationClass);

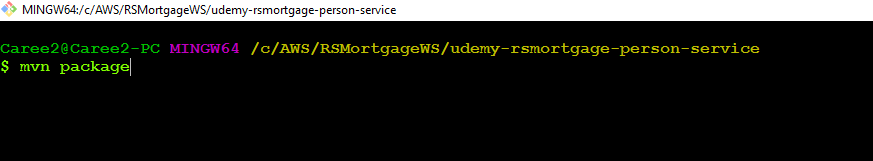
}

}

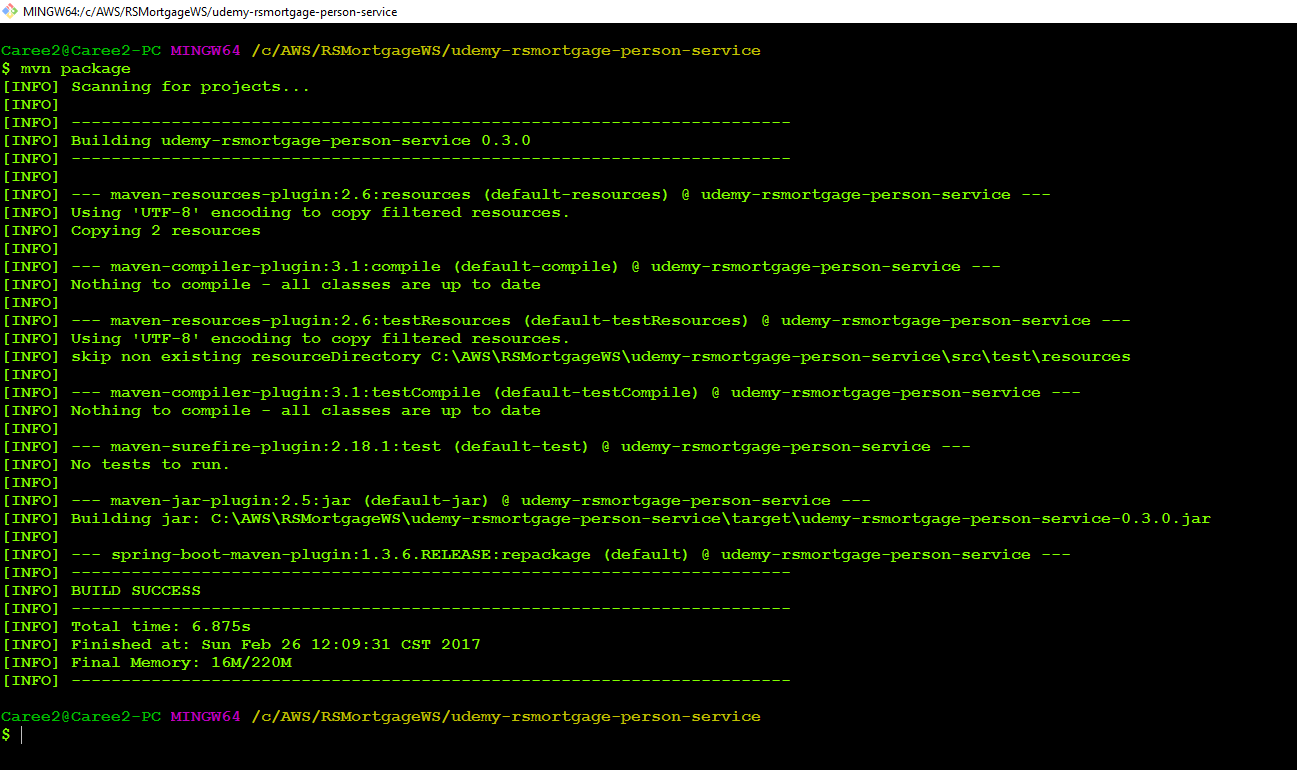
1.40 –Open Git Bash in project folder



1.41 –Run build

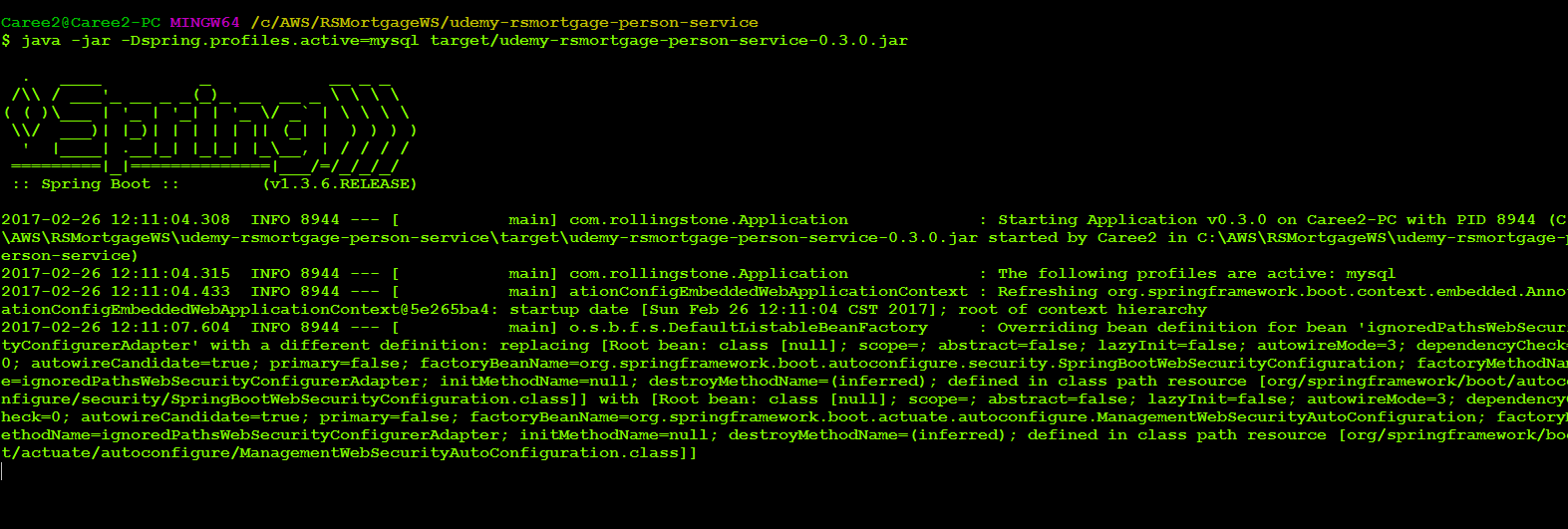


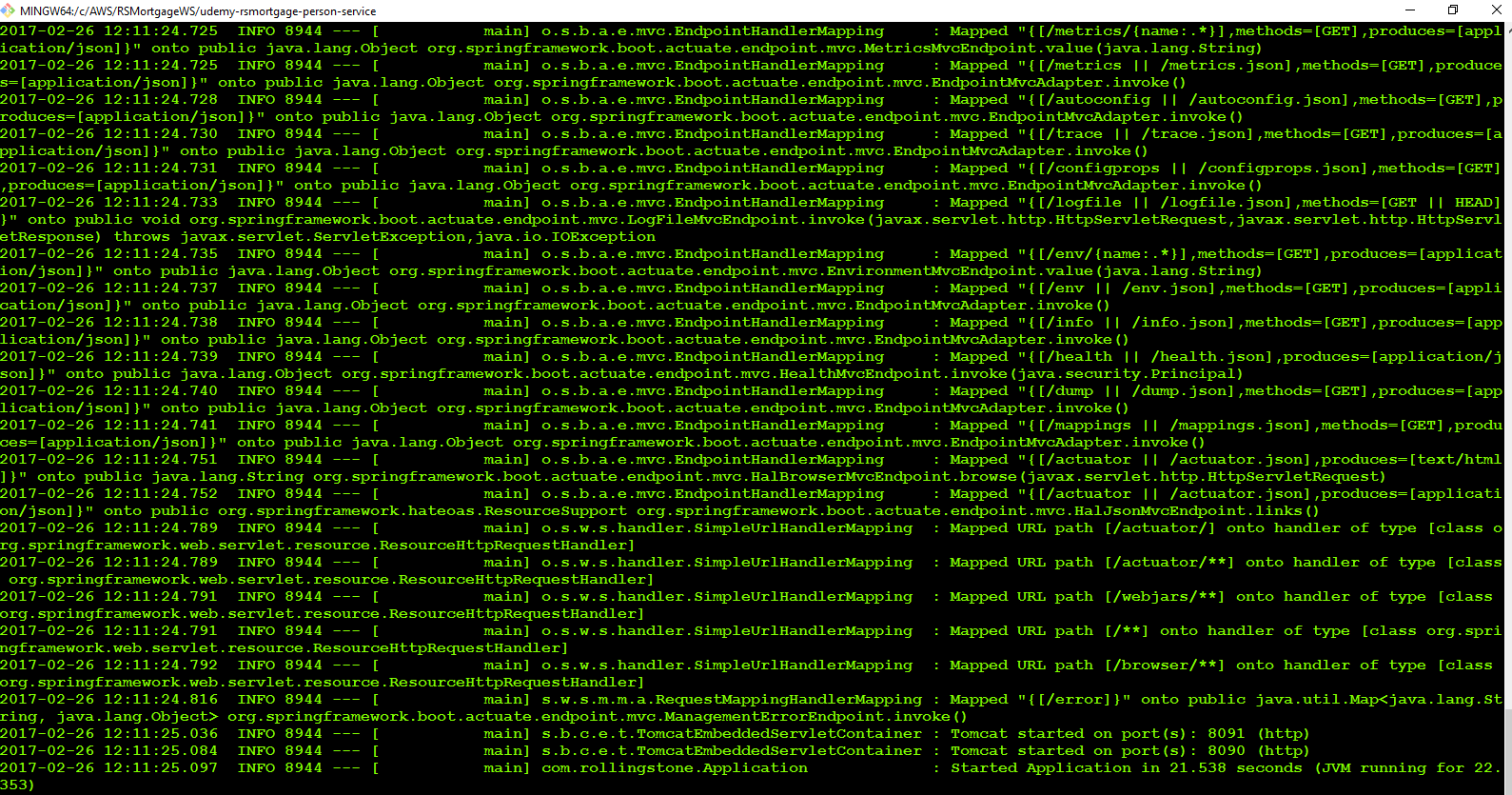
1.42 –Build successful



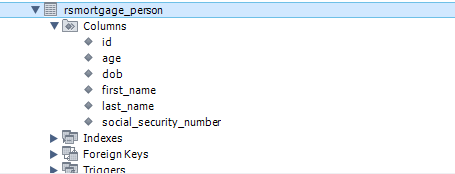
1.43 –Now Run

java -jar -Dspring.profiles.active=mysql target/udemy-rsmortgage-person-service-0.3.0.jar

