Maven高级

课程大纲

第1章 回顾[理解]

- c 1.1 Maven好处
 - 1. 节省磁盘空间
 - 2. 可以一键构建
 - 3. 可以跨平台
 - 4. 应用在大型项目时可以提高开发效率

1.2 安装配置 maven

注意: 3.3+版本需要 jdkj.7+以上的支持

1.3 三种仓库

- 1. 本地仓库
- 2. 远程仓库(私服)
- 3. 中央仓库

1.4 常见的命令

- 1. Compile
- 2. Test
- 3. Package
- 4. Install
- 5. Deploy
- 6. Clean

1.5 坐标的书写规范

- 1. groupId 公司或组织域名的倒序
- 2. artifactId 项目名或模块名
- 3. version 版本号

1.6 如何添加坐标

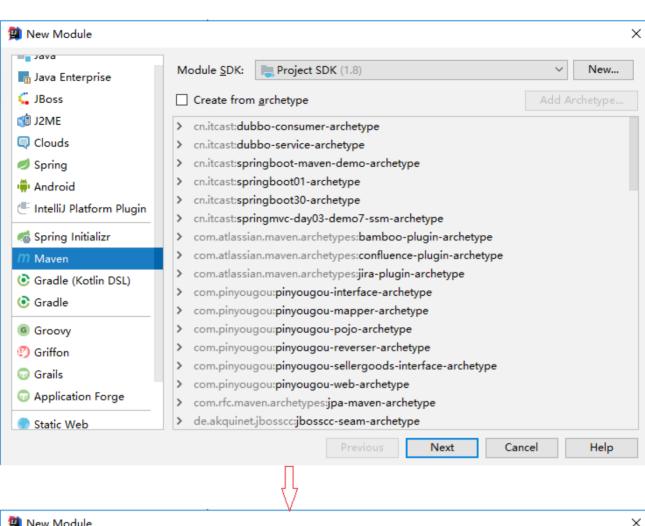
- 1. 在本地仓库中搜索
- 2. 互联网上搜,推荐网址 http://www.mvnrepository.com/

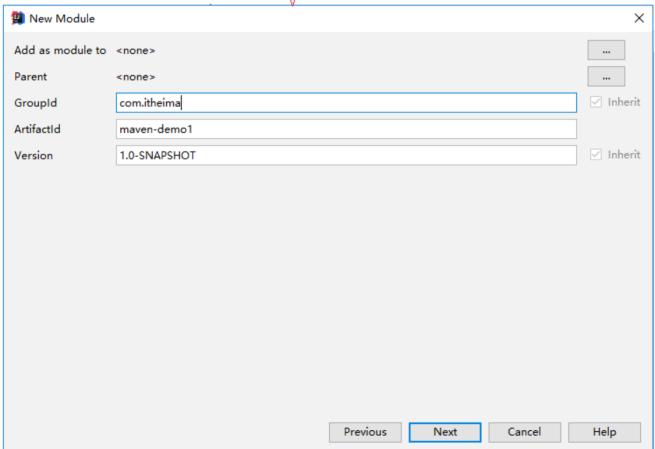
1.7 依赖范围

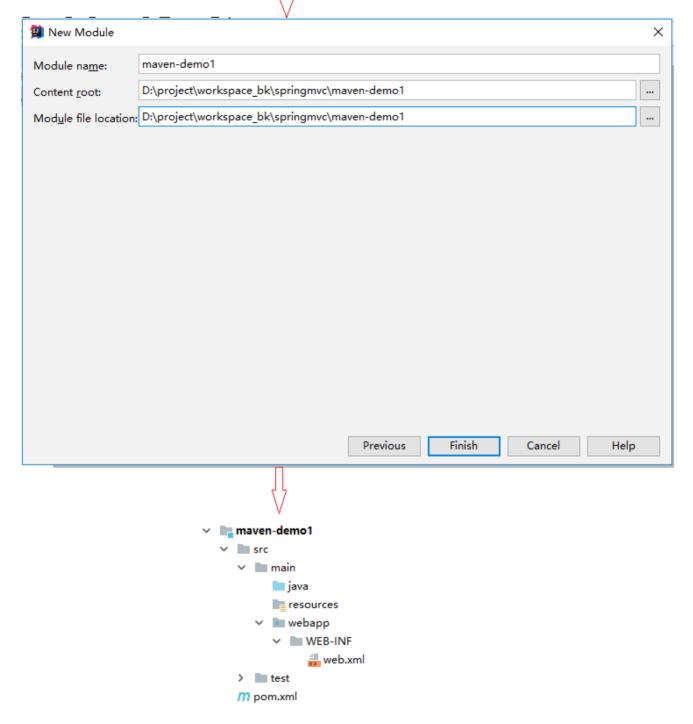
- 1. Compile
- 2. Test
- 3. Runtime
- 4. Provided

