#### 随笔 - 22 文章 - 1 评论 - 26

# z周运z

博客园 首页 新随笔 联系 订阅 管理

#### 公告

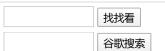
昵称: 颜色不一样的烟火

园龄: 10个月 粉丝: 6 关注: 1 +加关注

#### 2020年1月

日 一 二 三 四 五 六 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8

#### 搜索



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gitlab(4)

Activiti (二) springBoot2集成activiti, 集成activiti在线设计器

# . 摘要

本篇随笔主要记录springBoot2集成activiti流程引擎,并且嵌入activiti的在线设计器,可以通过浏览器直接编辑出我们需要的流程,不需要通过eclipse或者IDEA的actiBpm插件设计流程再直接部署到项目下,页面保存流程后可直接发布、发起流程。

# · 所需软件版本

springBoot 2.0.1.RELEASE
activiti 5.22.0 宜网下载地址
activiti-webapp-explorer2 我的github上的explorer项目

# · 集成方法

activiti支持多种数据库,本身还有个h2的内存数据库,我这里用的是Mysql 1、pom.xml引入依赖,这里主要是activiti的依赖包,\${activiti.version}为5.22.0

```
jenkins(2)
                                                   <exclusion>
                                                       <groupId>org.springframework.boot
activiti(2)
                                                       <artifactId>spring-boot-starter-actuator</artifactId>
CentOs(2)
                                                   </exclusion>
spring(2)
                                                   <exclusion>
springboot(2)
                                                       <groupId>org.springframework.boot</groupId>
Vmware(2)
                                                       <artifactId>spring-boot-starter-web</artifactId>
动态代理(1)
                                                   </exclusion>
设计模式(1)
                                                   <exclusion>
项目构建(1)
                                                       <groupId>org.springframework.security</groupId>
更多
                                                       <artifactId>spring-security-config</artifactId>
                                                   </exclusion>
随笔分类
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activiti(2)
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centos(3)
                                           <dependency>
                                               <groupId>org.activiti
gitlab(4)
                                               <artifactId>activiti-spring-boot-starter-actuator</artifactId>
jenkins(2)
                                               <version>${activiti.version}
js/jquery(1)
                                               <exclusions>
linux(4)
                                                   <exclusion>
Mq(1)
                                                       <groupId>org.springframework.boot</groupId>
msql(1)
                                                       <artifactId>spring-boot-starter-web</artifactId>
myBatis(1)
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oracle(1)
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redis(1)
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solr(1)
                                           <dependency>
spring(4)
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springboot(3)
                                               <artifactId>activiti-rest</artifactId>
springCloud(1)
                                               <version>${activiti.version}
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2019年12月(2)
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2019年8月(1)
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2019年5月(5)
                                           <dependency>
2019年3月(2)
                                               <groupId>org.activiti
2019年2月(9)
                                               <artifactId>activiti-explorer</artifactId>
                                               <version>${activiti.version}
最新评论
                                               <exclusions>
1. Re:Activiti (二) springBoot2集
                                                   <exclusion>
成activiti, 集成activiti在线设计器
                                                       <groupId>com.vaadin</groupId>
楼主可否给个联系方式, 有问题请
                                                       <artifactId>vaadin</artifactId>
                                                   </exclusion>
教
            --沉迷睡觉的死宅
                                                   <exclusion>
                                                       <groupId>org.vaadin.addons
2. Re:Activiti (二) springBoot2集
                                                       <artifactId>dcharts-widget</artifactId>
成activiti, 集成activiti在线设计器
                                                   </exclusion>
```

楼主可否给个联系方式,有问题请 教

--九惜

3. Re:Activiti(二)springBoot2集成activiti,集成activiti在线设计器楼主,为什么我设置了javaBean作为变量的时候,获取的时候,返回的是ObjectNode类型,无法转换成JavaBean类型

--园子里的人

4. Re:Activiti(二)springBoot2集成activiti,集成activiti在线设计器版主 开启流程的时候报这个no processes deployed with key 'modelKey'

--xiaoyuemushan

5. Re:Activiti(二)springBoot2集成activiti,集成activiti在线设计器源码已经发到码云,各位可以去拉取地址:

--颜色不一样的烟火

#### 阅读排行榜

- 1. Activiti(二) springBoot2集成a ctiviti, 集成activiti在线设计器(663 8)
- 2. springBoot添加日志管理(2779)
- 3. java实现word生成并转pdf(1585)
- 4. linux下oracle无法删除用户(618)
- 5. MYSQL SQL语句优化(547)

#### 评论排行榜

- 1. Activiti(二) springBoot2集成a ctiviti,集成activiti在线设计器(24)
- 2. java实现word生成并转pdf(2)

#### 推荐排行榜

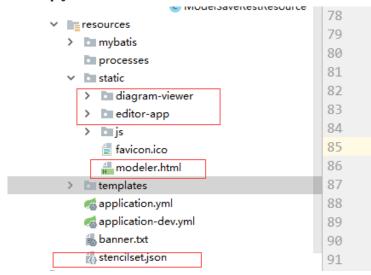
- 1. Activiti (二) springBoot2集成a ctiviti, 集成activiti在线设计器(1)
- 2. 数据库缓存mybatis,redis(1)
- 3. MYSQL SQL语句优化(1)
- 4. Linux环境oracle导库步骤(1)

```
<exclusion>
           <groupId>activiti-simple-workflow
           <artifactId>org.activiti</artifactId>
       </exclusion>
   </exclusions>
</dependency>
<dependency>
   <groupId>org.activiti
   <artifactId>activiti-diagram-rest</artifactId>
   <version>${activiti.version}
</dependency>
<dependency>
   <groupId>org.activiti
   <artifactId>activiti-simple-workflow</artifactId>
   <version>${activiti.version}
</dependency>
<dependency>
   <groupId>org.activiti</groupId>
   <artifactId>activiti-spring</artifactId>
   <version>${activiti.version}
</dependency>
<dependency>
   <groupId>org.apache.xmlgraphics/groupId>
   <artifactId>batik-codec</artifactId>
   <version>1.7</version>
</dependency>
<dependency>
   <groupId>org.apache.xmlgraphics
   <artifactId>batik-css</artifactId>
   <version>1.7</version>
</dependency>
<dependency>
   <groupId>org.apache.xmlgraphics
   <artifactId>batik-svg-dom</artifactId>
   <version>1.7</version>
</dependency>
<dependency>
   <groupId>org.apache.xmlgraphics
   <artifactId>batik-svggen</artifactId>
   <version>1.7
</dependency>
<dependency>
   <groupId>org.springframework.security</groupId>
   <artifactId>spring-security-config</artifactId>
   <version>4.1.3.RELEASE
</dependency>
<!--spring activiti end-->
```