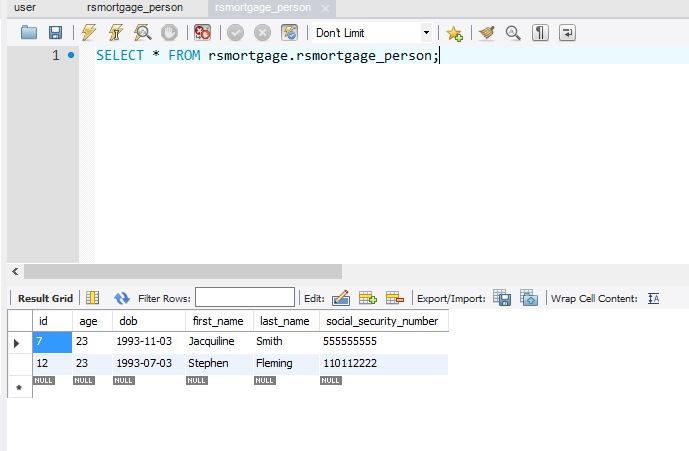




1.44 –Verify Database

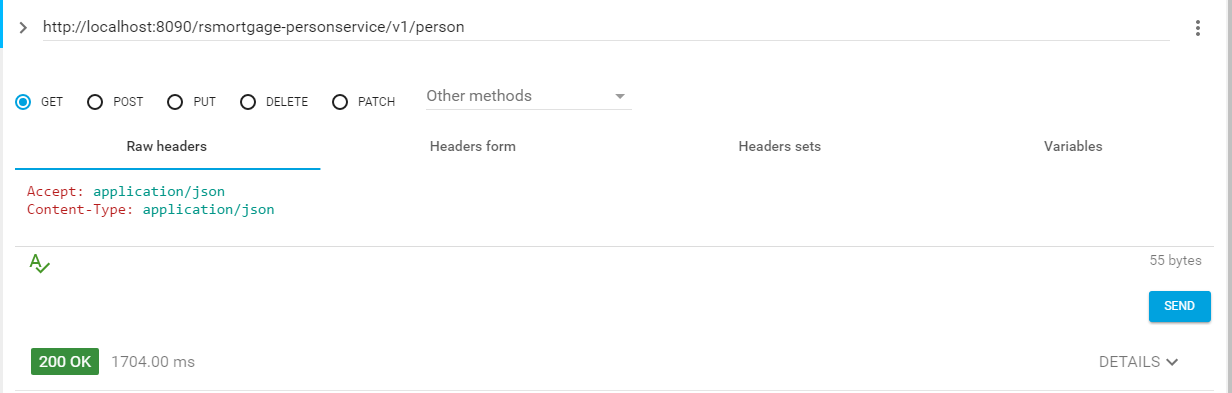


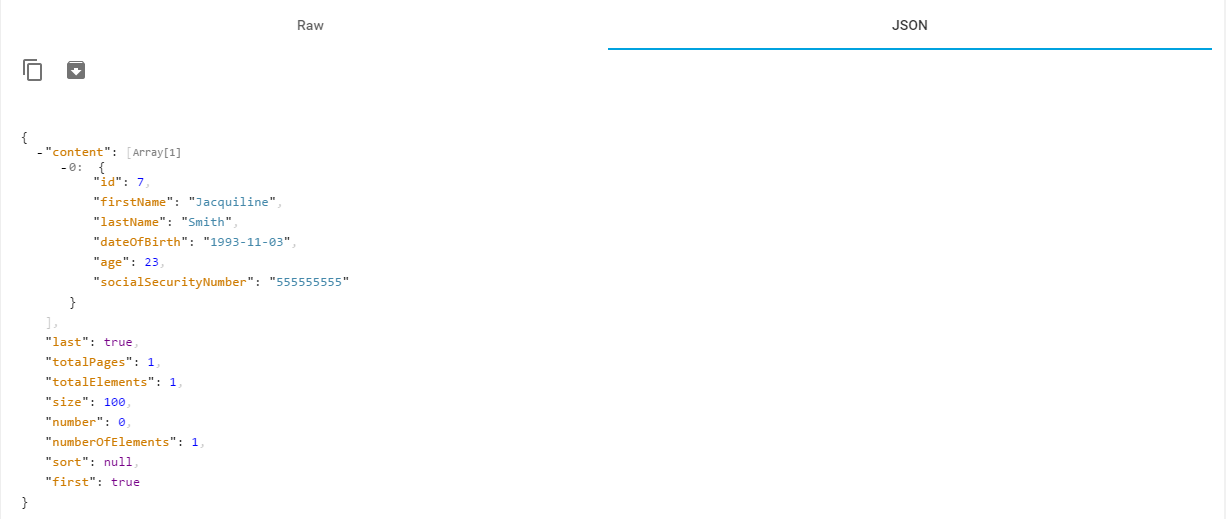
1.45 –Verify Database Data



1.46 –Verify Data Retrieval API is working

<http://localhost:8090/rsmortgage-personservice/v1/person>

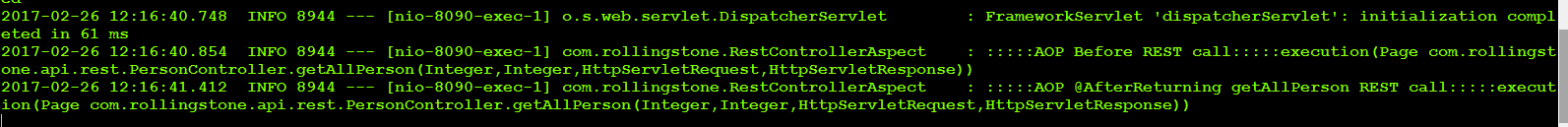




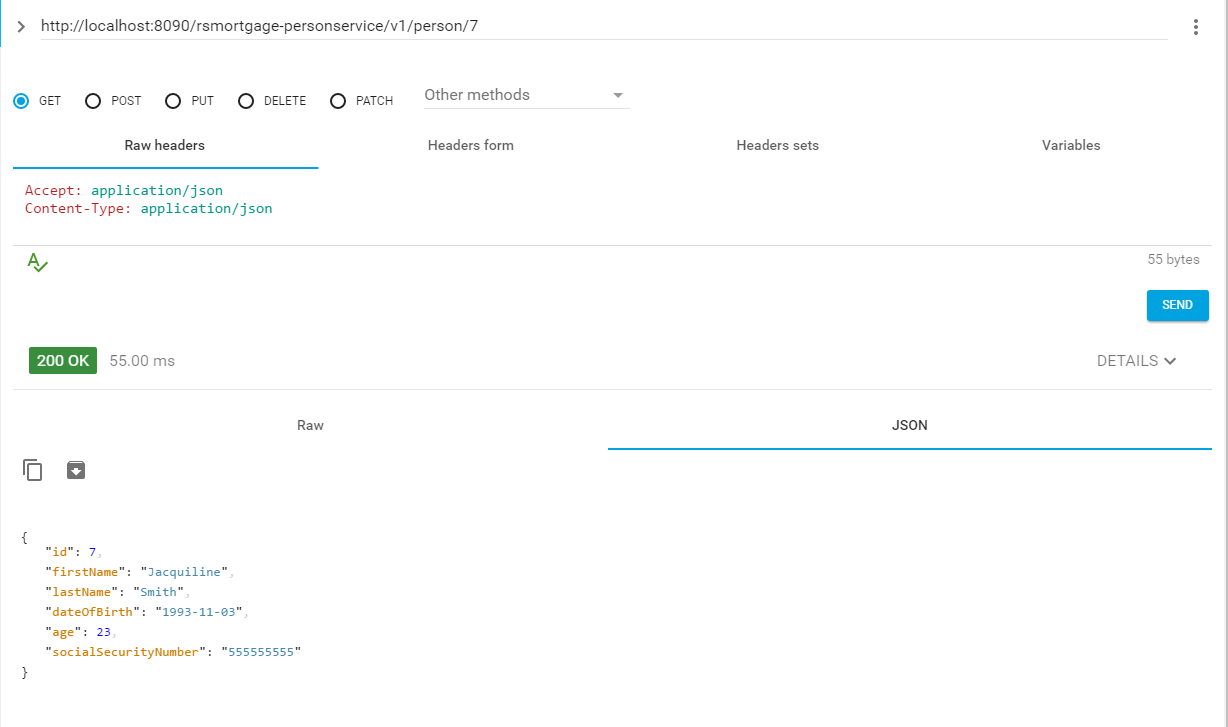
1.47 –Verify Data AOP for @Before and @AfterReturning

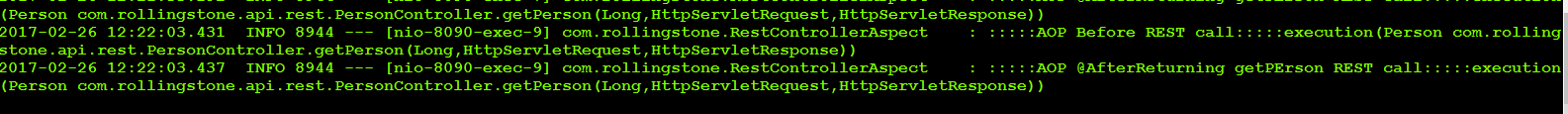
2017-02-26 12:16:40.854 INFO 8944 --- [nio-8090-exec-1] com.rollingstone.RestControllerAspect : :::::AOP Before REST call:::::execution(Page com.rollingstone.api.rest.PersonController.getAllPerson(Integer,Integer,HttpServletRequest,HttpServletResponse))

2017-02-26 12:16:41.412 INFO 8944 --- [nio-8090-exec-1] com.rollingstone.RestControllerAspect : :::::AOP @AfterReturning getAllPerson REST call:::::execution(Page com.rollingstone.api.rest.PersonController.getAllPerson(Integer,Integer,HttpServletRequest,HttpServletResponse))



1.47 –Verify Single Data Retrieval API is working





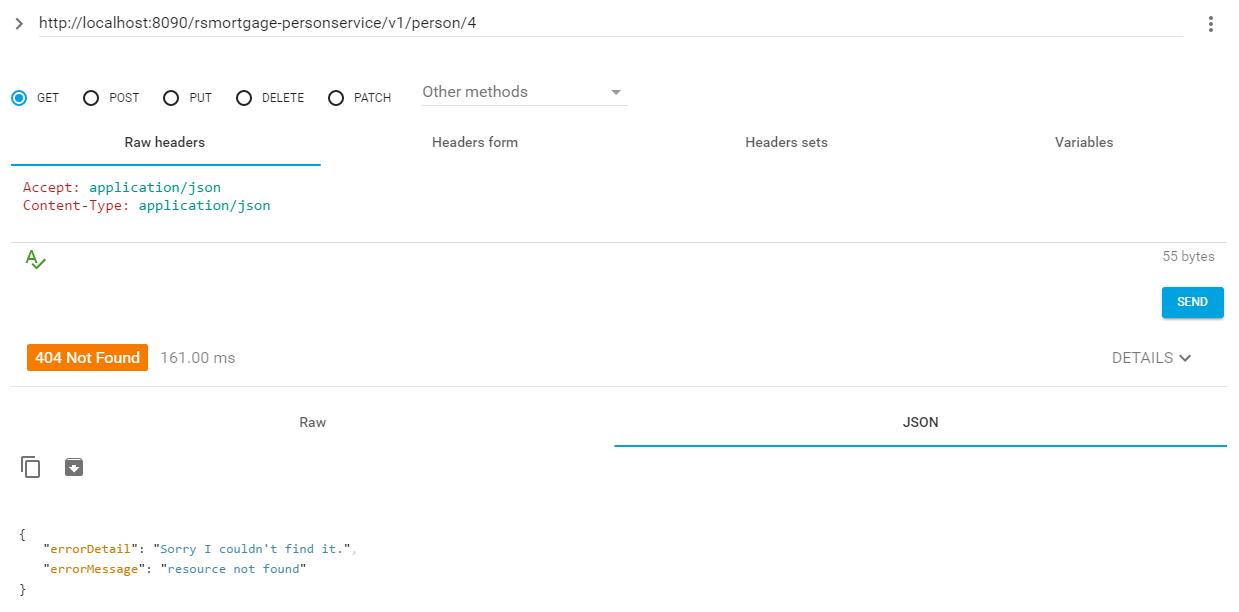
2017-02-26 12:22:03.431 INFO 8944 --- [nio-8090-exec-9] com.rollingstone.RestControllerAspect : :::::AOP Before REST call:::::execution(Person com.rollingstone.api.rest.PersonController.getPerson(Long,HttpServletRequest,HttpServletResponse))

2017-02-26 12:22:03.437 INFO 8944 --- [nio-8090-exec-9] com.rollingstone.RestControllerAspect : :::::AOP @AfterReturning getPErson REST call:::::execution(Person com.rollingstone.api.rest.PersonController.getPerson(Long,HttpServletRequest,HttpServletResponse))

1.48 –Verify Not Found is working

2017-02-26 12:19:33.435 INFO 8944 --- [nio-8090-exec-3] com.rollingstone.RestControllerAspect : :::::AOP Before REST call:::::execution(Person com.rollingstone.api.rest.PersonController.getPerson(Long,HttpServletRequest,HttpServletResponse))

2017-02-26 12:19:33.517 INFO 8944 --- [nio-8090-exec-3] c.r.api.rest.PersonController : ResourceNotFoundException handler:resource not found



1.49 –Verify Person Creation is working

[**http://localhost:8090/rsmortgage-personservice/v1/person**](http://localhost:8090/rsmortgage-personservice/v1/person)

