**Spring REST Hands-on Assignment**

**Step 1: Configure Static Employee Data Using Spring XML**

**File: employee.xml**

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

<beans xmlns="http://www.springframework.org/schema/beans"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://www.springframework.org/schema/beans

http://www.springframework.org/schema/beans/spring-beans.xsd">

<!-- Skills -->

<bean id="skill1" class="com.cognizant.spring\_learn.model.Skill">

<property name="id" value="1"/>

<property name="name" value="Java"/>

</bean>

<bean id="skill2" class="com.cognizant.spring\_learn.model.Skill">

<property name="id" value="2"/>

<property name="name" value="Spring"/>

</bean>

<!-- Departments -->

<bean id="dept1" class="com.cognizant.spring\_learn.model.Department">

<property name="id" value="1"/>

<property name="name" value="Human Resources"/>

</bean>

<bean id="dept2" class="com.cognizant.spring\_learn.model.Department">

<property name="id" value="2"/>

<property name="name" value="Finance"/>

</bean>

<!-- Employees -->

<bean id="employee1" class="com.cognizant.spring\_learn.model.Employee">

<property name="id" value="1"/>

<property name="name" value="John Doe"/>

<property name="salary" value="50000"/>

<property name="permanent" value="true"/>

<property name="department" ref="dept1"/>

<property name="skillList">

<list>

<ref bean="skill1"/>

<ref bean="skill2"/>

</list>

</property>

</bean>

<bean id="employee2" class="com.cognizant.spring\_learn.model.Employee">

<property name="id" value="2"/>

<property name="name" value="Jane Smith"/>

<property name="salary" value="60000"/>

<property name="permanent" value="false"/>

<property name="department" ref="dept2"/>

<property name="skillList">

<list>

<ref bean="skill2"/>

</list>

</property>

</bean>

<bean id="employee3" class="com.cognizant.spring\_learn.model.Employee">

<property name="id" value="3"/>

<property name="name" value="Michael Scott"/>

<property name="salary" value="70000"/>

<property name="permanent" value="true"/>

<property name="department" ref="dept1"/>

<property name="skillList">

<list>

<ref bean="skill1"/>

</list>

</property>

</bean>

<bean id="employee4" class="com.cognizant.spring\_learn.model.Employee">

<property name="id" value="4"/>

<property name="name" value="Dwight Schrute"/>

<property name="salary" value="55000"/>

<property name="permanent" value="false"/>

<property name="department" ref="dept2"/>

<property name="skillList">

<list>

<ref bean="skill1"/>

<ref bean="skill2"/>

</list>

</property>

</bean>

<!-- List of all employees -->

<bean id="employeeList" class="java.util.ArrayList">

<constructor-arg>

<list>

<ref bean="employee1"/>

<ref bean="employee2"/>

<ref bean="employee3"/>

<ref bean="employee4"/>

</list>

</constructor-arg>

</bean>

</beans>

**Step 2: Create EmployeeDao to Load Data from XML**

**EmployeeDao.java**

Code:

package com.cognizant.spring\_learn.dao;

import com.cognizant.spring\_learn.model.Employee;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Repository;

import java.util.ArrayList;

import java.util.List;

@Repository

public class EmployeeDao {

// Static list to hold employees

public static List<Employee> EMPLOYEE\_LIST;

// Constructor loads employee list from XML

public EmployeeDao() {

ApplicationContext context = new ClassPathXmlApplicationContext("employee.xml");

EMPLOYEE\_LIST = (ArrayList<Employee>) context.getBean("employeeList");

}

// Method to return all employees

public List<Employee> getAllEmployees() {

return EMPLOYEE\_LIST;

}

}

**Step 3: Create REST API for Employees**

1. **Create the Service Layer: EmployeeService**

package com.cognizant.spring\_learn.service;

import com.cognizant.spring\_learn.dao.EmployeeDao;

import com.cognizant.spring\_learn.model.Employee;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

import java.util.List;

@Service

public class EmployeeService {

@Autowired

private EmployeeDao employeeDao;

@Transactional

public List<Employee> getAllEmployees() {

return employeeDao.getAllEmployees();