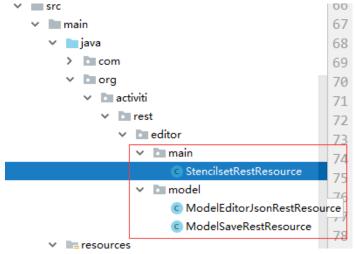
## 

#### 2、拷贝项目资源

解压activiti-webapp-explorer2,把webapp下面的diagram-viewer、editorapp、modeler.html复制到springboot项目下的static下,这是activiti的在线设计器,modeler.html就是设计的主界面,复制resources下stencilset.json到自己的resources下。



解压activiti-5.22.0的包,将libs下的activiti-modeler-5.22.0-sources.jar解压出来,把org\activiti\rest\editor路径下的main、model文件夹复制到springboot项目的源码路径下,里面有三个类,主要用于读取stencilset.json。



- 3、修改拷贝过来的资源文件
  - 修改StencilsetRestResource.java、ModelEditorJsonRestResource.jav
- a、ModelSaveRestResource.java3个controller, 加上@RequestMapping("/ser vice")

```
@RequestMapping("/service")
public class StencilsetRestResource {

@RequestMapping(value="/editor/stencilset", method = RequestMethod.GET, produces = "application/js public @ResponseBody String getStencilset() {

InputStream stencilsetStream = this.getClass().getClassLoader().getResourceAsStream( name: "stence try {

    return IOUtils.tostring(stencilsetStream, encoding: "utf-8");
    } catch (Exception e) {

        throw new ActivitiException("Error while loading stencil set", e);
    }
}
```

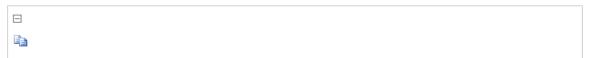
修改editor-app下的app-cfg.js,把contextRoot后面改成/service,和controller里面加的requestMapping要一致

```
• var ACTIVITI = ACTIVITI || {};

ACTIVITI.CONFIG = {
   'contextRoot' : '/service',
};
```