{

"firstName": "Stephen",

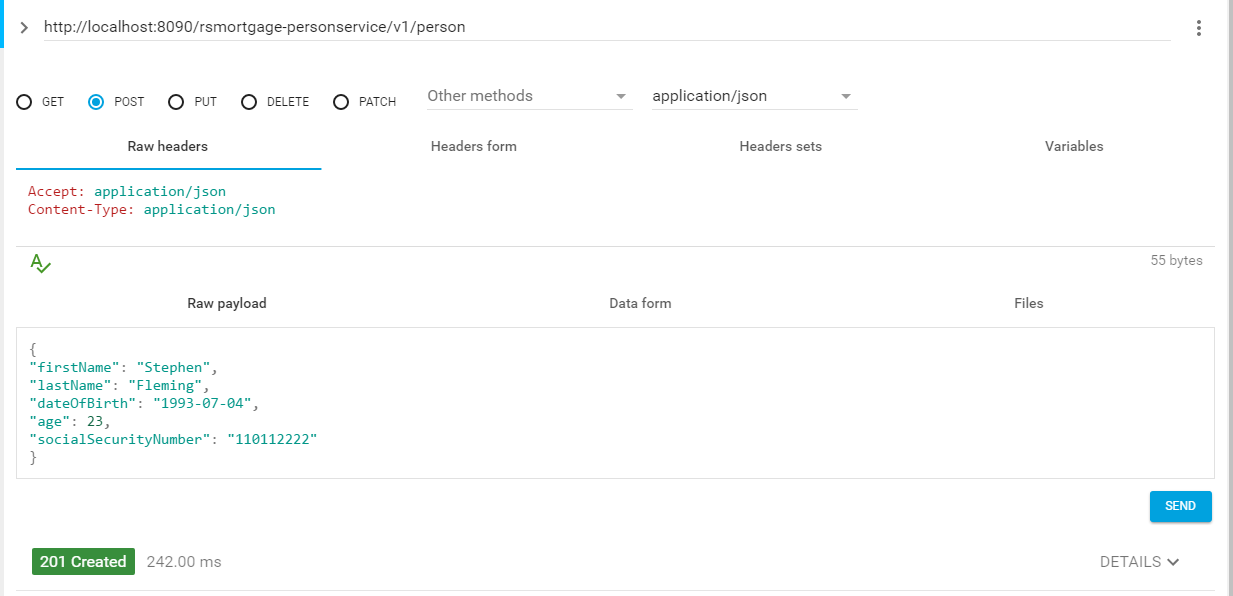
"lastName": "Fleming",

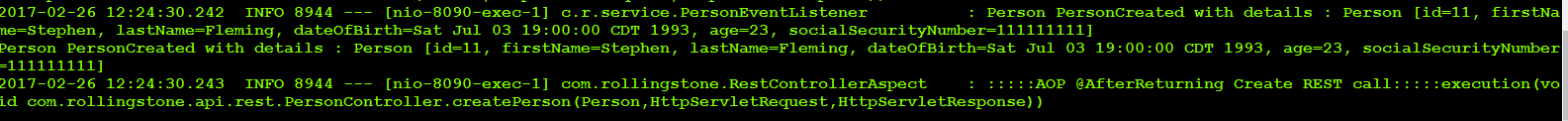
"dateOfBirth": "1993-07-04",

"age": 23,

"socialSecurityNumber": "110112222"

}

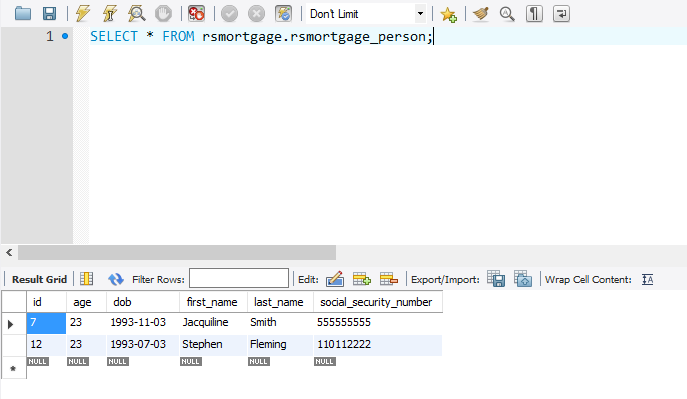




2017-02-26 12:24:30.242 INFO 8944 --- [nio-8090-exec-1] c.r.service.PersonEventListener : Person PersonCreated with details : Person [id=11, firstName=Stephen, lastName=Fleming, dateOfBirth=Sat Jul 03 19:00:00 CDT 1993, age=23, socialSecurityNumber=111111111]

Person PersonCreated with details : Person [id=11, firstName=Stephen, lastName=Fleming, dateOfBirth=Sat Jul 03 19:00:00 CDT 1993, age=23, socialSecurityNumber=111111111]

2017-02-26 12:24:30.243 INFO 8944 --- [nio-8090-exec-1] com.rollingstone.RestControllerAspect : :::::AOP @AfterReturning Create REST call:::::execution(void com.rollingstone.api.rest.PersonController.createPerson(Person,HttpServletRequest,HttpServletResponse))



1.49 –Verify Person Updation is working

<http://localhost:8090/rsmortgage-personservice/v1/person/11>

{

"id": 11,

"firstName": "Stephen",

"lastName": "Fleming",

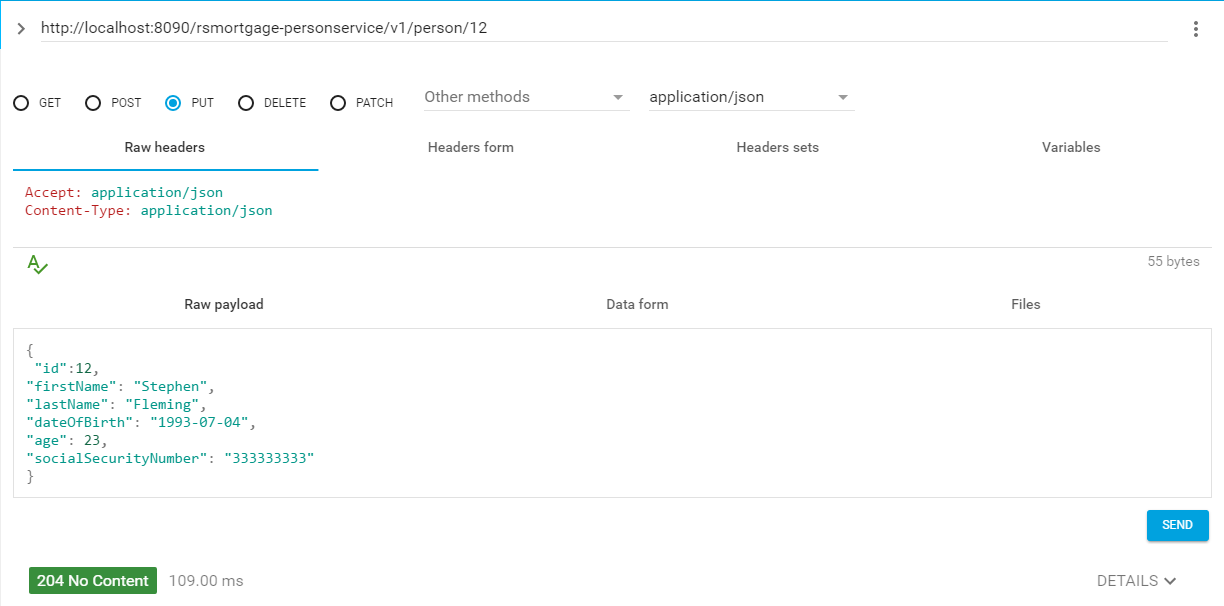
"dateOfBirth": "1993-07-04",

"age": 23,

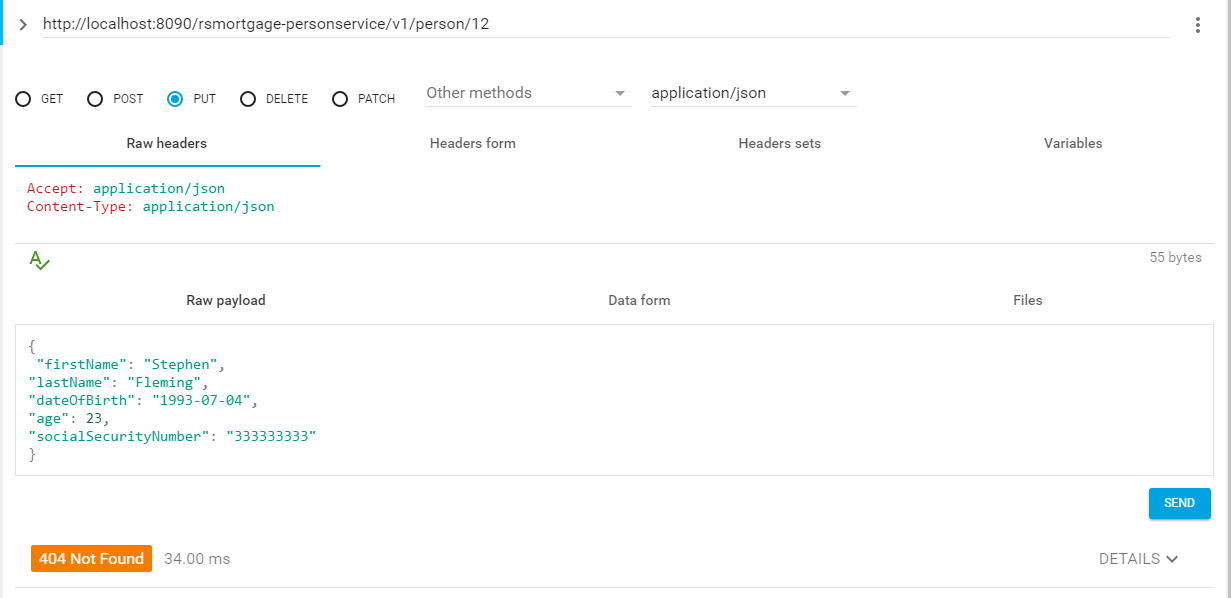
"socialSecurityNumber": "110112222"