}

}

1. **Create the Controller Layer: EmployeeController**

package com.cognizant.spring\_learn.controller;

import com.cognizant.spring\_learn.model.Employee;

import com.cognizant.spring\_learn.service.EmployeeService;

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

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

import java.util.List;

@RestController

public class EmployeeController {

@Autowired

private EmployeeService employeeService;

@GetMapping("/employees")

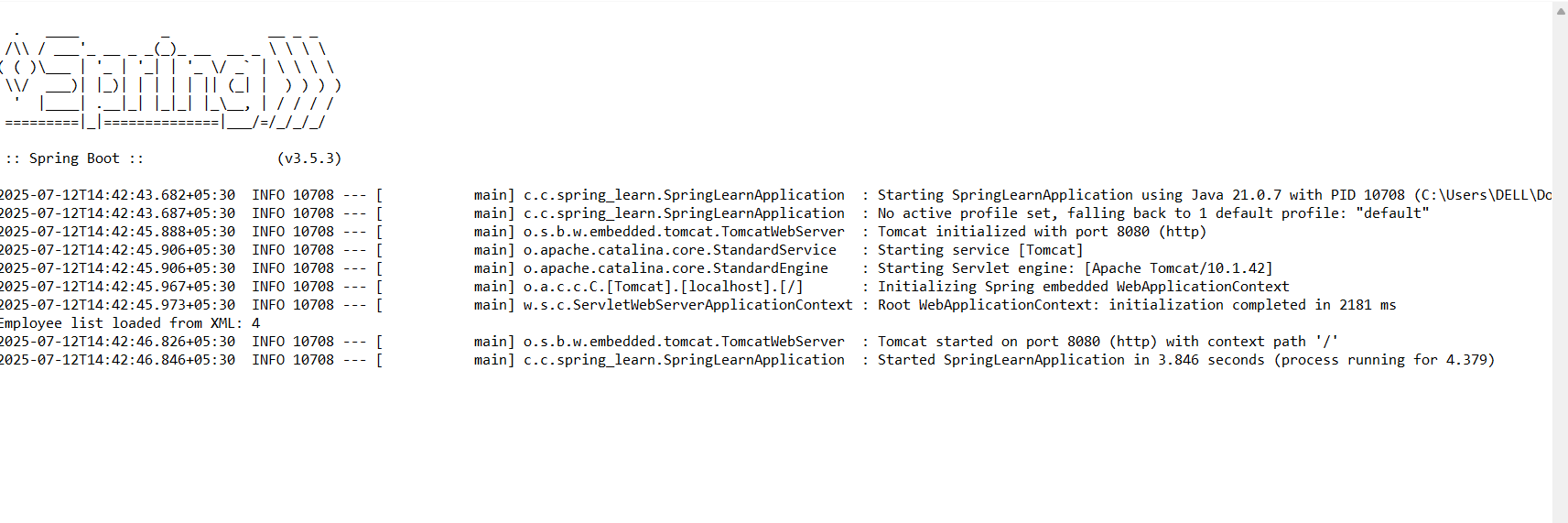
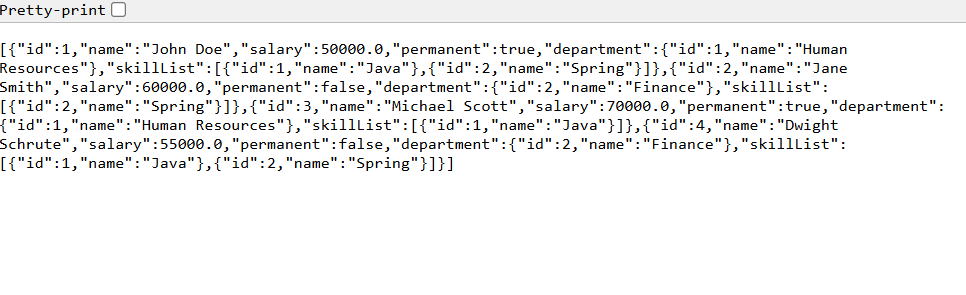
public List<Employee> getAllEmployees() {

return employeeService.getAllEmployees();

}

}

**Step 5-run the application**

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