4、新增service、controller

service实现,这里只放实现类,接口就不放了,自己可以根据实现类自己添加接口方法,这个service实现了把流程和自定义表单结合的功能,completeTask方法通过java反射执行不同任务节点执行不同form



```
package com.djkj.activiti.service.Impl;
import com.djkj.activiti.bean.ActivitiVariable;
import com.djkj.activiti.common.BusinessTaskUtil;
import com.djkj.activiti.service.ActivitiService;
import com.djkj.activiti.service.ActivitiVariableService;
import org.activiti.bpmn.model.BpmnModel;
import org.activiti.engine.HistoryService;
import org.activiti.engine.RepositoryService;
import org.activiti.engine.RuntimeService;
import org.activiti.engine.TaskService;
import org.activiti.engine.delegate.DelegateExecution;
import org.activiti.engine.history.HistoricActivityInstance;
import org.activiti.engine.history.HistoricProcessInstance;
import org.activiti.engine.impl.cfg.ProcessEngineConfigurationImpl;
import org.activiti.engine.impl.persistence.entity.ProcessDefinitionEntity;
import org.activiti.engine.impl.pvm.PvmTransition;
import org.activiti.engine.impl.pvm.process.ActivityImpl;
import org.activiti.engine.runtime.ProcessInstance;
import org.activiti.engine.task.Task;
import org.activiti.image.ProcessDiagramGenerator;
import org.apache.log4j.Logger;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import sun.misc.BASE64Encoder;
import javax.imageio.ImageIO;
import java.awt.image.BufferedImage;
import java.io.ByteArrayOutputStream;
import java.io.File;
import java.io.FileOutputStream;
import java.io.InputStream;
import java.lang.reflect.Method;
import java.util.*;
@Service
public class ActivitiServiceImpl implements ActivitiService {
    @Autowired
    private RuntimeService runtimeService;
    @Autowired
    private TaskService taskService;
    @Autowired
    private HistoryService historyService;
    @Autowired
    private RepositoryService repositoryService;
    @Autowired
    private ProcessEngineConfigurationImpl processEngineConfiguration;
    @Autowired
```

```
private ActivitiVariableService activitiVariableService;
   private static final Logger logger=Logger.getLogger(ActivitiServiceImpl.class);
   /**
    * 启动流程
    */
   @Override
   public void startProcesses(String id, String business key) {
       ProcessInstance pi = runtimeService.startProcessInstanceByKey(id, business key);
//流程图id, 业务表id
       System.out.println("流程启动成功,流程id:"+pi.getId());
   /**
    * 描述:根据用户id查询待办任务列表
    * @author 范相如
    * @date 2018年2月25日
    */
   @Override
   public List<Task> findTasksByUserId(String userId) {
       List<Task> resultTask = taskService.createTaskQuery().processDefinitionKey("proce
ss").taskCandidateOrAssigned(userId).list();
       return resultTask;
   }
   @Override
   public Task findTaskById(String taskId){
       List<Task> resultTask = taskService.createTaskQuery().taskId(taskId).list();
       if(resultTask!=null){
           return resultTask.get(0);
       return null;
    * 描述:任务审批
                         (通过/拒接) 
    * @author 范相如
    * @date 2018年2月25日
    * @param taskId 任务id
    * @param userId 用户id
    * @param result false OR true
    */
   @Override
   public void completeTask(String taskId,String userId,String result) {
       //获取流程实例
       taskService.claim(taskId, userId);
```

```
//获取任务
       Task task=taskService.createTaskQuery().taskId(taskId).singleResult();
       //获取流程实例ID
       String proInsId = task.getProcessInstanceId();
       //获取流程实例
       ProcessInstance process = runtimeService.createProcessInstanceQuery().processInst
anceId(proInsId).singleResult();
       //获取业务外键
       String business key = process.getBusinessKey();
       String[] array = business key.split(":");
       String business Id = array[1];
       //业务处理
       try {
           Class clazz=BusinessTaskUtil.class;
           Object obj = clazz.newInstance();
           Method method = clazz.getMethod("actBusiness_"+task.getFormKey(),String.class
, String.class, String.class);
           method.invoke(obj,userId,business Id,result);
       }catch (Exception e) {
           e.printStackTrace();
           logger.error("执行业务方法错误!");
       taskService.complete(taskId);
    * 更改业务流程状态#{ActivityDemoServiceImpl.updateBizStatus(execution,"tj")}
    * @param execution
    * @param status
    * /
   @Override
   public void updateBizStatus(DelegateExecution execution, String status) {
       String bizId = execution.getProcessBusinessKey();
       //根据业务id自行处理业务表
       System.out.println("业务表["+bizId+"]状态更改成功,状态更改为: "+status);
   //流程节点权限用户列表${ActivityDemoServiceImpl.findUsers(execution, sign)}
   @Override
   public List<String> findUsersForSL(DelegateExecution execution) {
       return Arrays.asList("sly1", "sly2");
   //流程节点权限用户列表${ActivityDemoServiceImpl.findUsers(execution, sign)}
   @Override
   public List<String> findUsersForSP(DelegateExecution execution) {
       return Arrays.asList("spy1", "uspy2");
```

```
}
   /**
    * 描述: 生成流程图
    * 首先启动流程,获取processInstanceId,替换即可生成
    * @author 范相如
    * @date 2018年2月25日
    * @param processInstanceId
    * @throws Exception
    */
   @Override
   public void queryProImg(String processInstanceId) throws Exception {
       //获取历史流程实例
       HistoricProcessInstance processInstance = historyService.createHistoricProcessIn
stanceQuery().processInstanceId(processInstanceId).singleResult();
       //根据流程定义获取输入流
       InputStream is = repositoryService.getProcessDiagram(processInstance.getProcessDe
finitionId());
       BufferedImage bi = ImageIO.read(is);
       File file = new File("demo2.png");
       if(!file.exists()) file.createNewFile();
       FileOutputStream fos = new FileOutputStream(file);
       ImageIO.write(bi, "png", fos);
       fos.close();
       is.close();
       System.out.println("图片生成成功");
       List<Task> tasks = taskService.createTaskQuery().taskCandidateUser("userId").list
();
       for(Task t : tasks) {
           System.out.println(t.getName());
    * 流程图高亮显示
    * 首先启动流程,获取processInstanceId,替换即可生成
    * @throws Exception
    * /
   @Override
   public String queryProHighLighted(String processInstanceId) throws Exception {
       //获取历史流程实例
       HistoricProcessInstance processInstance = historyService.createHistoricProcessIn
stanceQuery().processInstanceId(processInstanceId).singleResult();
       //获取流程图
       BpmnModel bpmnModel = repositoryService.getBpmnModel(processInstance.getProcessDe
```

```
finitionId());
        ProcessDiagramGenerator diagramGenerator = processEngineConfiguration.getProcessD
iagramGenerator();
        ProcessDefinitionEntity definitionEntity = (ProcessDefinitionEntity)repositorySer
vice.getProcessDefinition(processInstance.getProcessDefinitionId());
       List<HistoricActivityInstance> highLightedActivitList = historyService.createHis
toricActivityInstanceQuery().processInstanceId(processInstanceId).list();
       //高亮环节id集合
       List<String> highLightedActivitis = new ArrayList<String>();
       //高亮线路id集合
       List<String> highLightedFlows = getHighLightedFlows(definitionEntity, highLightedA
ctivitList);
        for(HistoricActivityInstance tempActivity : highLightedActivitList){
           String activityId = tempActivity.getActivityId();
           highLightedActivitis.add(activityId);
       //配置字体
        InputStream imageStream = diagramGenerator.generateDiagram(bpmnModel, "png", high
LightedActivitis, highLightedFlows,"宋体","微软雅黑","黑体",null,2.0);
        BufferedImage bi = ImageIO.read(imageStream);
11
        File file = new File("demo2.png");
//
        if(!file.exists()) file.createNewFile();
11
         FileOutputStream fos = new FileOutputStream(file);
        ByteArrayOutputStream bos= new ByteArrayOutputStream();
        ImageIO.write(bi, "png", bos);
       byte[] bytes = bos.toByteArray();//转换成字节
       BASE64Encoder encoder = new BASE64Encoder();
        String png base64 = encoder.encodeBuffer(bytes);//转换成base64串
        png base64 = png base64.replaceAll("\n", "").replaceAll("\r", "");//删除 \r\n
       bos.close();
        imageStream.close();
       return png base64;
    * 获取需要高亮的线
     * @param processDefinitionEntity
     * @param historicActivityInstances
     * @return
     */
   private List<String> getHighLightedFlows(
            ProcessDefinitionEntity processDefinitionEntity,
            List<HistoricActivityInstance> historicActivityInstances) {
       List<String> highFlows = new ArrayList<String>();// 用以保存高亮的线flowId
        for (int i = 0; i < historicActivityInstances.size() - 1; i++) {// 对历史流程节点进
```

```
行遍历
           ActivityImpl activityImpl = processDefinitionEntity
                   .findActivity(historicActivityInstances.get(i)
                          .getActivityId());// 得到节点定义的详细信息
           List<ActivityImpl> sameStartTimeNodes = new ArrayList<ActivityImpl>();// 用以
保存后需开始时间相同的节点
           ActivityImpl sameActivityImpl1 = processDefinitionEntity
                   .findActivity(historicActivityInstances.get(i + 1)
                          .getActivityId());
           // 将后面第一个节点放在时间相同节点的集合里
           sameStartTimeNodes.add(sameActivityImpl1);
           for (int j = i + 1; j < historicActivityInstances.size() - 1; j++) {</pre>
               HistoricActivityInstance activityImpl1 = historicActivityInstances
                       .get(j);// 后续第一个节点
               HistoricActivityInstance activityImpl2 = historicActivityInstances
                       .get(j + 1);// 后续第二个节点
               if (activityImpl1.getStartTime().equals(
                      activityImpl2.getStartTime())) {
                  // 如果第一个节点和第二个节点开始时间相同保存
                  ActivityImpl sameActivityImpl2 = processDefinitionEntity
                          .findActivity(activityImpl2.getActivityId());
                  sameStartTimeNodes.add(sameActivityImpl2);
               } else {
                  // 有不相同跳出循环
                  break:
           List<PvmTransition> pvmTransitions = activityImpl
                   .getOutgoingTransitions();// 取出节点的所有出去的线
           for (PvmTransition pvmTransition: pvmTransitions) {
               // 对所有的线进行遍历
               ActivityImpl pvmActivityImpl = (ActivityImpl) pvmTransition
                       .getDestination();
               // 如果取出的线的目标节点存在时间相同的节点里,保存该线的id,进行高亮显示
               if (sameStartTimeNodes.contains(pvmActivityImpl)) {
                  highFlows.add(pvmTransition.getId());
       return highFlows;
```