}

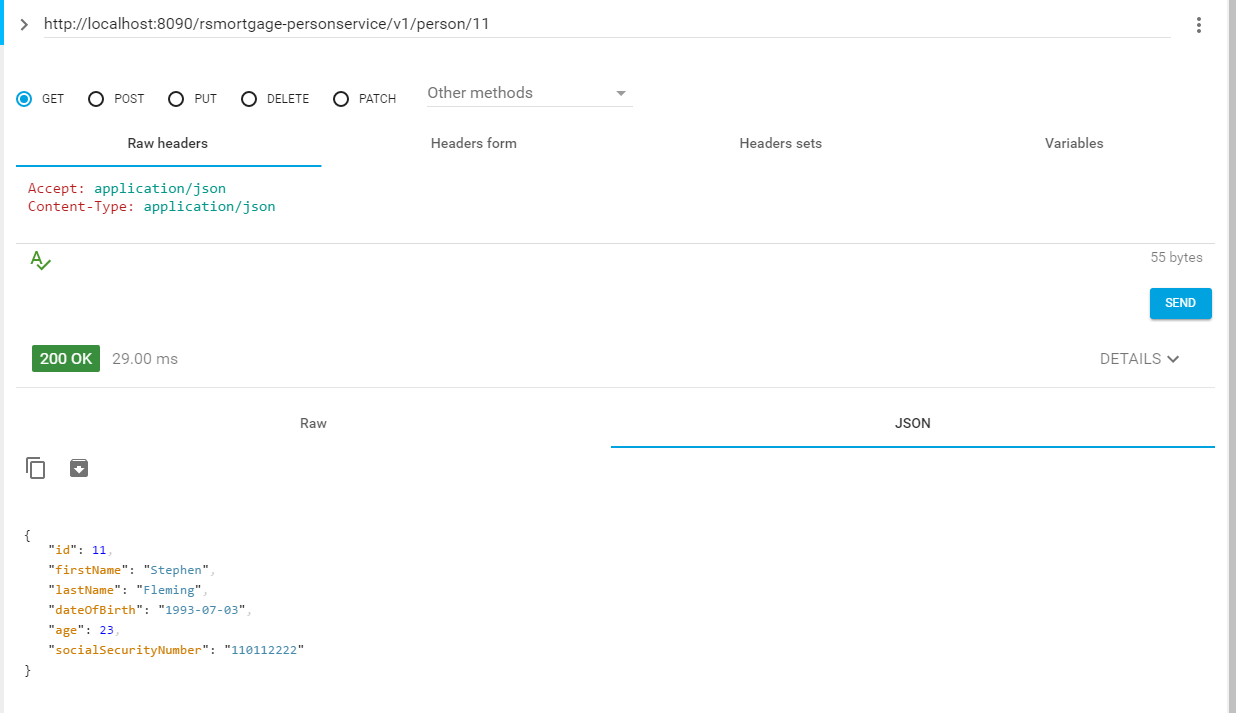
Before



**ID missing in payload**



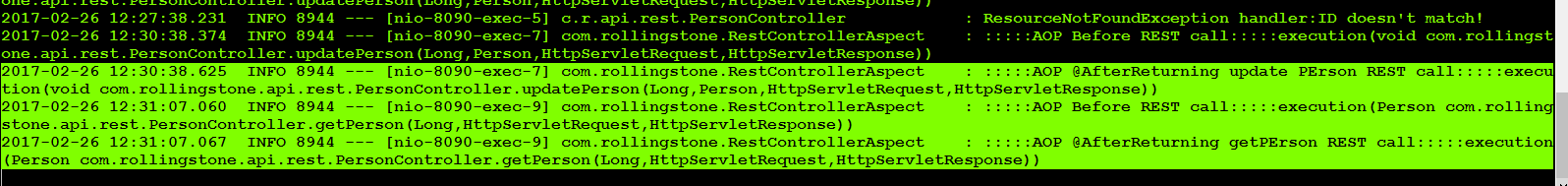
After



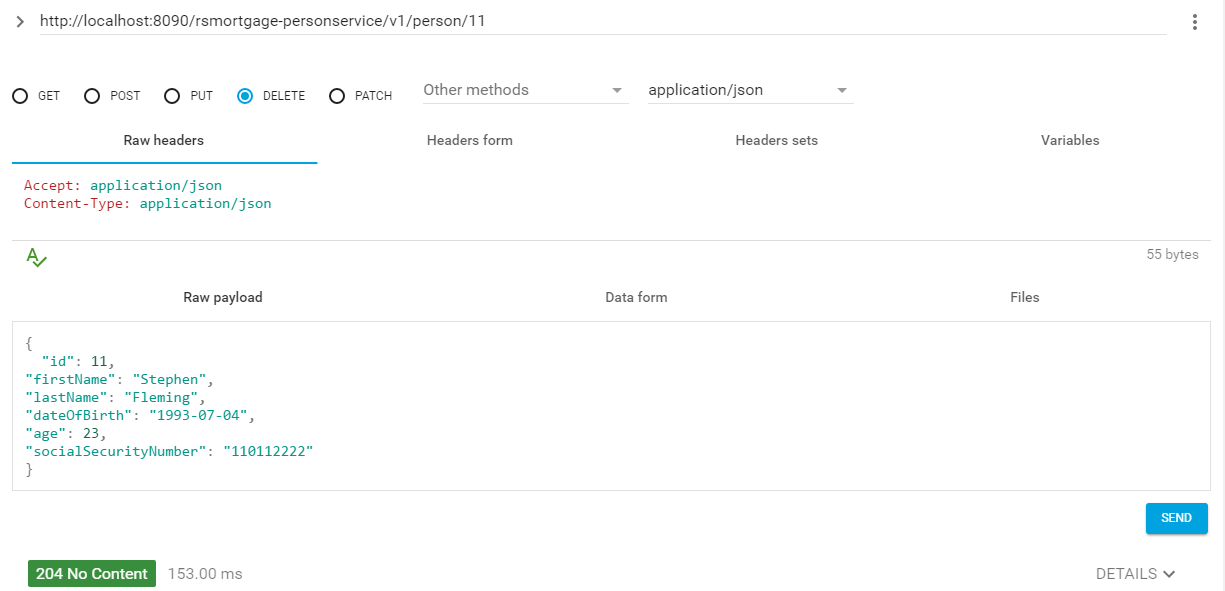
2017-02-26 12:30:38.625 INFO 8944 --- [nio-8090-exec-7] com.rollingstone.RestControllerAspect : :::::AOP @AfterReturning update PErson REST call:::::execution(void com.rollingstone.api.rest.PersonController.updatePerson(Long,Person,HttpServletRequest,HttpServletResponse))

2017-02-26 12:31:07.060 INFO 8944 --- [nio-8090-exec-9] com.rollingstone.RestControllerAspect : :::::AOP Before REST call:::::execution(Person com.rollingstone.api.rest.PersonController.getPerson(Long,HttpServletRequest,HttpServletResponse))

