**Spring MVC and Spring ORM Integration:**

**Steps to write Programing**

**for Integration of SpringMVC**

**and SpringORM:-**

**===========================**

**Steup:-**

**1)Open eclipse in Java EE perspective**

**2)Configure Tomcat Server**

**3)Create a new Dynamic web proj**

**4)Copy and paste jars in lib folder(not in buildpath)**

**Spring+Hibernate+ DB jar+ commons Logging+JSTL.**

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**\*\*)Coding**

**1)XML:-**

**i)web.xml : configre FC using directory pattern.**

**ii)Spring config file: ex: sample-servlet.xml**

**->Activate Annotations**

**->DMDS,ASFB,HT**

**->View resolver.**

**2)Java Coding:-**

**i)Model class(@Entity, @Id...**

**ii)POJI in DAL (EX: IEmployeeDao) (I)**

**iii)POJO in DAL ex: EmployeeDaoImpl (C) ----<> HT**

**iv) POJI in SL ex: IEmployeeService (I)**

**v) POJO in SL EmployeeServiceImpl (C) ----<> IEmployeeDao**

**v) Controller in PL ex: EmployeeControllerr (C)**

**------<> IEmployeeService**

**JSPs:(jsps)**

**i)Register.jsp**

**ii)Data.jsp**

**Web.xml**

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

**<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://java.sun.com/xml/ns/javaee"* xsi:schemaLocation=*"http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-app\_2\_5.xsd"* id=*"WebApp\_ID"* version=*"2.5"*>**