# controller实现,我写了两个controller,主要当时写的时候没有写在一起,你们可以把这两部分的内容合并在一起

```
package com.djkj.activiti.controller;
import com.fasterxml.jackson.databind.JsonNode;
import com.fasterxml.jackson.databind.ObjectMapper;
import com.fasterxml.jackson.databind.node.ObjectNode;
import org.activiti.bpmn.converter.BpmnXMLConverter;
import org.activiti.bpmn.model.BpmnModel;
import org.activiti.editor.constants.ModelDataJsonConstants;
import org.activiti.editor.language.json.converter.BpmnJsonConverter;
import org.activiti.engine.ProcessEngine;
import org.activiti.engine.RepositoryService;
import org.activiti.engine.repository.Deployment;
import org.activiti.engine.repository.Model;
import org.apache.commons.lang3.StringUtils;
import org.apache.log4j.Logger;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.ModelMap;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.bind.annotation.RestController;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.UnsupportedEncodingException;
import java.util.List;
@Controller
@RequestMapping("/models")
public class MyActivitiController {
    private static final Logger LOGGER = Logger.getLogger(MyActivitiController.class);
    @Aut.owired
    private RepositoryService repositoryService;
    @Autowired
    private ObjectMapper objectMapper;
    @RequestMapping("/modelList")
    public String modelList(org.springframework.ui.Model model, HttpServletRequest reques
```

```
t) {
       List<Model> models = repositoryService.createModelQuery().orderByCreateTime().des
c().list();
       model.addAttribute("models", models);
       String info = request.getParameter("info");
       if(StringUtils.isNotEmpty(info)){
           model.addAttribute("info", info);
       return "model/list";
   @RequestMapping("/create")
   public void newModel (HttpServletRequest request, HttpServletResponse response) throws
UnsupportedEncodingException {
      try {
          //初始化一个空模型
          Model model = repositoryService.newModel();
          //设置一些默认信息
          String name = "new-process";
          String description = "";
          int revision = 1;
          String key = "process";
          ObjectNode modelNode = objectMapper.createObjectNode();
          modelNode.put(ModelDataJsonConstants.MODEL NAME, name);
          modelNode.put(ModelDataJsonConstants.MODEL DESCRIPTION, description);
          modelNode.put(ModelDataJsonConstants.MODEL_REVISION, revision);
          model.setName(name);
          model.setKey(key);
          model.setMetaInfo(modelNode.toString());
          repositoryService.saveModel(model);
          String id = model.getId();
          //完善ModelEditorSource
          ObjectNode editorNode = objectMapper.createObjectNode();
          editorNode.put("id", "canvas");
          editorNode.put("resourceId", "canvas");
          ObjectNode stencilSetNode = objectMapper.createObjectNode();
          stencilSetNode.put("namespace",
                  "http://b3mn.org/stencilset/bpmn2.0#");
          editorNode.put("stencilset", stencilSetNode);
          repositoryService.addModelEditorSource(id, editorNode.toString().getBytes("utf
-8"));
          response.sendRedirect(request.getContextPath() + "/static/modeler.html?modelId
```

```
=" + id);
      }catch (IOException e) {
          e.printStackTrace();
          LOGGER.info("模型创建失败!");
   @RequestMapping("/delete/{id}")
   public @ResponseBody String deleteModel(@PathVariable("id")String id){
       repositoryService.deleteModel(id);
       return "删除成功! ";
   @RequestMapping("/deployment/{id}")
   public @ResponseBody String deploy(@PathVariable("id")String id) throws Exception {
       //获取模型
       Model modelData = repositoryService.getModel(id);
       byte[] bytes = repositoryService.getModelEditorSource(modelData.getId());
       if (bytes == null) {
           return "模型数据为空,请先设计流程并成功保存,再进行发布。";
       JsonNode modelNode = new ObjectMapper().readTree(bytes);
       BpmnModel model = new BpmnJsonConverter().convertToBpmnModel(modelNode);
       if (model.getProcesses().size() == 0) {
           return "数据模型不符要求,请至少设计一条主线流程。";
       byte[] bpmnBytes = new BpmnXMLConverter().convertToXML(model);
       //发布流程
       String processName = modelData.getName() + ".bpmn20.xml";
       Deployment deployment = repositoryService.createDeployment()
               .name(modelData.getName())
               .addString(processName, new String(bpmnBytes, "UTF-8"))
               .deploy();
       modelData.setDeploymentId(deployment.getId());
       repositoryService.saveModel(modelData);
       return "流程发布成功";
   @RequestMapping("/start/{id}")
   public @ResponseBody String startProcess(@PathVariable("id") String id){
       try {
```

```
}catch (Exception e) {
    e.printStackTrace();
    return "流程启动失败!";
}
return "流程启动成功";
}
```

