**项目架构设计**

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| --- | --- | --- | --- | --- |
|  | **SSH1** | **SSH2** | **SSM** | **SpringBoot** |
| **控制器层** | Struts2 | Struts2 | Spring MVC | Spring MVC |
| **数据持久化层** | Hibernate | Hibernate | MyBatis | Spring Data JPA |
| **服务层** | Spring | Spring | Spring | Spring |
| **数据库** | MySQL | MySQL | MySQL | MySQL |
| **安全认证** | Apache Shiro | Apache Shiro | Apache Shiro | Apache Shiro  Spring Security |
| **流程控制** | Activiti | Activiti | Activiti | Activiti |
| **缓存** | Redis | Redis | Redis | Redis |
| **数据源及数据连接池** | Druid | Druid | Druid | Druid |
| **日志记录** | slf4j & log4j | slf4j & log4j | slf4j & logback | slf4j & logback |
| **作业调度** | QuartZ | QuartZ | QuartZ | QuartZ |
| **验证码** | JCaptcha  Kaptcha | JCaptcha  Kaptcha | JCaptcha  Kaptcha | JCaptcha  Kaptcha |
| **Office文档** | POI | POI | POI | POI |
| **PDF文档** | JasperReport | JasperReport | JasperReport | JasperReport |
| **在线支付** | 微信  支付宝 | 微信  支付宝 | 微信  支付宝 | 微信  支付宝 |
| **依赖注入是否开启注解** | 否 | 是 | 是 | 是 |
| **映射文件是否开启注解** | 否 | 是 | 否 | 是 |
| **事务是否开启注解** | 否 | 是 | 是 | 是 |