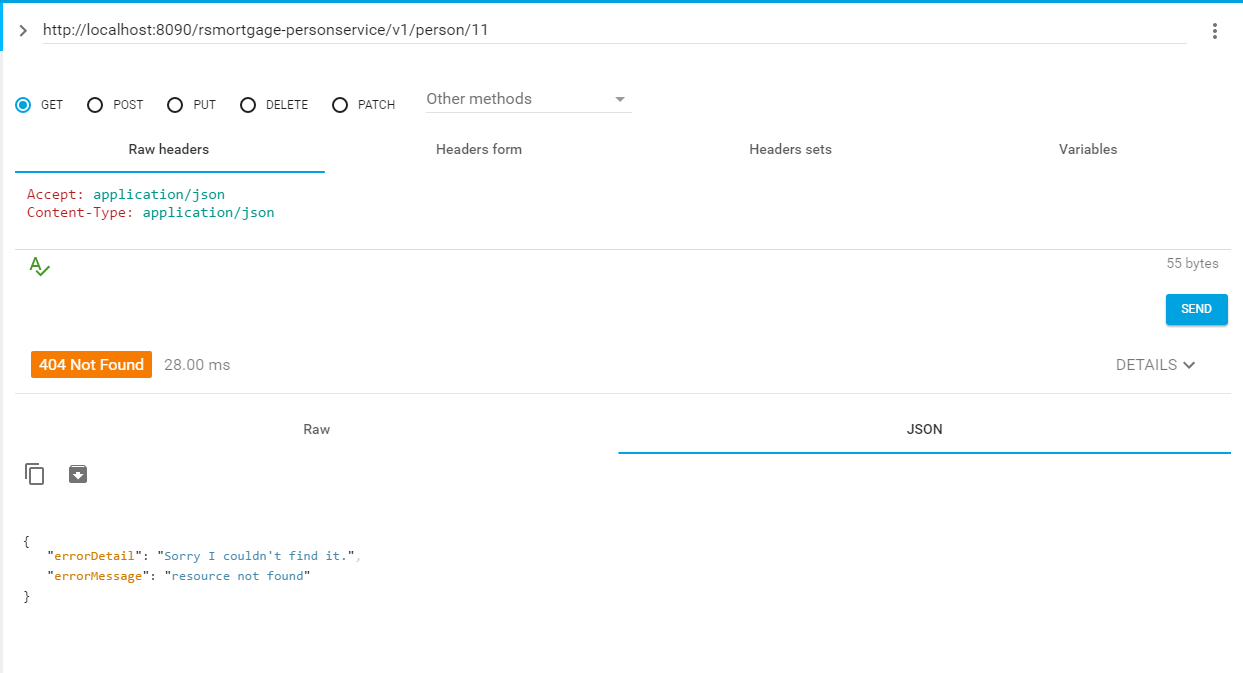
2017-02-26 12:31:07.067 INFO 8944 --- [nio-8090-exec-9] com.rollingstone.RestControllerAspect : :::::AOP @AfterReturning getPErson REST call:::::execution(Person com.rollingstone.api.rest.PersonController.getPerson(Long,HttpServletRequest,HttpServletResponse))