#### 显示所有流程列表, 以及流程的增删改

```
package com.djkj.activiti.controller;
import com.djkj.activiti.bean.ActivitiVariable;
import com.djkj.activiti.bean.FormData;
import com.djkj.activiti.service.ActivitiService;
import com.djkj.activiti.service.ActivitiVariableService;
import org.activiti.engine.HistoryService;
import org.activiti.engine.TaskService;
import org.activiti.engine.task.Task;
import org.apache.commons.lang3.StringUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.ModelMap;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.servlet.mvc.support.RedirectAttributesModelMap;
import javax.annotation.Resource;
import java.util.Date;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
@Controller
@RequestMapping("/activiti")
public class ActivitiProcessController {
    @Resource
    private ActivitiService activitiServiceImpl;
```

```
@Autowired
   private TaskService taskService;
    @Autowired
   private HistoryService historyService;
   @Autowired
   private ActivitiVariableService activitiVariableService;
     private static final String business = "testtask";
   //启动流程---215001
   @RequestMapping("/start/{key}")
   public String startProcess(@PathVariable("key") String key, RedirectAttributesModelMa
p modelMap) {
         Map<String,Object> map = new HashMap<String,Object>();
         map.put("userId", userIdSl);
         map.put("businessKey", business key);
         String business key = key + ":" + key;
       ActivitiVariable activitiVariable = new ActivitiVariable();
       int resul=activitiVariableService.insert(activitiVariable);
       if(resul==1){
            modelMap.addFlashAttribute("info","流程启动成功!");
            String business key = key+":"+activitiVariable.getId();
            activitiServiceImpl.startProcesses(key,business key);
            modelMap.addFlashAttribute("info","流程启动失败!");
       return "redirect:/models/modelList";
   //获取受理员任务列表
   @RequestMapping("/queryTaskSl")
   public String findTasksForSL(ModelMap modelMap,FormData formData) {
       List<Task> lists = activitiServiceImpl.findTasksByUserId(formData.getUserId());
       modelMap.addAttribute("tasks", lists);
       modelMap.addAttribute("userId", formData.getUserId());
        return "model/taskList";
   @RequestMapping("/form")
   public String form(FormData formData, ModelMap modelMap) {
       Task task=activitiServiceImpl.findTaskById(formData.getId());
       modelMap.addAttribute("data", formData);
       modelMap.addAttribute("task",task);
       if(StringUtils.isNotEmpty(task.getFormKey())){
            return "activitiForm/"+task.getFormKey();
        return "model/form";
```

```
//受理员受理数据
   @RequestMapping("/completeTaskS1")
   public String completeTasksForSL(ModelMap modelMap,FormData formData) {
       activitiServiceImpl.completeTask(formData.getId(), formData.getUserId(), formDat
a.getAttr1());//受理后,任务列表数据减少
       return findTasksForSL(modelMap, formData);
11
     //获取审批员任务列表
11
     @RequestMapping("/queryTaskSp")
     public void findTasksForSP() {
         List<Task> lists = activitiServiceImpl.findTasksByUserId(userIdSp);
         System.out.println("任务列表: "+lists);//任务列表: [Task[id=220004, name=审批]]
     //审批员通过审核
     @RequestMapping("/completeTaskSp/{id}")
     public void completeTasksForSP(@PathVariable("id")String id) {
         activitiServiceImpl.completeTask(id, userIdSp, "true");//审批后,任务列表数据减少
11
   //设置流程变量
   //设置流程变量【基本类型】
   public void setTasksVar()
       List<Task> lists = activitiServiceImpl.findTasksByUserId("sly1");
       for(Task task: lists) {//不知为何,变量保存成功,但数据表只有请假天数含有任务id,单获取流程
变量时, 根据任务id均可获取到 (如下一测试)
           taskService.setVariable(task.getId(), "请假人", "sly1");
           taskService.setVariableLocal(task.getId(), "请假天数",3);
           taskService.setVariable(task.getId(), "请假日期", new Date());
     //获取流程变量
     @Test
     public void getTasksVar() {
         List<Task> lists = activitiServiceImpl.findTasksByUserId("sly1");
         for(Task task : lists) {
            //获取流程变量【基本类型】
//
            String person = (String) taskService.getVariable(task.getId(), "请假人");
11
             Integer day = (Integer) taskService.qetVariableLocal(task.qetId(), "请假天
数");
             Date date = (Date) taskService.getVariable(task.getId(), "请假日期");
//
//
             System.out.println("流程变量: "+person+"||"+day+"||"+date+"||");
//
//
```

```
11
11
11
     //设置流程变量【实体】
11
     @Test
//
     public void setTasksVarEntity() {
//
         List<Task> lists = activitiServiceImpl.findTasksByUserId("sly1");
11
         for(Task task : lists) {
//
            Person p = new Person();
11
            p.setName("翠花");
11
            p.setId(20);
11
            p.setDate();;
//
            p.setNote("回去探亲,一起吃个饭123");
             taskService.setVariable(task.getId(), "人员信息(添加固定版本)", p);
            System.out.println("设置流程变量成功!");
11
//
     //获取流程变量【实体】 实体必须序列化
11
     @Test
11
     public void getTasksVarEntity() {
//
         List<Task> lists = activitiServiceImpl.findTasksByUserId("sly1");
11
       for(Task task : lists) {
//
            // 2.获取流程变量,使用javaBean类型
11
             Person p = (Person)taskService.getVariable(task.getId(), "人员信息(添加固定版
本)");
             System.out.println(" 请假人: "+p.getName()+" 请假天数: "+p.getId()+" 请
假时间: "+ p.getDate()+ " 请假原因: "+p.getNote());
11
11
11
11
11
    //生成流程图---232501
11
    @RequestMapping("/queryProImg")
     public void queryProImg() throws Exception {
11
         activitiServiceImpl.queryProImg("232501");
//
   //生成流程图 (高亮) ---232501
   @RequestMapping("/queryProHighLighted")
   public @ResponseBody String queryProHighLighted(String proInsId) throws Exception {
       String imageByteArray = activitiServiceImpl.queryProHighLighted(proInsId);
       return imageByteArray;
//
//
      * 查询流程变量的历史表,可以根据变量名称查询该变量的所有历史信息
11
      * /
     @Test
```

```
11
     public void findHistoryProcessVariables() {
11
         List<HistoricVariableInstance> list = historyService.createHistoricVariableInst
anceQuery()//创建一个历史的流程变量查询对象
                 .variableName("请假天数")
//
                  .list();
//
         if (list!=null &&list.size()>0) {
11
              for (HistoricVariableInstance hvi : list) {
11
                 System.out.println(hvi.getId()+"
                                                    "+hvi.getProcessInstanceId()+"
"+hvi.getVariableName()
                          +" "+hvi.getVariableTypeName()+"
//
                                                               "+hvi.getValue());
                 System.out.println("#############################;
11
//
       * 历史流程实例查询
       * <a href="http://blog.csdn.net/luckyzhoustar/article/details/48652783">http://blog.csdn.net/luckyzhoustar/article/details/48652783</a>
//
//
     @Test
     public void findHistoricProcessInstance() {
11
         // 查询已完成的流程
//
         List<HistoricProcessInstance> datas = historyService
11
                  .createHistoricProcessInstanceQuery().finished().list();
         System.out.println("使用finished方法: " + datas.size());
11
//
         // 根据流程定义ID查询
11
         datas = historyService.createHistoricProcessInstanceQuery()
11
                  .processDefinitionId("processDefinitionId").list();
11
         System.out.println("使用processDefinitionId方法: " + datas.size());
11
         // 根据流程定义key (流程描述文件的process节点id属性) 查询
11
         datas = historyService.createHistoricProcessInstanceQuery()
//
                  .processDefinitionKey("processDefinitionKey").list();
11
         System.out.println("使用processDefinitionKey方法: " + datas.size());
//
         // 根据业务主键查询
         datas = historyService.createHistoricProcessInstanceQuery()
                  .processInstanceBusinessKey("processInstanceBusinessKey").list();
         System.out.println("使用processInstanceBusinessKey方法: " + datas.size());
         // 根据流程实例ID查询
         datas = historyService.createHistoricProcessInstanceQuery()
                  .processInstanceId("processInstanceId").list();
         System.out.println("使用processInstanceId方法: " + datas.size());
         // 查询没有完成的流程实例
         historyService.createHistoricProcessInstanceQuery().unfinished().list();
         System.out.println("使用unfinished方法: " + datas.size());
11
//
      /**
```

```
11
      * 历史任务查询
11
      * @throws ParseException
11
      */
11
     @Test
//
      public void findHistoricTasks() throws ParseException {
//
         SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");
//
         //历史数据查询
11
         List<HistoricTaskInstance> datas = historyService.createHistoricTaskInstanceQue
ry()
11
                  .finished().list();
11
         System.out.println("使用finished方法查询: " + datas.size());
11
         datas = historyService.createHistoricTaskInstanceOuery()
                  .processDefinitionId("processDefinitionId").list();
//
         System.out.println("使用processDefinitionId方法查询: " + datas.size());
         datas = historyService.createHistoricTaskInstanceQuery()
                  .processDefinitionKey("testProcess").list();
         System.out.println("使用processDefinitionKey方法查询: " + datas.size());
         datas = historyService.createHistoricTaskInstanceQuery()
                  .processDefinitionName("testProcess2").list();
         System.out.println("使用processDefinitionName方法查询: " + datas.size());
11
         datas = historyService.createHistoricTaskInstanceQuery()
                  .processFinished().list();
//
         System.out.println("使用processFinished方法查询: " + datas.size());
//
         datas = historyService.createHistoricTaskInstanceQuery()
11
                  .processInstanceId("processInstanceId").list();
//
         System.out.println("使用processInstanceId方法查询: " + datas.size());
//
         datas = historyService.createHistoricTaskInstanceQuery()
11
                  .processUnfinished().list();
         System.out.println("使用processUnfinished方法查询: " + datas.size());
11
11
         datas = historyService.createHistoricTaskInstanceQuery()
11
                  .taskAssignee("crazyit").list();
         System.out.println("使用taskAssignee方法查询: " + datas.size());
11
//
         datas = historyService.createHistoricTaskInstanceQuery()
11
                  .taskAssigneeLike("%zy%").list();
11
         System.out.println("使用taskAssigneeLike方法查询: " + datas.size());
         datas = historyService.createHistoricTaskInstanceOuerv()
                  .taskDefinitionKey("usertask1").list();
         System.out.println("使用taskDefinitionKey方法查询: " + datas.size());
         datas = historyService.createHistoricTaskInstanceQuery()
                  .taskDueAfter(sdf.parse("2020-10-11 06:00:00")).list();
         System.out.println("使用taskDueAfter方法查询: " + datas.size());
11
         datas = historyService.createHistoricTaskInstanceOuery()
                  .taskDueBefore(sdf.parse("2022-10-11 06:00:00")).list();
         System.out.println("使用taskDueBefore方法查询: " + datas.size());
         datas = historyService.createHistoricTaskInstanceQuery()
//
                  .taskDueDate(sdf.parse("2020-10-11 06:00:00")).list();
//
         System.out.println("使用taskDueDate方法查询: " + datas.size());
11
         datas = historyService.createHistoricTaskInstanceQuery()
```

