**microservices with Spring Boot.**

**PersonControlller.java:**

package com.example.test;

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

import org.springframework.web.bind.annotation.\*;

@RestController

@RequestMapping(path = "/webapione")

public class PersonControlller {

@Autowired

PersonService personService;

@GetMapping("/person/{personId}")

public PersonResponse getPerson(@PathVariable int personId){

return personService.getPerson(personId);

}

@PostMapping("/person")

public void addPerson(@RequestBody PersonEntity pe ) {

personService.addPerson(pe);

}

}

**ProductEntity.java:**

**package** com.example.test;

**import** jakarta.persistence.Column;

**import** jakarta.persistence.Entity;

**import** jakarta.persistence.GeneratedValue;

**import** jakarta.persistence.GenerationType;

**import** jakarta.persistence.Id;

@Entity

**public** **class** PersonEntity {

@Id

@GeneratedValue(strategy = GenerationType.***AUTO***)

@Column(name = "id", updatable = **false**, nullable = **false**)

**private** Integer personId;

@Column

**private** String name;

@Column

**private** Integer age;

**public** PersonEntity() {

**super**();

}

**public** PersonEntity(Integer personId, String name, Integer age) {

**super**();

**this**.personId = personId;

**this**.name = name;

**this**.age = age;

}

**public** Integer getPersonId() {

**return** personId;

}

**public** **void** setPersonId(Integer personId) {

**this**.personId = personId;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** Integer getAge() {

**return** age;

}

**public** **void** setAge(Integer age) {

**this**.age = age;

}

}

**PersonRepositry:**

package com.example.test;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

@Repository

public interface PersonRepository extends JpaRepository<PersonEntity, Integer> {

}

**PersonService.java:**

package com.example.test;

import java.util.HashMap;

import java.util.Map;

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

import org.springframework.stereotype.Service;

import org.springframework.web.client.RestTemplate;

@Service

public class PersonService {

@Autowired

PersonRepository personRepository;

RestTemplate restTemplate = new RestTemplate();

public PersonResponse getPerson(int personId){

final String uri = "http://localhost:8082/webapitwo/hobby/{personId}";

Map<String, Integer> params = new HashMap<String, Integer>();

params.put("personId", personId);

String result = restTemplate.getForObject(uri, String.class, params);

PersonEntity pe=personRepository.findById(personId).get();

PersonResponse pr=new PersonResponse();

pr.setPersonId(pe.getPersonId());

pr.setName(pe.getName());

pr.setAge(pe.getAge());

pr.setHobby(result);

return pr;

}

public void addPerson(PersonEntity pe){

personRepository.save(pe);

}

}

**PersonResponse.java:**

**package** com.example.test;

**public** **class** PersonResponse

{

**private** Integer personId;

**private** String name;

**private** Integer age;

**private** String hobby;

**public** Integer getPersonId() {

**return** personId;

}

**public** **void** setPersonId(Integer personId) {

**this**.personId = personId;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** Integer getAge() {

**return** age;

}

**public** **void** setAge(Integer age) {

**this**.age = age;

}

**public** String getHobby() {

**return** hobby;

}

**public** **void** setHobby(String result) {

**this**.hobby = result;

}

}

Application.properties:

server.port=8081

spring.application.name=RestApiOne

spring.h2.console.enabled=true

spring.h2.console.path=/h2

spring.datasource.url=jdbc:h2:mem:testdb

spring.datasource.username=sa

spring.datasource.password=

spring.datasource.driver-class-name=org.h2.Driver

**RestApiOneApplication.java:**

package com.example.test;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class RestApiOneApplication {

public static void main(String[] args) {

SpringApplication.run(RestApiOneApplication.class, args);

}

}

**Pom.xml:**

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<parent>

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

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

<version>3.2.1</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.example</groupId>

<artifactId>RestApiOne</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>RestApiOne</name>

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

<properties>

<java.version>17</java.version>

</properties>

<dependencies>

<dependency>

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

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

</dependency>

<dependency>

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

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

</dependency>

<!-- JSP support in Spring -->

<dependency>

<groupId>org.apache.tomcat.embed</groupId>

<artifactId>tomcat-embed-jasper</artifactId>

<scope>provided</scope>

</dependency>

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<scope>runtime</scope>

</dependency>

<dependency>

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

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

<scope>test</scope>

</dependency>

<dependency>

<groupId>com.ecommerce</groupId>

<artifactId>

spring-boot-building-rest-api-server

</artifactId>

<version>0.0.1-SNAPSHOT</version>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

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

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

</plugin>

</plugins>

</build>

</project>

**Restapitwo:**

**HobbyController.java:**

package com.example.test;

