**Create static employee list data using spring xml configuration**

**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=*"skillJava"* class=*"com.cognizant.spring\_learn.model.Skill"*>

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

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

</bean>

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

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

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

</bean>

<!-- Departments -->

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

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

<property name=*"name"* value=*"Information Technology"* />

</bean>

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

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

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

</bean>

<!-- Employees -->

<bean id=*"emp1"* class=*"com.cognizant.spring\_learn.model.Employee"*>

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

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

<property name=*"department"* ref=*"deptIT"* />

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

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

<property name=*"skills"*>

<list>

<ref bean=*"skillJava"*/>

<ref bean=*"skillSpring"*/>

</list>

</property>

</bean>

<bean id=*"emp2"* class=*"com.cognizant.spring\_learn.model.Employee"*>

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

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

<property name=*"department"* ref=*"deptHR"* />

<property name=*"salary"* value=*"45000"* />

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

<property name=*"skills"*>

<list>

<ref bean=*"skillJava"*/>

</list>

</property>

</bean>

<bean id=*"emp3"* class=*"com.cognizant.spring\_learn.model.Employee"*>

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

<property name=*"name"* value=*"Alice Brown"* />

<property name=*"department"* ref=*"deptIT"* />

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

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

<property name=*"skills"*>

<list>

<ref bean=*"skillSpring"*/>

</list>

</property>

</bean>

<bean id=*"emp4"* class=*"com.cognizant.spring\_learn.model.Employee"*>

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

<property name=*"name"* value=*"Bob White"* />

<property name=*"department"* ref=*"deptHR"* />

<property name=*"salary"* value=*"40000"* />

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

<property name=*"skills"*>

<list>

<ref bean=*"skillJava"*/>

</list>

</property>

</bean>

<!-- Employee List -->

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

<constructor-arg>

<list>

<ref bean=*"emp1"*/>

<ref bean=*"emp2"*/>

<ref bean=*"emp3"*/>

<ref bean=*"emp4"*/>

</list>

</constructor-arg>

</bean>

</beans>

**EmployeeDao.java:**

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 java.util.ArrayList;

public class EmployeeDao {

public static ArrayList<Employee> *EMPLOYEE\_LIST*;

public EmployeeDao() {

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

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

}

public ArrayList<Employee> getAllEmployees() {

return *EMPLOYEE\_LIST*;

}

}

**Employee.java:**

package com.cognizant.spring\_learn.model;

import java.util.List;

public class Employee {

private int id;

private String name;

private double salary;

private boolean permanent;

private Department department;

private List<Skill> skills;

public Employee() {

System.*out*.println("Inside Employee Constructor.");

}

public int getId() {

return id;

}

public void setId(int id) {

System.*out*.println("Inside setId.");

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

System.*out*.println("Inside setName.");

this.name = name;

}

public double getSalary() {

return salary;

}

public void setSalary(double salary) {

System.*out*.println("Inside setSalary.");

this.salary = salary;

}

public boolean isPermanent() {

return permanent;

}

public void setPermanent(boolean permanent) {

System.*out*.println("Inside setPermanent.");

this.permanent = permanent;

}

public Department getDepartment() {

return department;

}

public void setDepartment(Department department) {

System.*out*.println("Inside setDepartment.");

this.department = department;

}

public List<Skill> getSkills() {

return skills;

}

public void setSkills(List<Skill> skills) {

System.*out*.println("Inside setSkills.");

this.skills = skills;

}

@Override

public String toString() {

return "Employee [id=" + id + ", name=" + name + ", salary=" + salary +

", permanent=" + permanent + ", department=" + department + ", skills=" + skills + "]";

}

}

**Department.java:**

package com.cognizant.spring\_learn.model;

public class Department {

private int id;

private String name;

public Department() {

System.*out*.println("Inside Department Constructor.");

}

public int getId() {

return id;

}

public void setId(int id) {

System.*out*.println("Inside setId.");

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

System.*out*.println("Inside setName.");

this.name = name;

}

@Override

public String toString() {

return "Department [id=" + id + ", name=" + name + "]";

}

}

**Skill.java:**

package com.cognizant.spring\_learn.model;

public class Skill {

private int id;

private String name;

public Skill() {

System.*out*.println("Inside Skill Constructor.");

}

public int getId() {

return id;

}

public void setId(int id) {

System.*out*.println("Inside setId.");