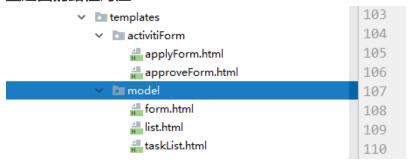
```
//
                 .unfinished().list();
//
         System.out.println("使用unfinished方法查询: " + datas.size());
//
     /**
//
//
      * 历史行为查询
11
         ·流程在进行过程中,每每走一个节点,都会记录流程节点的信息,包括节点的id,名称、类型、时间等,保
存到ACT HI ACTINST表中。
      * @throws ParseException
11
//
     @Test
//
     public void findHistoricActivityInstance() {
         SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");
         //查询数据
         List<HistoricActivityInstance> datas = historyService.createHistoricActivityIns
tanceQuery()
//
                 .activityId("endevent1").list();
         System.out.println("使用activityId查询: " + datas.size());
         datas = historyService.createHistoricActivityInstanceQuery()
                 .activityInstanceId(datas.get(0).getId()).list();
         System.out.println("使用activityInstanceId查询: " + datas.size());
11
         datas = historyService.createHistoricActivityInstanceQuery()
                 .activityType("intermediateSignalCatch").list();
         System.out.println("使用activityType查询: " + datas.size());
         datas = historyService.createHistoricActivityInstanceQuery()
                 .executionId("executionId").list();
         System.out.println("使用executionId查询: " + datas.size());
         datas = historyService.createHistoricActivityInstanceQuery().finished().list();
         System.out.println("使用finished查询: " + datas.size());
         datas = historyService.createHistoricActivityInstanceQuery()
                 .processInstanceId("processInstanceId").list();
11
         System.out.println("使用processInstanceId查询: " + datas.size());
11
         datas = historyService.createHistoricActivityInstanceQuery()
//
                 .taskAssignee("crazyit").list();
11
         System.out.println("使用taskAssignee查询: " + datas.size());
11
         datas = historyService.createHistoricActivityInstanceQuery().unfinished().list
();
         System.out.println("使用unfinished查询: " + datas.size());
      * 历史流程明细查询
      * 在流程进行的过程中,会产生许多明细数据,只有将History设置为最高级别的时候,才会被记录到ACT HI
DETAIL表中。
11
      * @throws ParseException
      * /
//
     @Test
     public void findHistoricDetail() {
11
         // 查询历史行为
```

```
11
         HistoricActivityInstance act = historyService.createHistoricActivityInstanceQue
ry()
11
                 .activityName("First Task").finished().singleResult();
         List<HistoricDetail> datas = historyService.createHistoricDetailQuery()
                 .activityInstanceId(act.getId()).list();
11
         System.out.println("使用activityInstanceId方法查询: " + datas.size());
         datas = historyService.createHistoricDetailQuery().excludeTaskDetails().list();
         System.out.println("使用excludeTaskDetails方法查询: " + datas.size());
         datas = historyService.createHistoricDetailQuery().formProperties().list();
         System.out.println("使用formProperties方法查询: " + datas.size());
         datas = historyService.createHistoricDetailQuery().processInstanceId("processIn
stanceId").list();
         System.out.println("使用processInstanceId方法查询: " + datas.size());
         datas = historyService.createHistoricDetailQuery().taskId("taskId").list();
         System.out.println("使用taskId方法查询: " + datas.size());
         datas = historyService.createHistoricDetailQuery().variableUpdates().list();
         System.out.println("使用variableUpdates方法查询: " + datas.size());
```