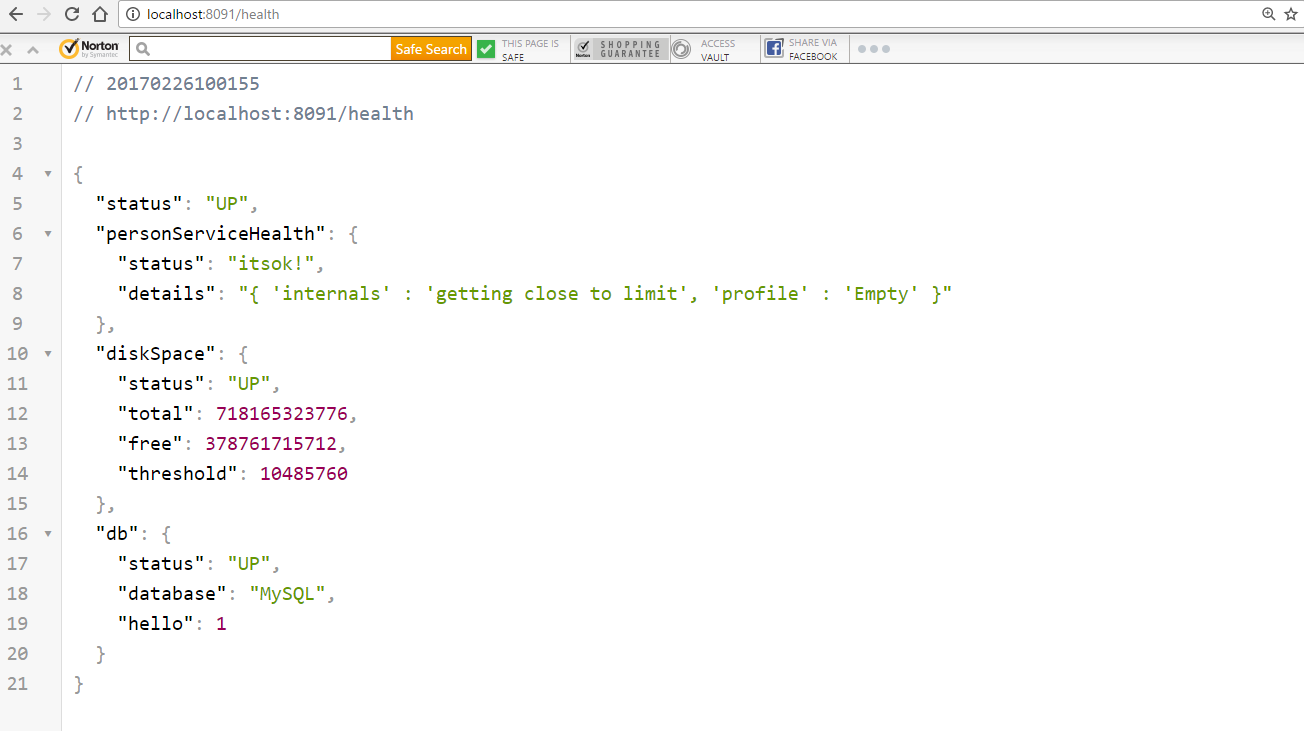
1.50 –Verify Person Deletion is working



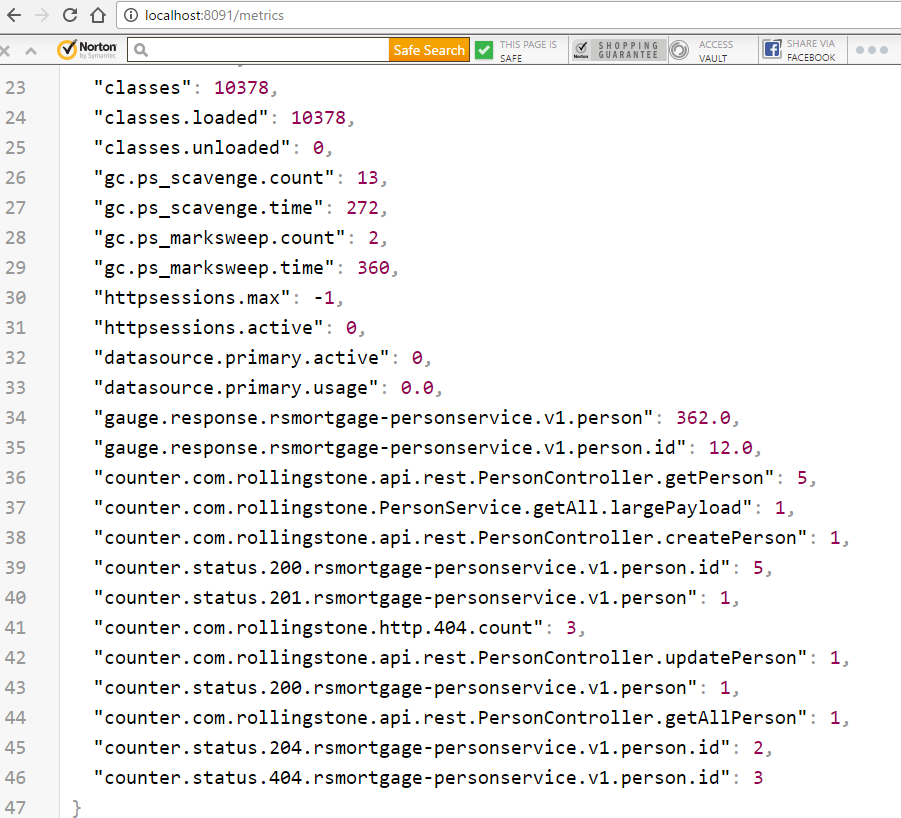
Not Found



1.51 –Custom Health

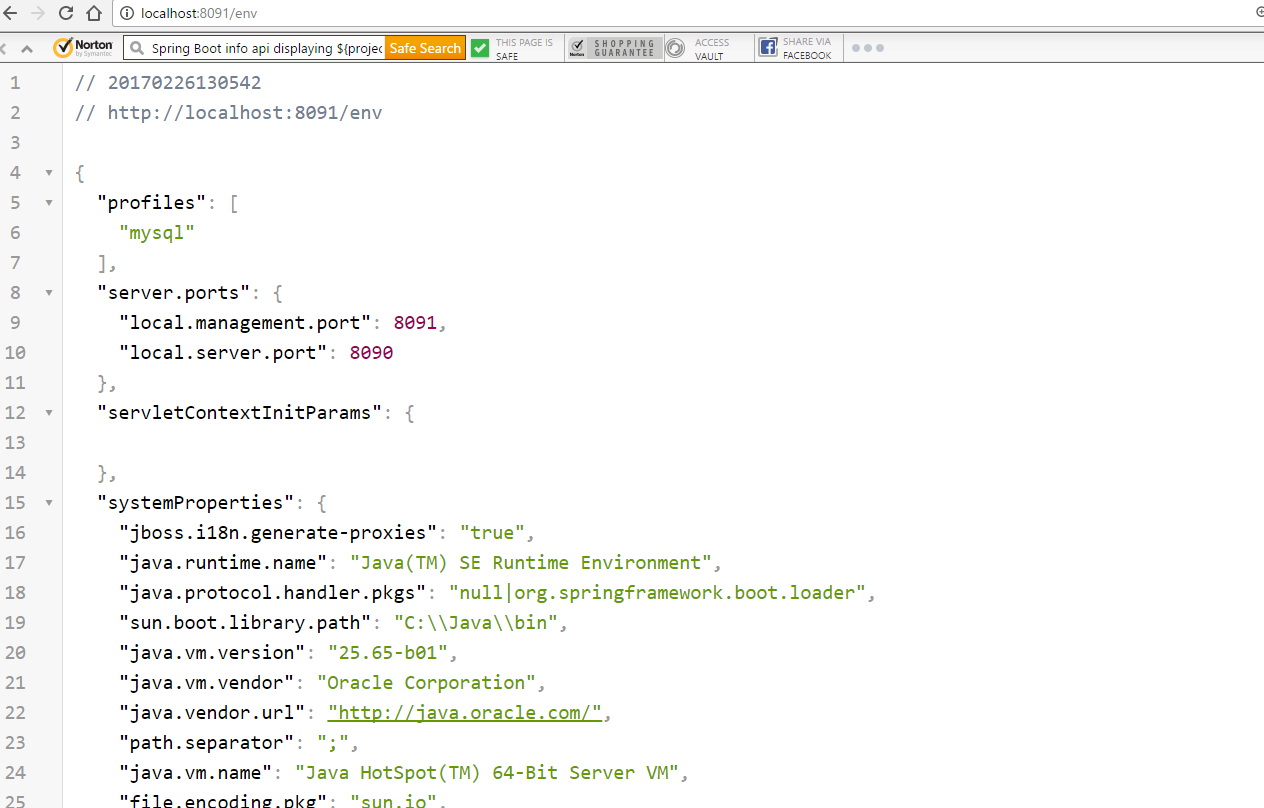


1.54 – Metrics and Custom Metrics



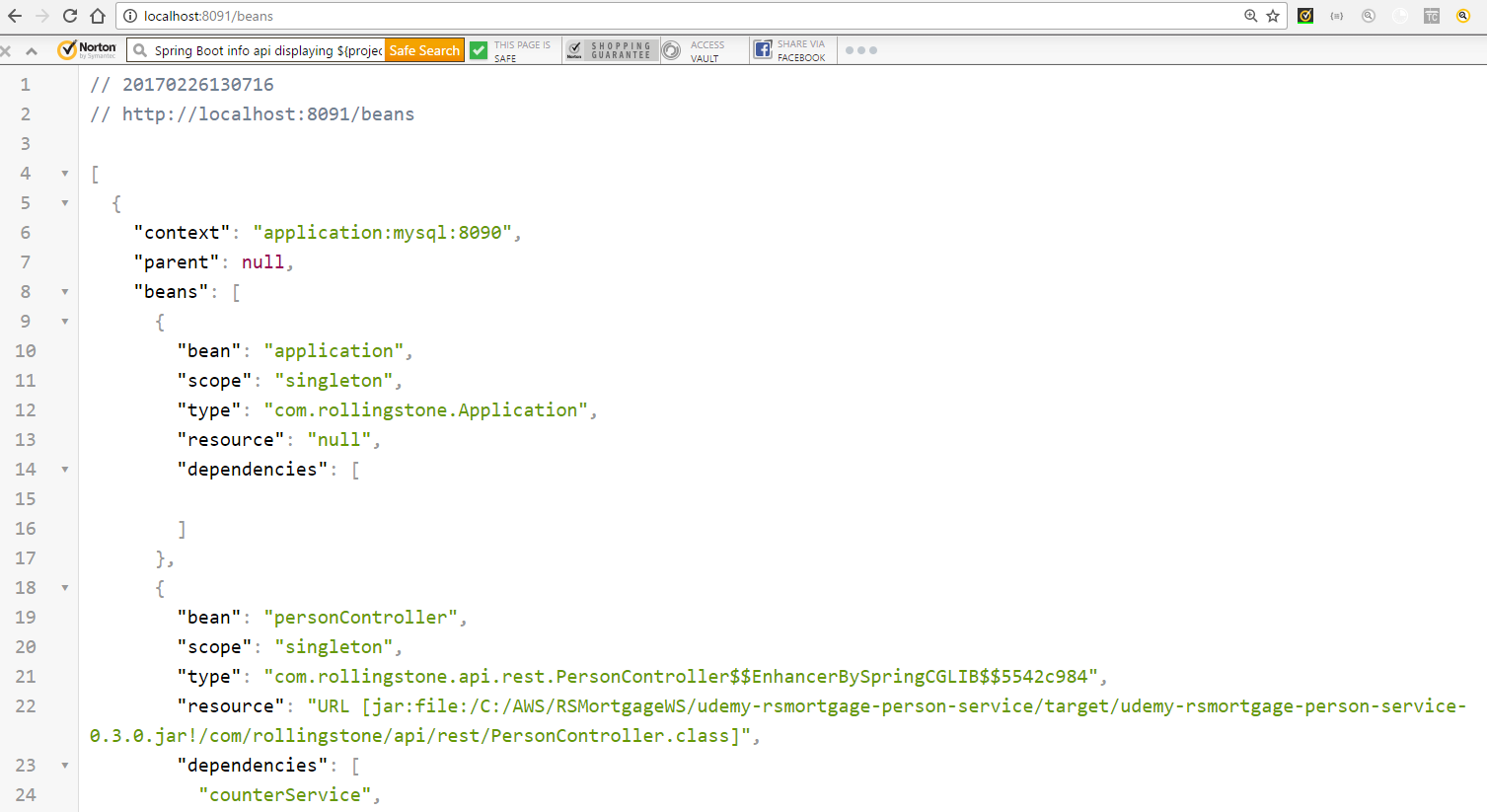
1.55 – /env endpoint