**<servlet>**

**<servlet-name>sample</servlet-name>**

**<servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>sample</servlet-name>**

**<url-pattern>/mvc/\*</url-pattern>**

**</servlet-mapping>**

**</web-app>**

**sample-servlet.xml**

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

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

**xmlns:p=*"http://www.springframework.org/schema/p"* xmlns:context=*"http://www.springframework.org/schema/context"***

**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-3.0.xsd***

***http://www.springframework.org/schema/context***

***http://www.springframework.org/schema/context/spring-context-3.0.xsd***

***"*>**

**<!-- Activation of Annotation -->**

**<context:component-scan base-package=*"com.app"*/>**

**<!-- DMDS,ASFB,HT -->**

**<bean**

**class=*"org.springframework.jdbc.datasource.DriverManagerDataSource"***

**name=*"dsObj"***

**p:driverClassName=*" oracle.jdbc.driver.OracleDriver"***

**p:url=*"jdbc:oracle:thin:@localhost:1521:xe"***

**p:username=*"system"***

**p:password=*"manager"*/>**

**<bean**

**class=*"org.springframework.orm.hibernate3.annotation.AnnotationSessionFactoryBean"***

**name=*"sfObj"*>**

**<property name=*"dataSource"*>**

**<ref bean=*"dsObj"*/>**

**</property>**

**<property name=*"hibernateProperties"*>**

**<props>**

**<prop key=*"hibernate.dialect"*>org.hibernate.dialect.OracleDialect</prop>**

**<prop key=*"hibernate.show\_sql"*>true</prop>**

**<prop key=*"hibernate.hbm2ddl.auto"*>update</prop>**

**</props>**

**</property>**

**<property name=*"annotatedClasses"*>**

**<list>**

**<value>com.app.model.Employee</value>**

**</list>**

**</property>**

**</bean>**

**<bean**

**class=*"org.springframework.orm.hibernate3.HibernateTemplate"***

**name=*"htObj"***

**>**

**<property name=*"sessionFactory"*>**

**<ref bean=*"sfObj"*/>**

**</property>**

**</bean>**

**<!-- View Resolver -->**

**<bean**

**class=*"org.springframework.web.servlet.view.InternalResourceViewResolver"***

**p:prefix=*"/WEB-INF/jsps/"* p:suffix=*".jsp"*/>**

**</beans>**

**Register.jsp**

**<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"***

**pageEncoding=*"ISO-8859-1"*%>**

**<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">**

**<html>**

**<head>**

**<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>**

**<title>Insert title here</title>**

**</head>**

**<body>**

**<h1>Welcome to Register page</h1>**

**<form action=*"insert"* method=*"post"*>**

**<pre>**

**Id : <input type=*"text"* name=*"empId"*/>**

**Name : <input type=*"text"* name=*"empName"*/>**

**Sal : <input type=*"text"* name=*"empSal"*/>**

**<input type=*"submit"* value=*"Insert"*/>**

**</pre>**

**</form>**

**${msg}<br/>**

**<a href=*"viewAllEmp"*>View All Records</a>**

**</body>**

**</html>**

**Data.jsp**

**<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"***

**pageEncoding=*"ISO-8859-1"*%>**

**<%@taglib prefix=*"c"* uri=*"http://java.sun.com/jsp/jstl/core"* %>**

**<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">**

**<html>**

**<head>**

**<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>**

**<title>Insert title here</title>**

**</head>**

**<body>**

**<table border=*"1"*>**

**<c:forEach items=*"*${empList}*"* var=*"emp"*>**

**<tr>**

**<td><c:out value=*"*${emp.empId}*"*/></td>**

**<td><c:out value=*"*${emp.empName}*"*/></td>**

**<td><c:out value=*"*${emp.empSal}*"*/></td>**

**</tr>**

**</c:forEach>**

**</table>**

**</body>**

**</html>**

**Employee.java (Model)**

**package com.app.model;**

**import javax.persistence.Column;**

**import javax.persistence.Entity;**

**import javax.persistence.Id;**

**import javax.persistence.Table;**

**@Entity**

**@Table(name="EMP\_TAB\_54")**

**public class Employee {**

**@Id**

**@Column(name="eid")**

**private int empId;**

**@Column(name="ename")**

**private String empName;**

**@Column(name="esal")**

**private double empSal;**

**public Employee() {**

**super();**

**}**

**public Employee(int empId) {**

**super();**

**this.empId = empId;**

**}**

**public Employee(int empId, String empName, double empSal) {**

**super();**

**this.empId = empId;**

**this.empName = empName;**

**this.empSal = empSal;**

**}**

**@Override**

**public String toString() {**

**return "Employee [empId=" + empId + ", empName=" + empName**

**+ ", empSal=" + empSal + "]";**

**}**

**public int getEmpId() {**

**return empId;**

**}**

**public void setEmpId(int empId) {**

**this.empId = empId;**

**}**

**public String getEmpName() {**

**return empName;**

**}**

**public void setEmpName(String empName) {**

**this.empName = empName;**

**}**

**public double getEmpSal() {**

**return empSal;**

**}**

**public void setEmpSal(double empSal) {**

**this.empSal = empSal;**

**}**

**}**

**DAL POJI**

**IEmployeeDao.java**

**package com.app.dao;**

**import java.util.List;**

**import com.app.model.Employee;**

**public interface IEmployeeDao {**

**public int saveEmployee(Employee e);**

**public List<Employee> getAllEmps();**

**}**

**DAL –POJO**

**EmployeeDaoImpl.java**

**package com.app.dao.impl;**

**import java.util.List;**

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

**import org.springframework.orm.hibernate3.HibernateTemplate;**

**import org.springframework.stereotype.Repository;**

**import com.app.dao.IEmployeeDao;**

**import com.app.model.Employee;**

**@Repository**

**public class EmployeeDaoImpl implements IEmployeeDao{**

**@Autowired**

**private HibernateTemplate ht;**

**//save**

**public int saveEmployee(Employee e){**

**return (Integer)ht.save(e);**

**}**

**//get all**

**public List<Employee> getAllEmps() {**

**return ht.loadAll(Employee.class);**

**}**

**}**

**SL POJI**

**IEmployeeService.java**

**package com.app.service;**

**import java.util.List;**

**import com.app.model.Employee;**

**public interface IEmployeeService {**

**public int saveEmployee(Employee e);**

**public List<Employee> getAllEmps();**

**}**

**SL POJO :**

**EmployeeServiceImpl.java**

**package com.app.service.impl;**

**import java.util.Collections;**

**import java.util.Comparator;**

**import java.util.List;**

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

**import org.springframework.stereotype.Service;**

**import com.app.dao.IEmployeeDao;**

**import com.app.model.Employee;**

**import com.app.service.IEmployeeService;**

**@Service**

**public class EmployeeServiceImpl implements IEmployeeService{**

**@Autowired**

**private IEmployeeDao dao;**

**public int saveEmployee(Employee e){**

**double sal=e.getEmpSal();**

**sal=sal+((sal\*10.0)/100.0);**

**e.setEmpSal(sal);**

**return dao.saveEmployee(e);**

**}**

**public List<Employee> getAllEmps() {**

**List<Employee> empList=dao.getAllEmps();;**

**Collections.*sort*(empList, new Comparator<Employee>(){**

**@Override**

**public int compare(Employee o1, Employee o2) {**

**return o1.getEmpId()-o2.getEmpId();**

**}**

**});**

**return empList;**

**}**

**}**

**PL-Controller**

**EmployeeController.java**

**package com.app.controller;**

**import java.util.List;**

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

**import org.springframework.stereotype.Controller;**

**import org.springframework.ui.ModelMap;**

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

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

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

**import com.app.model.Employee;**

**import com.app.service.IEmployeeService;**

**@Controller**

**public class EmployeeController {**

**@Autowired**

**private IEmployeeService service;**

**//1.show the reg page**

**@RequestMapping("/reg")**

**public String showPage(){**

**return "Register";**

**}**

**//2. save data**

**@RequestMapping(value="/insert",method=RequestMethod.*POST*)**

**public String saveEmployee(@ModelAttribute("employee")Employee e,ModelMap m){**

**//call service save**

**int eid=service.saveEmployee(e);**

**String msg="Saved with Id :"+eid;**

**m.addAttribute("msg",msg);**

**return "Register";**

**}**

**//3. get Data**

**@RequestMapping("/viewAllEmp")**

**public String getAllEmps(ModelMap m){**

**List<Employee> eL=service.getAllEmps();**

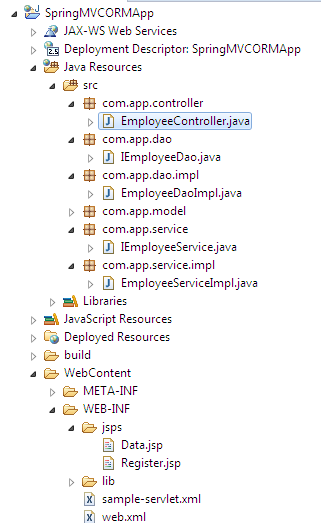
**m.addAttribute("empList",eL);**

**return "Data";**

**}**

**}**

**Folder Structure**

****