启动流程、用户任务task查询、业务处理、流程进度查看等等,历史流程查看功能没有验证过,这部分代码 是注释掉的

## 5、页面实现

在templates放置显示页面,可自己根据喜好放置,我这里主要是跟controller 里返回的路径对应



model文件夹下放的是模型列表页和用户任务列表页,form.html已经废弃,改为上面的activitiForm里面的form页面,不同的页面对应不同流程节点

## list.html模型列表页

```
<!DOCTYPE html>
<html lang="zh" xmlns:th="http://www.thymeleaf.org">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
    <script src="/static/js/jquery.min.js"></script>
    <script th:inline="javascript">
        function deployment(obj){
            var id=obj.attributes['objectid'].nodeValue;
            $.ajax({
                url:"/models/deployment/"+id,
                type:"GET",
                success:function(res){
                    alert(res);
            });
        function deleteProcess(obj){
            var id=obj.attributes['objectid'].nodeValue;
            $.ajax({
                url:"/models/delete/"+id,
                type: "GET",
                success:function(res){
                    alert(res);
            });
        function start(obj){
            var id=obj.attributes['objectid'].nodeValue;
            $.ajax({
                url:'/models/start/'+id,
                type:'GET',
                success:function(res){
                    alert(res);
            });
```

```
function taskList(){
        $("#taskList").submit();
  </script>
</head>
<body>
<div class="info"><span th:text="${info}"></span></div>
<a href="/models/create">新建</a>
<form id="taskList" action="/activiti/queryTaskSl">
<div>
  <div style="float:left;width:50%;">
     <select id="userId" name="userId">
        <option value="userzhou">userzhou</option>
        <option value="usertest">usertest</option>
     </select>
  </div>
  <div style="width:50%;">
     <button onclick="taskList();">任务列表
  </div>
</div>
</form>
<thead>
  <t.r>
     ID
     模型名称
     key
     版本
     部署ID
     创建时间
     最后更新时间
     操作
  </thead>
  <a th:href="@{/static/modeler.html(modelId=${data.id})}" class="font-blue" t
h:text="${data.name}"></a>
      2018-02-25 17:28:35
```

#### taskList.html任务列表页

```
<!DOCTYPE html>
<html lang="zh" xmlns:th="http://www.thymeleaf.org">
<head>
  <meta charset="UTF-8">
  <title>Title</title>
  <script src="/static/js/jquery.min.js"></script>
</head>
<body>
<a href="/models/modelList"><button>返回模型列表页</button></a>
   <span th:text="'用户: '+${userId}"></span>
  <thead>
     ID
        任务名称
        受理人
        任务ID
        流程ID
        创建时间
        操作
     </thead>
```

## applyForm.html任务列表页

```
<!DOCTYPE html>
<html lang="zh" xmlns:th="http://www.thymeleaf.org">
   <meta charset="UTF-8">
   <title>申请页面</title>
   <script src="/static/js/jquery.min.js"></script>
   <style>
        .title{
            text-align: center;
   </style>
   <script>
        function showProcessImg(processInstanceId) {
            $.ajax({
               url:'/activiti/queryProHighLighted',
               type: 'POST',
               data:{
                    proInsId:processInstanceId
                success:function(res){
                    $("#processImg").attr('src', "data:image/png;base64, "+res);
            })
```

```
function returnBack(userId) {
            var form = $("<form></form>");
            form.attr("action","/activiti/queryTaskSl");
            form.attr("method", "post");
            var input = $("<input type='text' name='userId'/>")
            input.attr("value", userId);
            form.append(input);
            form.appendTo("body");
            form.css("display", "none");
            form.submit();
   </script>
</head>
<body>
<div class="title">申请表单</div>
<a th:onclick="'javascript:returnBack(\''+${data.userId}+'\');'"><button>返回用户任务列表</b
utton></a>
<a href="javascript:void(0);" th:onclick="'javascript:showProcessImg(\''+${task.processIn}
stanceId}+'\')'"><button>查看流程图</button></a>
<form action="/activiti/completeTaskSl">
   <input type="hidden" id="id" name="id" th:value="${data.id}"/>
   <input type="hidden" id="userId" name="userId" th:value="${data.userId}"/>
   <input type="text" id="attr1" name="attr1"/>
   <button type="submit">提交</button>
   <button>取消
</form>
<img src="" id="processImg"/>
</body>
</html>
```

