**Create REST service to gets all employees**

**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...");

    }

}

**Employee.java**

package com.cognizant.spring\_learn1.model;

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

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

import java.util.Date;

import java.util.List;

public class Employee {

    private long id;

    private String name;

    private double salary;

    private boolean permanent;

    private Department department;

    private Date dateOfBirth;

    private List<Skill> skillList;

    public Employee() {}

    public long getId() { return id; }

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

    public String getName() { return name; }

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

    public double getSalary() { return salary; }

    public void setSalary(double salary) { this.salary = salary; }

    public boolean isPermanent() { return permanent; }

    public void setPermanent(boolean permanent) { this.permanent = permanent; }

    public Department getDepartment() { return department; }

    public void setDepartment(Department department) { this.department = department; }

    public Date getDateOfBirth() { return dateOfBirth; }

    public void setDateOfBirth(Date dateOfBirth) { this.dateOfBirth = dateOfBirth; }

    public List<Skill> getSkillList() { return skillList; }

    public void setSkillList(List<Skill> skillList) { this.skillList = skillList; }

}

**EmployeeController.java**

package com.cognizant.spring\_learn1.controller;

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

import com.cognizant.spring\_learn1.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") // URL to hit in Postman

    public List<Employee> getAllEmployees() {

        return employeeService.getAllEmployees(); // call service method

    }

}

**EmployeeDao.java**

package com.cognizant.spring\_learn1.dao;

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

import org.springframework.beans.propertyeditors.CustomDateEditor;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.AbstractApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Repository;

import java.text.SimpleDateFormat;

import java.util.List;

@Repository

public class EmployeeDao {

    private static List<Employee> EMPLOYEE\_LIST;

    public EmployeeDao() {

        try {

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

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

        } catch (Exception e) {

            throw new RuntimeException("Failed to load employee list from XML", e);

        }

    }

    public List<Employee> getAllEmployees() {

        return EMPLOYEE\_LIST;

    }

    public Employee getEmployeeById(int id) {

        for (Employee emp : EMPLOYEE\_LIST) {

            if (emp.getId() == id) {

                return emp;

            }

        }

        return null;

    }

}

**EmployeeService.java**

package com.cognizant.spring\_learn1.service;

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

import com.cognizant.spring\_learn1.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();

    }

}

**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; }

}

**Skill.java**

package com.cognizant.spring\_learn1.model;

public class Skill {

    private int id;

    private String name;

    //  Getter

    public int getId() {

        return id;

    }

    //  Setter

    public void setId(int id) {

        this.id = id;

    }

    //  Getter

    public String getName() {

        return name;

    }

    //  Setter

    public void setName(String name) {

        this.name = name;

    }

}

**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:**



