**Create REST service for department**

**SpringLearn1Application.java**

package com.cognizant.spring\_learn1;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringLearn1Application {

    public static void main(String[] args) {

        SpringApplication.run(SpringLearn1Application.class, args);

        System.out.println("Spring Boot Application Started...");

    }

}

**Department.java**

package com.cognizant.spring\_learn1.model;

public class Department {

    private int id;

    private String name;

    // Constructors

    public Department() {}

    public Department(int id, String name) {

        this.id = id;

        this.name = name;

    }

    // Getters & Setters

    public int getId() { return id; }

    public void setId(int id) { this.id = id; }

    public String getName() { return name; }

    public void setName(String name) { this.name = name; }

}

**DepartmentController.java**

package com.cognizant.spring\_learn1.controller;

import com.cognizant.spring\_learn1.model.Department;

import com.cognizant.spring\_learn1.service.DepartmentService;

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

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

import java.util.List;

@RestController

public class DepartmentController {

    @Autowired

    private DepartmentService departmentService;

    @GetMapping("/departments")

    public List<Department> getAllDepartments() {

        System.out.println("getAllDepartments called");

        return departmentService.getAllDepartments();

    }

}

**DepartmentDao.java**

package com.cognizant.spring\_learn1.dao;

import java.util.List;

import com.cognizant.spring\_learn1.model.Department;

import org.springframework.stereotype.Repository;

import java.util.ArrayList;

@Repository

public class DepartmentDao {

    private static List<Department> DEPARTMENT\_LIST;

    static {

        DEPARTMENT\_LIST = new ArrayList<>();

        DEPARTMENT\_LIST.add(new Department(1, "Human Resources"));

        DEPARTMENT\_LIST.add(new Department(2, "Finance"));

        DEPARTMENT\_LIST.add(new Department(3, "Engineering"));

    }

    public List<Department> getAllDepartments() {

        return DEPARTMENT\_LIST;

    }

}

**DepartmentService.java**

package com.cognizant.spring\_learn1.service;

import java.util.List;

import com.cognizant.spring\_learn1.model.Department;

import com.cognizant.spring\_learn1.dao.DepartmentDao;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

@Service

public class DepartmentService {

    @Autowired

    private DepartmentDao departmentDao;

    @Transactional

    public List<Department> getAllDepartments() {

        return departmentDao.getAllDepartments();

    }

}

**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>3.5.4</version>

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

    </parent>

    <groupId>com.cognizant</groupId>

    <artifactId>spring\_learn1</artifactId>

    <version>0.0.1-SNAPSHOT</version>

    <name>spring\_learn</name>

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

    <url/>

    <licenses>

       <license/>

    </licenses>

    <developers>

       <developer/>

    </developers>

    <scm>

       <connection/>

       <developerConnection/>

       <tag/>

       <url/>

    </scm>

    <properties>

       <java.version>21</java.version>

    </properties>

    <dependencies>

       <dependency>

          <groupId>org.springframework</groupId>

          <artifactId>spring-tx</artifactId>

       </dependency>

       <dependency>

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

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

       </dependency>

       <dependency>

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

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

          <scope>test</scope>

       </dependency>

       <dependency>

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

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

       </dependency>

       <!-- Spring Context for XML Configuration -->

       <dependency>

          <groupId>org.springframework</groupId>

          <artifactId>spring-context</artifactId>

       </dependency>

       <!-- For Hot Reload (Optional) -->

       <!-- <dependency>

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

          <artifactId>spring-boot-devtools</artifactId>

          <scope>runtime</scope>

          <optional>true</optional>

       </dependency> -->

       <!-- Test Support -->

       <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>

**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">

    <!-- Departments -->

    <bean id="dept1" class="com.cognizant.spring\_learn1.model.Department">

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

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

    </bean>

    <bean id="dept2" class="com.cognizant.spring\_learn1.model.Department">

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

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

    </bean>

    <!-- Skills -->

    <bean id="skill1" class="com.cognizant.spring\_learn1.model.Skill">

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

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

    </bean>

    <bean id="skill2" class="com.cognizant.spring\_learn1.model.Skill">

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

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

    </bean>

    <!-- Employee List -->

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

        <constructor-arg>

            <list>

                <bean class="com.cognizant.spring\_learn1.model.Employee">

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

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

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

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

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

                    <property name="dateOfBirth" value="01/01/1990"/>

                    <property name="skillList">

                        <list>

                            <ref bean="skill1"/>

                            <ref bean="skill2"/>

                        </list>

                    </property>

                </bean>

                <bean class="com.cognizant.spring\_learn1.model.Employee">

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

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

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

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

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

                    <property name="dateOfBirth" value="15/03/1992"/>

                    <property name="skillList">

                        <list>

                            <ref bean="skill1"/>

                        </list>

                    </property>

                </bean>

            </list>

        </constructor-arg>

    </bean>

</beans>

**Output:**