## approveForm.html任务列表页

```
<meta charset="UTF-8">
    <title>审批页面</title>
    <script src="/static/js/jquery.min.js"></script>
       .title{
            text-align: center;
   </style>
   <script>
        function showProcessImg(processInstanceId) {
            $.ajax({
                url:'/activiti/queryProHighLighted',
                type: 'POST',
                data:{
                    proInsId:processInstanceId
                success:function(res){
                    $("#processImg").attr('src', "data:image/png;base64, "+res);
            })
        function returnBack(userId) {
            var form = $("<form></form>");
            form.attr("action","/activiti/queryTaskSl");
            form.attr("method", "post");
            var input = $("<input type='text' name='userId'/>")
            input.attr("value", userId);
            form.append(input);
            form.appendTo("body");
            form.css("display", "none");
            form.submit();
   </script>
</head>
<body>
<div class="title">审批表单</div>
<a th:onclick="'javascript:returnBack(\''+${data.userId}+'\');'"><button>返回任务列表</butt
on></a>
<a href="javascript:void(0);" th:onclick="'javascript:showProcessImg(\''+${task.processIn</pre>
stanceId}+'\')'"><button>查看流程图</button></a>
<form action="/activiti/completeTaskSl">
   <input type="hidden" id="id" name="id" th:value="${data.id}"/>
   <input type="hidden" id="userId" name="userId" th:value="${data.userId}"/>
```

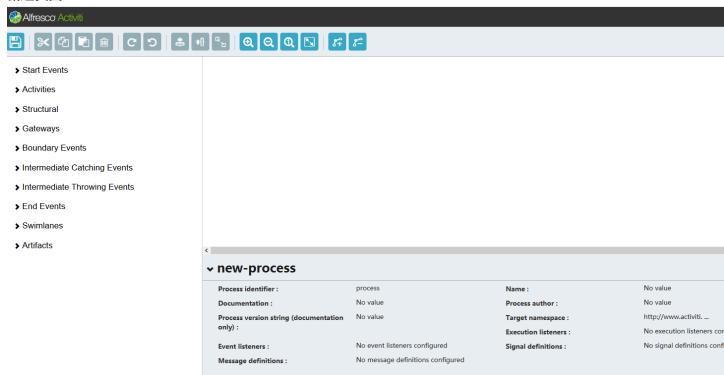
# ·运行界面如下 list.html列表页



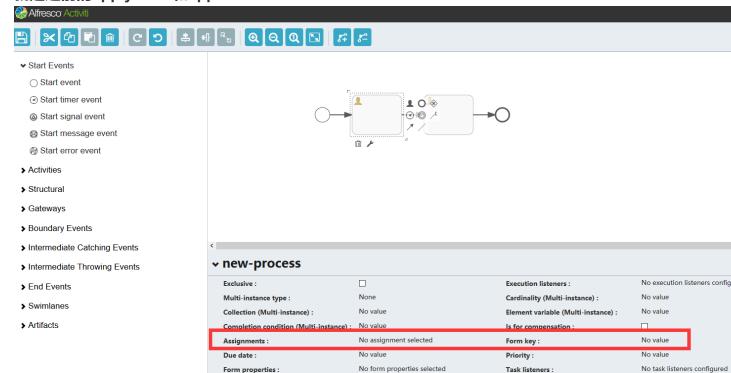
ID 模型名称 key 版本 部署ID 创建时间 最后更新时间 操作

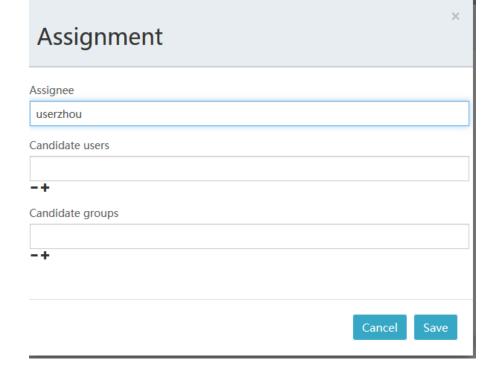
1 MyActiviti-release process 1 4 Tue Feb 19 16:43:30 CST 2019 Tue Feb 19 16:45:38 CST 2019 <u>发布 发起流程 导出 删除</u>

#### 新建页面



这里主要注意连个地方,assignments表示当前节点的处理人的id,我自己定义了两个用户userzhou和usertest, form key填写处理当前节点所用的form表单,也就是之前的applyForm和approveForm





#### 返回模型列表页

用户: usertest

 ID
 任务名称
 受理人
 任务ID
 流程ID
 创建时间
 操

 10008 审批
 usertest sid-6CF35F45-3C08-4DBC-A02A-540553A0F69B process:1:7 Tue Feb 19 17:08:36 CST 2019 处

12507 审批 usertest sid-6CF35F45-3C08-4DBC-A02A-540553A0F69B process:1:7 Tue Feb 19 17:10:28 CST 2019 处





- · 需要注意的地方
  - 1、去除activiti的security校验,修改application启动类

```
@SpringBootApplication(scanBasePackages = {"com.djkj","org.activiti"}, exclude = { org.springFramework.boot.autoconfigure.security.servlet.SecurityAutoConfiguration.class, org.activiti.spring.boot.SecurityAutoConfiguration.class,})
这是按照网上的写的,但还是存在校验,最后没办法在act_id_user里面加了一条数据,大家有解决的办法可以在下方给我评论,谢谢。
```

2、访问静态资源的时候,可能会被dispatcherservlet 给拦截掉,我是添加了个资源处理器,拦截static静态资源

```
package com.djkj.activiti.common;

import groovy.util.logging.Slf4j;
import org.springframework.context.annotation.Configuration;
import org.springframework.web.servlet.config.annotation.EnableWebMvc;
import org.springframework.web.servlet.config.annotation.ResourceHandlerRegistry;
```

```
import org.springframework.web.servlet.config.annotation.WebMvcConfigurer;

@Configuration
@S1f4j
@EnableWebMvc
public class StaticResourceConfig implements WebMvcConfigurer {

    @Override
    public void addResourceHandlers(ResourceHandlerRegistry registry) {
        registry.addResourceHandler("/static/**").addResourceLocations("classpath:/static/");
    }
}
```

# 3、关闭编辑器的时候可以自定义返回的页面

修改editor-app\configuration下的toolbar-default-actions.js,有俩个地方closeEditor方法和\$scope.saveAndClose方法,一个是关闭一个是保存并关闭,可以修改放回路径,对应的是controller里的路径

```
closeEditor: function(services) {
        window.location.href = "/models/modelList";
    },

$scope.saveAndClose = function () {
        $scope.save(function()) {
            window.location.href = "/models/modelList";
        });
    };
```

分类: activiti, spring, springboot

标签: <u>springboot</u>, <u>activiti</u>