<http://localhost:8091/env>



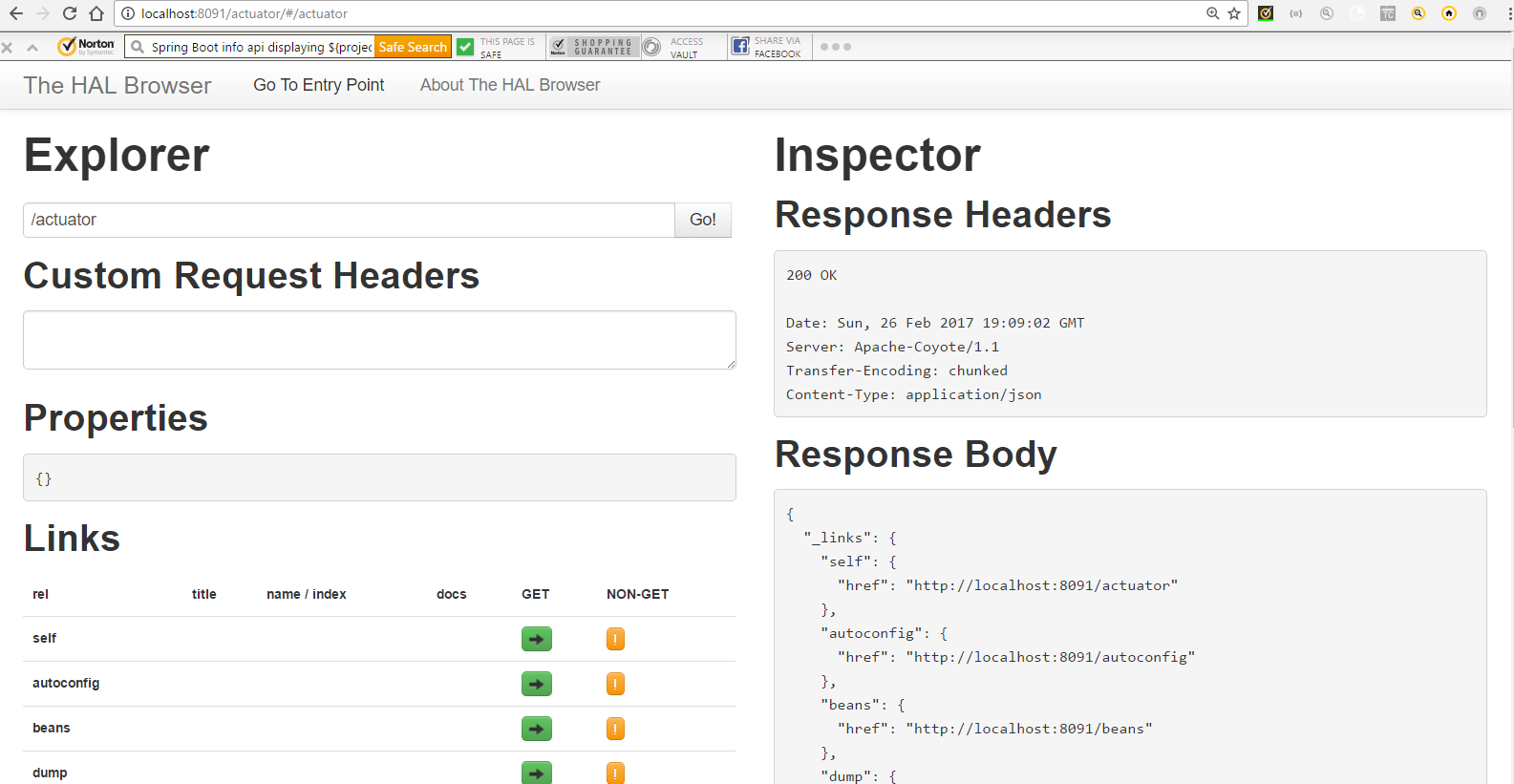
1.56 – /beans endpoint

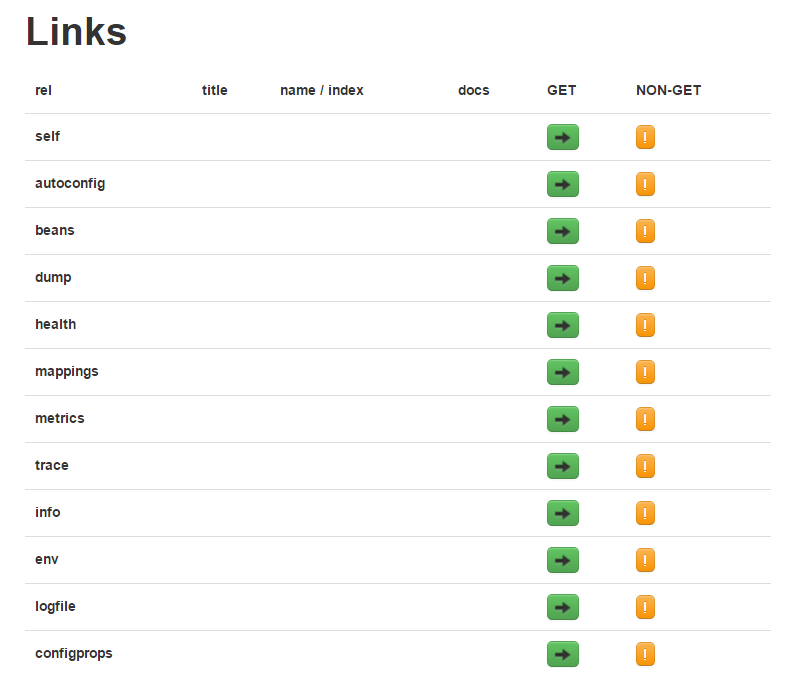
<http://localhost:8091/beans>



1.57 – /actuator endpoint

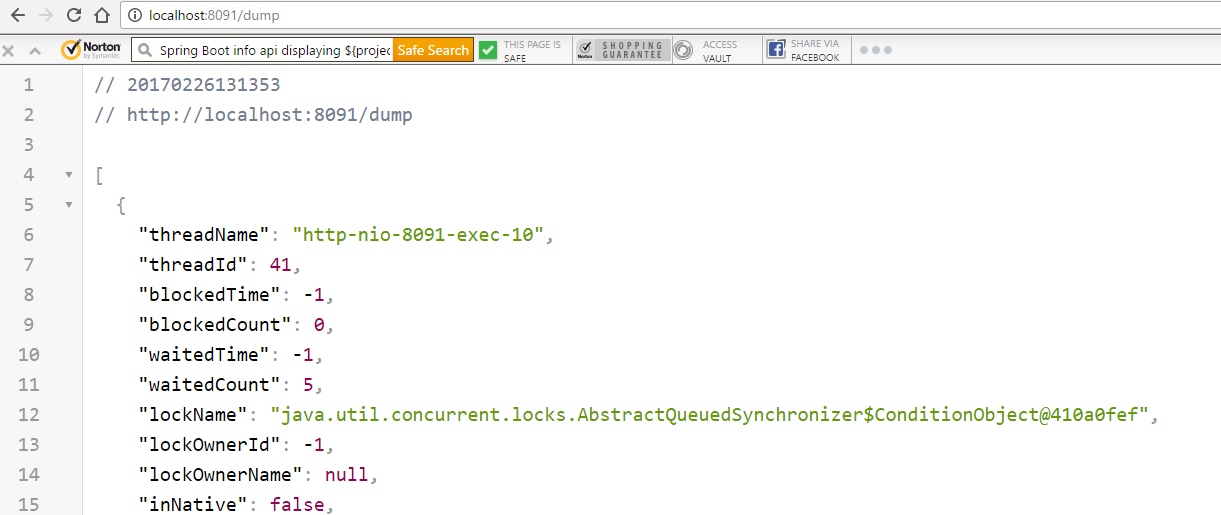
http://localhost:8091/actuator/#/actuator





