SPRING REST HANDS ON 3

Superset ID : 6384831

Name : Mohana Priya N

E-mail : mohanapriya.2205056@srec.ac.in

1) Hands on 1: Create static employee list data using spring xml configuration

Solution:

//employee.xml

```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
     https://www.springframework.org/schema/beans/spring-beans.xsd">
  <bean id="dept1" class="com.cognizant.springlearn.Department">
    <property name="id" value="1"/>
    <property name="name" value="HR"/>
  </bean>
  <bean id="dept2" class="com.cognizant.springlearn.Department">
    <property name="id" value="2"/>
    <property name="name" value="IT"/>
  </bean>
  <bean id="dept3" class="com.cognizant.springlearn.Department">
    <property name="id" value="3"/>
    <property name="name" value="Finance"/>
  </bean>
  <bean id="emp1" class="com.cognizant.springlearn.Employee">
    <property name="id" value="101"/>
    <property name="name" value="John Doe"/>
```

```xml
      <property name="department" ref="dept1"/>
   </bean>
   <bean id="emp2" class="com.cognizant.springlearn.Employee">
      <property name="id" value="102"/>
      <property name="name" value="Jane Smith"/>
      <property name="department" ref="dept2"/>
   </bean>
   <bean id="emp3" class="com.cognizant.springlearn.Employee">
      <property name="id" value="103"/>
      <property name="name" value="Alex Johnson"/>
      <property name="department" ref="dept3"/>
   </bean>
   <bean id="empList" class="java.util.ArrayList">
      <constructor-arg>
         <list>
            <ref bean="emp1"/>
            <ref bean="emp2"/>
            <ref bean="emp3"/>
         </list>
      </constructor-arg>
   </bean>
</beans>
```

//EmployeeDao.java

```java
package com.cognizant.springlearn.dao;

import com.cognizant.springlearn.Employee;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Component;

import java.util.ArrayList;

@Component
```

```java
public class EmployeeDao {

    private static ArrayList<Employee> EMPLOYEE_LIST;

    public EmployeeDao() {

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

        EMPLOYEE_LIST = (ArrayList<Employee>) context.getBean("empList");

    }

    public ArrayList<Employee> getAllEmployees() {

        return EMPLOYEE_LIST;

    }

}
```

2) Hands on 2: Create REST service to gets all employees

Solution:

//EmployeeService.java

```java
package com.cognizant.springlearn.service;

import com.cognizant.springlearn.Employee;

import com.cognizant.springlearn.dao.EmployeeDao;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

import java.util.ArrayList;

@Service

public class EmployeeService {

    @Autowired

    private EmployeeDao employeeDao;

    @Transactional

    public ArrayList<Employee> getAllEmployees() {

        return employeeDao.getAllEmployees();

    }}
```

```java
//EmployeeController.java
package com.cognizant.springlearn.controller;
import com.cognizant.springlearn.Employee;
import com.cognizant.springlearn.service.EmployeeService;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;
import java.util.ArrayList;
@RestController
public class EmployeeController {
    @Autowired
    private EmployeeService employeeService;
    @GetMapping("/employees")
    public ArrayList<Employee> getAllEmployees() {
        return employeeService.getAllEmployees();
    }
}
```

3) Hands on 3: Create REST service for department

Solution:

//DepartmentDao.java

```java
package com.cognizant.springlearn.dao;
import com.cognizant.springlearn.Department;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
import org.springframework.stereotype.Component;
import java.util.ArrayList;
@Component
public class DepartmentDao {
    private static ArrayList<Department> DEPARTMENT_LIST;
```

```java
    public DepartmentDao() {

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

        DEPARTMENT_LIST = (ArrayList<Department>) context.getBean("departmentList");

    }

    public ArrayList<Department> getAllDepartments() {

        return DEPARTMENT_LIST;

    }

}
```

//employee.xml

```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

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

    <bean id="dept1" class="com.cognizant.springlearn.Department">

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

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

    </bean>

    <bean id="dept2" class="com.cognizant.springlearn.Department">

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

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

    </bean>

    <bean id="dept3" class="com.cognizant.springlearn.Department">

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

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

    </bean>

    <bean id="emp1" class="com.cognizant.springlearn.Employee">

        <property name="id" value="101"/>

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

```xml
      <property name="department" ref="dept1"/>
   </bean>
   <bean id="emp2" class="com.cognizant.springlearn.Employee">
      <property name="id" value="102"/>
      <property name="name" value="Jane Smith"/>
      <property name="department" ref="dept2"/>
   </bean>
   <bean id="emp3" class="com.cognizant.springlearn.Employee">
      <property name="id" value="103"/>
      <property name="name" value="Alex Johnson"/>
      <property name="department" ref="dept3"/>
   </bean>
   <bean id="empList" class="java.util.ArrayList">
      <constructor-arg>
         <list>
            <ref bean="emp1"/>
            <ref bean="emp2"/>
            <ref bean="emp3"/>
         </list>
      </constructor-arg>
   </bean>
 <bean id="departmentList" class="java.util.ArrayList">
      <constructor-arg>
         <list>
            <ref bean="dept1"/>
            <ref bean="dept2"/>
            <ref bean="dept3"/>
         </list>
      </constructor-arg>
 </bean>
```

```
</beans>

//DepartmentService.java

package com.cognizant.springlearn.service;

import com.cognizant.springlearn.Department;

import com.cognizant.springlearn.dao.DepartmentDao;

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

import org.springframework.stereotype.Service;

import java.util.ArrayList;

@Service

public class DepartmentService {

    @Autowired

    private DepartmentDao departmentDao;

    public ArrayList<Department> getAllDepartments() {

        return departmentDao.getAllDepartments();

    }

}

//DepartmentController.java

package com.cognizant.springlearn.controller;

import com.cognizant.springlearn.Department;

import com.cognizant.springlearn.service.DepartmentService;

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

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

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

import java.util.ArrayList;

@RestController

public class DepartmentController {

    @Autowired

    private DepartmentService departmentService;

    @GetMapping("/departments")

    public ArrayList<Department> getAllDepartments() {
```

```
        return departmentService.getAllDepartments();
    }
}
```