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

import org.springframework.web.bind.annotation.\*;

@RestController

@RequestMapping(path = "/webapitwo")

public class HobbyController {

@Autowired

HobbyService hobbyService;

@GetMapping("/hobby/{personid}")

public String findByPersonId(@PathVariable int personid){

return hobbyService.findByPersonId(personid);

}

@PostMapping("/hobby")

public void addHobby(@RequestBody HobbyEntity he ) {

hobbyService.addHobby(he);

}

}

**HobbyEntity.java:**

package com.example.test;

import jakarta.persistence.Column;

import jakarta.persistence.Entity;

import jakarta.persistence.GeneratedValue;

import jakarta.persistence.GenerationType;

import jakarta.persistence.Id;

@Entity

public class HobbyEntity {

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

@Column(name = "id", updatable = false, nullable = false)

private Integer id;

@Column

private Integer personId;

@Column

private String name;

public HobbyEntity() {

super();

}

public HobbyEntity(Integer personId, String name) {

super();

this.personId = personId;

this.name = name;

}

public Integer getPersonId() {

return personId;

}

public void setPersonId(Integer personId) {

this.personId = personId;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

}

**HobbyRepository.java:**

package com.example.test;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.data.jpa.repository.Query;

import org.springframework.stereotype.Repository;

@Repository

public interface HobbyRepository extends JpaRepository<HobbyEntity, Integer> {

@Query("SELECT h.name FROM HobbyEntity h WHERE h.personId=:personId")

public String findByPersonId(Integer personId);

}

**HobbyService.java:**

package com.example.test;

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

import org.springframework.stereotype.Service;

@Service

public class HobbyService {

@Autowired

HobbyRepository hobbyRepository;

public String findByPersonId(int personid){

return hobbyRepository.findByPersonId(personid);

}

public void addHobby(HobbyEntity he){

hobbyRepository.save(he);

}

}

**RestApiTwoApplication.java:**

package com.example.test;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class RestApiTwoApplication {

public static void main(String[] args) {

SpringApplication.run(RestApiTwoApplication.class, args);

}

}

**Application.properties:**

server port=8080

spring.application.name=RestApiTwo

spring.h2.console.enabled=true

#spring.h2.console.path=/h2

spring.datasource.url=jdbc:h2:mem:testdb

spring.datasource.username=sa

spring.datasource.password=

spring.datasource.driver-class-name=org.h2.Driver

**Pom.xml:**

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<parent>

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

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

<version>3.2.1</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.example</groupId>

<artifactId>RestApiTwo</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>RestApiTwo</name>