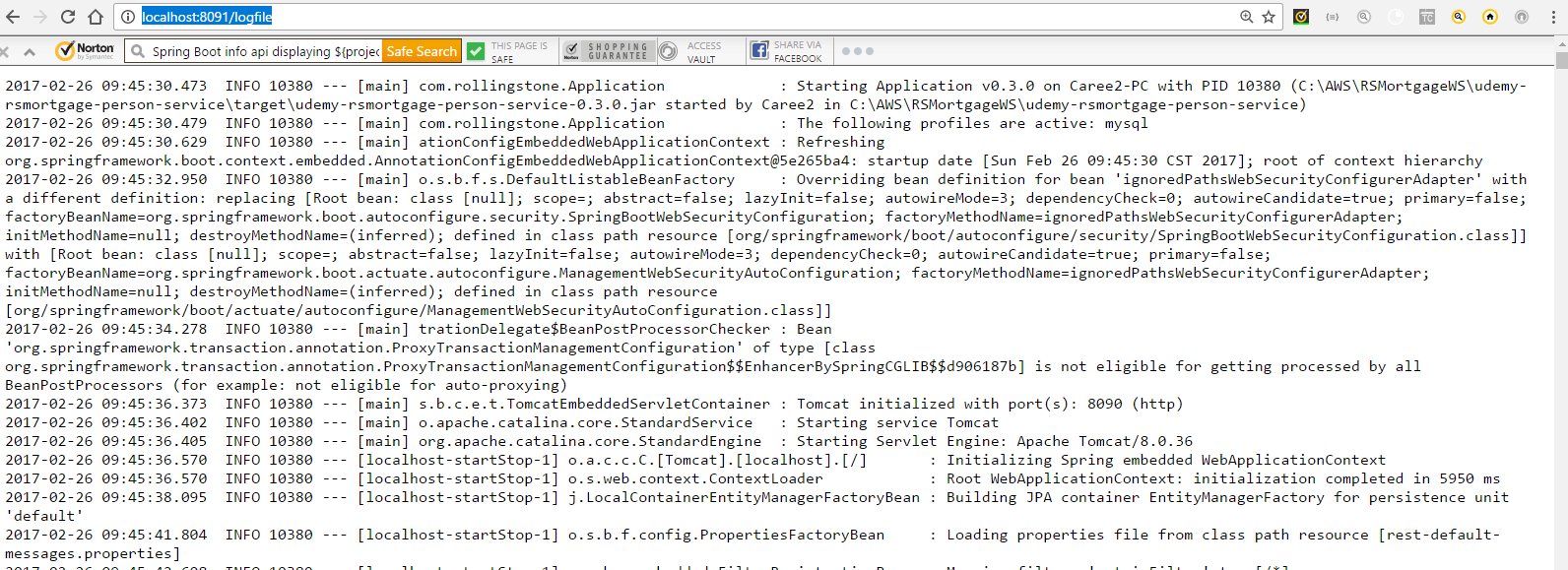
1.58 – /dump endpoint

http://localhost:8091/dump



1.59 – /logfile endpoint

http://localhost:8091/logfile



1.60 –Conclusion

This document listed the steps as well as provided the explanation of creating a Spring Boot application based on Spring Cloud Service Discovery.