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

System.*out*.println("Inside setName.");

this.name = name;

}

@Override

public String toString() {

return "Skill [id=" + id + ", name=" + name + "]";

}

}

**SpringLearnApplication.java:**

package com.cognizant.spring\_learn;

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

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

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import java.util.ArrayList;

@SpringBootApplication

public class SpringLearnApplication {

private static final Logger *LOGGER* = LoggerFactory.*getLogger*(SpringLearnApplication.class);

public static void main(String[] args) {

SpringApplication.*run*(SpringLearnApplication.class, args);

EmployeeDao employeeDao = new EmployeeDao();

ArrayList<Employee> employees = employeeDao.getAllEmployees();

*LOGGER*.debug("Employee List: {}", employees);

}

}

**Output:**

Employee List:

[

Employee [id=1, name=John Doe, salary=50000.0, permanent=true, department=Department [id=1, name=Information Technology], skills=[Skill [id=1, name=Java], Skill [id=2, name=Spring]]],

Employee [id=2, name=Jane Smith, salary=45000.0, permanent=false, department=Department [id=2, name=Human Resources], skills=[Skill [id=1, name=Java]]],

Employee [id=3, name=Alice Brown, salary=60000.0, permanent=true, department=Department [id=1, name=Information Technology], skills=[Skill [id=2, name=Spring]]],

Employee [id=4, name=Bob White, salary=40000.0, permanent=false, department=Department [id=2, name=Human Resources], skills=[Skill [id=1, name=Java]]]

]

**Create REST service to gets all employees**

**EmployeeService.java:**

package com.cognizant.spring\_learn.service;

import java.util.List;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

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

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

@Service

public class EmployeeService {

@Autowired

private EmployeeDao employeeDao;

@Transactional

public List<Employee> getAllEmployees() {

return employeeDao.getAllEmployees();

}

}

**EmployeeController.java:**

package com.cognizant.spring\_learn.controller;

import java.util.List;

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

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

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

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

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

@RestController

public class EmployeeController {

@Autowired

private EmployeeService employeeService;

@GetMapping("/employees")

public List<Employee> getAllEmployees() {

return employeeService.getAllEmployees();

}

}

**EmployeeDao.java:**

package com.cognizant.spring\_learn.dao;

import java.util.ArrayList;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Repository;

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

@Repository

public class EmployeeDao {

private static ArrayList<Employee> *EMPLOYEE\_LIST*;

public EmployeeDao() {

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

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

}

public ArrayList<Employee> getAllEmployees() {

return *EMPLOYEE\_LIST*;

}

}

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**Create REST service for department**

**Department.java:**

package com.cognizant.spring\_learn.model;

public class Department {

private int id;

private String name;

public Department() {

System.*out*.println("Inside Department Constructor");

}

public int getId() {

System.*out*.println("Inside getId");

return id;

}

public void setId(int id) {

System.*out*.println("Inside setId");

this.id = id;

}

public String getName() {

System.*out*.println("Inside getName");

return name;

}

public void setName(String name) {

System.*out*.println("Inside setName");

this.name = name;

}

@Override

public String toString() {

return "Department [id=" + id + ", name=" + name + "]";

}

}

**DepartmentDao.java:**

package com.cognizant.spring\_learn.dao;

import java.util.ArrayList;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Repository;

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

@Repository

public class DepartmentDao {

private static ArrayList<Department> *DEPARTMENT\_LIST*;

public DepartmentDao() {

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

*DEPARTMENT\_LIST* = (ArrayList<Department>) context.getBean("departmentList");

}

public ArrayList<Department> getAllDepartments() {

return *DEPARTMENT\_LIST*;

}

}

**DepartmentService.java:**

package com.cognizant.spring\_learn.service;

import java.util.List;

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

import org.springframework.stereotype.Service;

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

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

@Service

public class DepartmentService {

@Autowired

private DepartmentDao departmentDao;

public List<Department> getAllDepartments() {

return departmentDao.getAllDepartments();

}

}

**DepartmentController.java:**

package com.cognizant.spring\_learn.controller;

import java.util.List;

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

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

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

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

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

@RestController

public class DepartmentController {

@Autowired

private DepartmentService departmentService;

@GetMapping("/departments")

public List<Department> getAllDepartments() {

System.*out*.println("Inside DepartmentController.getAllDepartments");

return departmentService.getAllDepartments();

}

}