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

<properties>

<java.version>17</java.version>

</properties>

<dependencies>

<dependency>

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

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

</dependency>

<dependency>

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

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

</dependency>

<!-- JSP support in Spring -->

<dependency>

<groupId>org.apache.tomcat.embed</groupId>

<artifactId>tomcat-embed-jasper</artifactId>

<scope>provided</scope>

</dependency>

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<scope>runtime</scope>

</dependency>

<dependency>

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

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

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

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

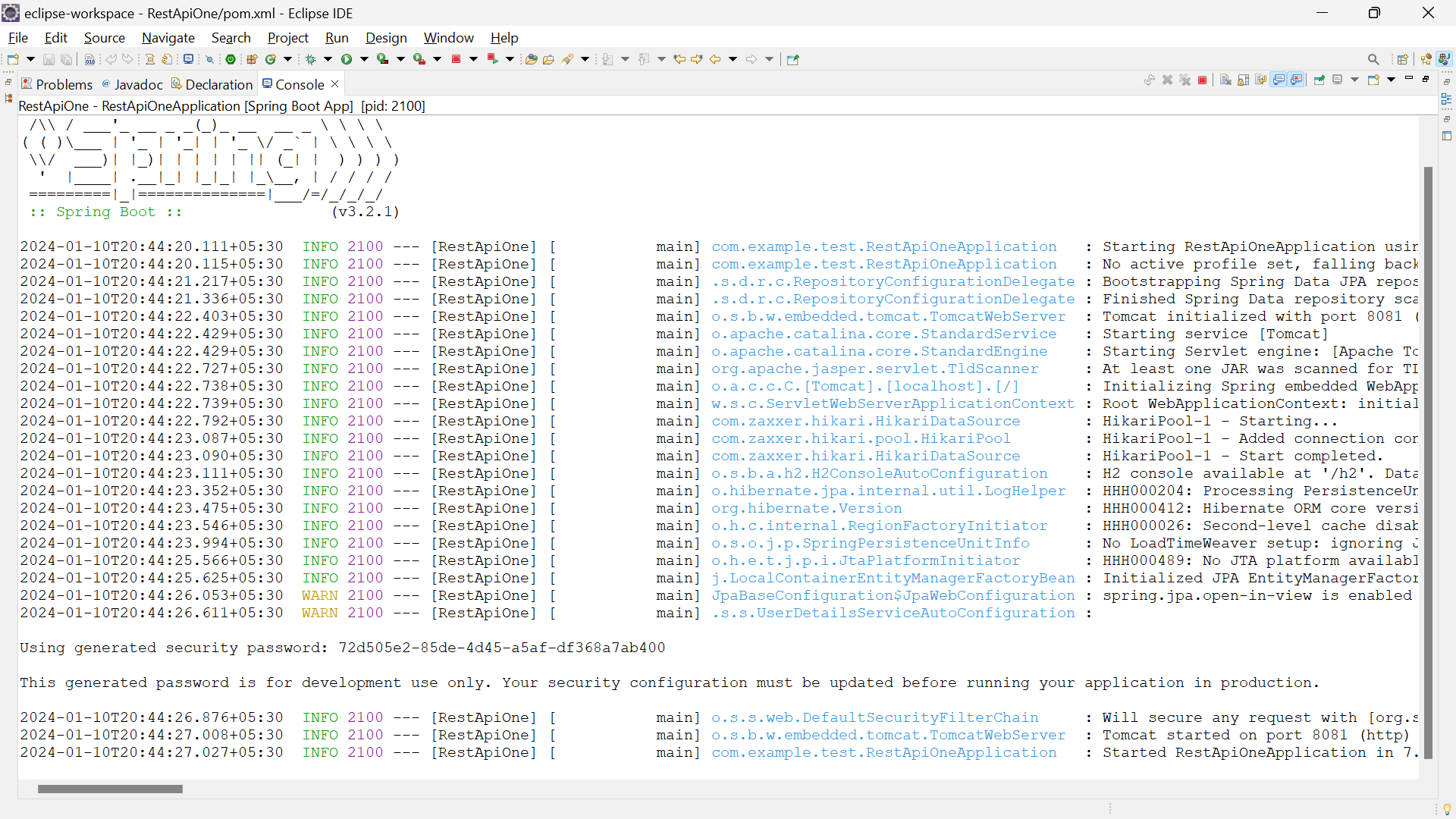
<artifactId>spring-boot-maven-plugin</artifactId>

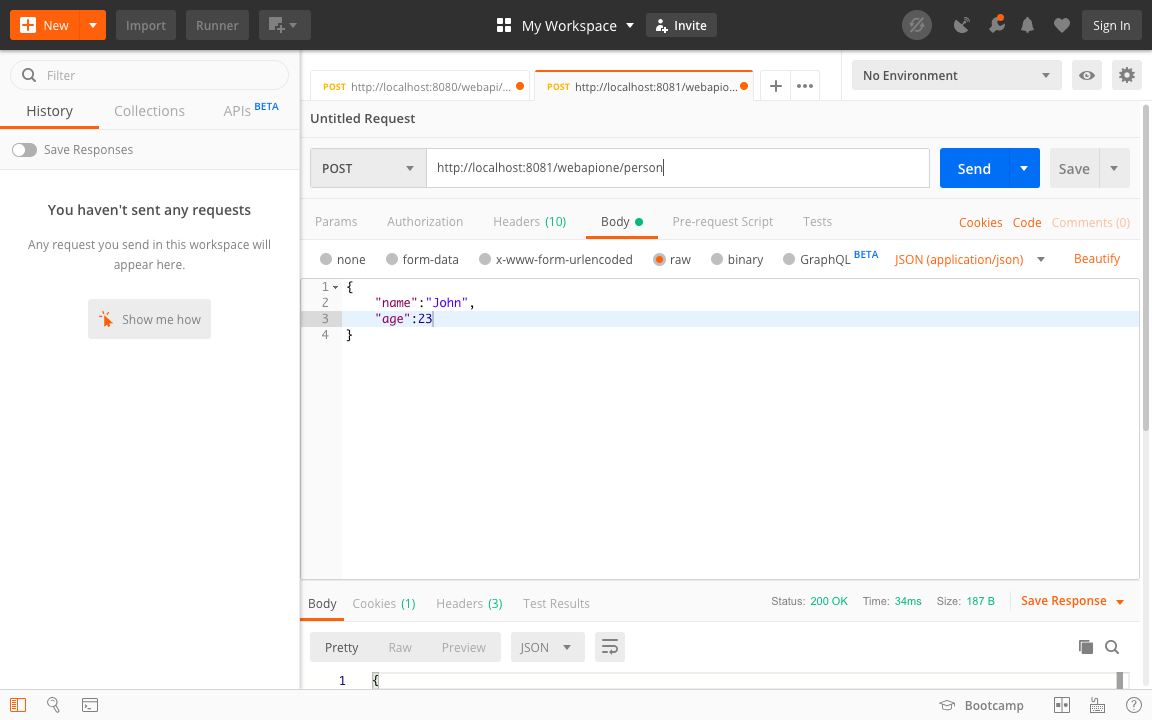
</plugin>

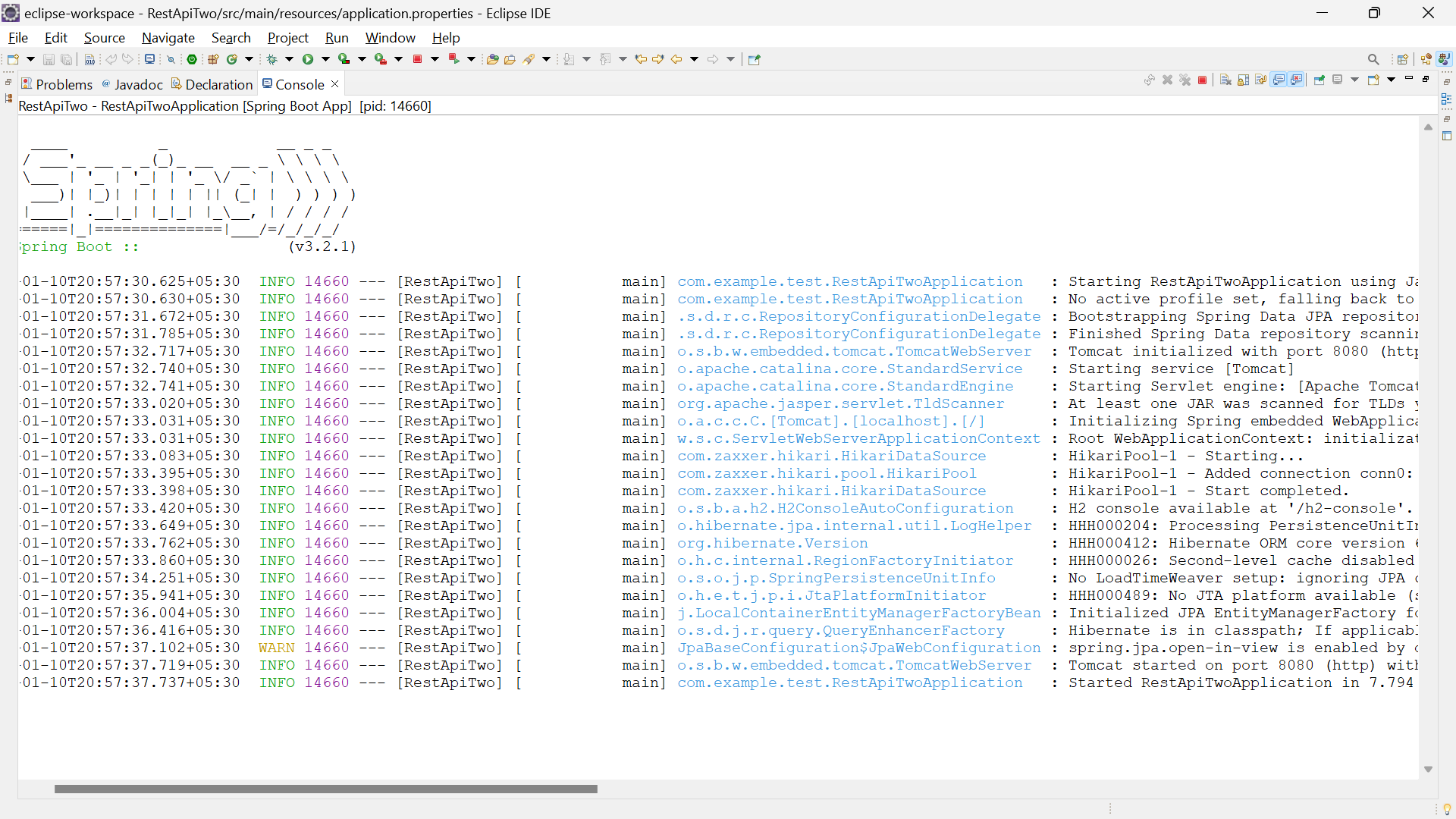
</plugins>

</build>

</project>

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