第2章Maven

创建一个war包工程,流程如下图:





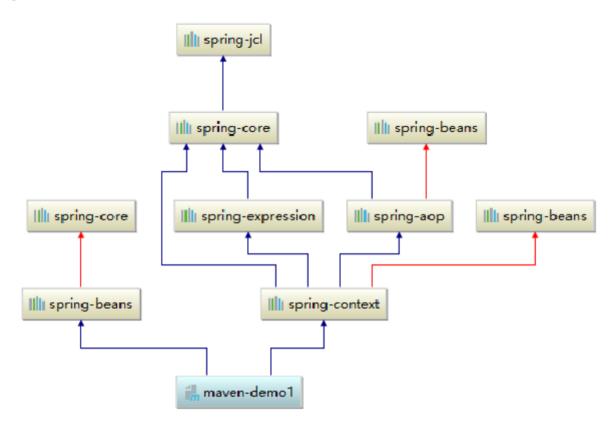


2.1 jar包冲突:第一声明优先原则

哪个jar包在靠上的位置,这个jar包就是先声明的,先声明的jar包下的依赖包,可以优先引入项目中。 我们在pom.xml中引入如下坐标,分别是spring中不同的版本。

```
<!--导入相关依赖包-->
<dependencies>
    <!--引入spring-context,它所以来的包都会导入进来-->
    <dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-context</artifactId>
        <version>5.0.2.RELEASE</version>
```

我们在控制面板的maven面板,点击查看依赖关系按钮,看到了包和包之间的依赖关系存在冲突,都使用了spring-core包,关系图如下:



我们再来看看他们依赖包的导入,发现导入的包却没有问题,包使用的都是5.0.2的版本。

- > Im Maven: org.springframework:spring-aop:5.0.2.RELEASE
- > Im Maven: org.springframework:spring-beans:4.2.4.RELEASE
- > Im Maven: org.springframework:spring-context:5.0.2.RELEASE
- > Im Maven: org.springframework:spring-core:5.0.2.RELEASE
- > Im Maven: org.springframework:spring-expression:5.0.2.RELEASE
- > Maven: org.springframework:spring-jcl:5.0.2.RELEASE

我们把上面2个包的顺序调换后就变成了低版本的依赖导入。

- > Maven: commons-logging:commons-logging:1.2
- > Maven: org.springframework:spring-aop:5.0.2.RELEASE
- Maven: org.springframework:spring-beans:4.2.4.RELEASE
- > Im Maven: org.springframework:spring-context:5.0.2.RELEASE
- > Im Maven: org.springframework:spring-core:4.2.4.RELEASE
- > Im Maven: org.springframework:spring-expression:5.0.2.RELEASE

2.2 jar包冲突:路径近者优先原则

直接依赖比传递依赖路径近,你那么最终进入项目的jar包会是路径近的直接依赖包。

直接依赖:项目中直接导入的jar包就是项目的直接依赖包。

传递依赖:项目中没有直接导入的jar包,可以通过中直接依赖包传递到项目中去。

修改jar包,直接引入依赖spring-core

```
<dependencies>
   <dependency>
       <groupId>org.springframework
       <artifactId>spring-beans</artifactId>
       <version>4.2.4.RELEASE
   </dependency>
   <dependency>
       <groupId>org.springframework</groupId>
       <artifactId>spring-context</artifactId>
       <version>5.0.2.RELEASE</version>
   </dependency>
   <!--引入直接依赖-->
   <dependency>
       <groupId>org.springframework</groupId>
       <artifactId>spring-core</artifactId>
       <version>4.2.8.RELEASE
   </dependency>
</dependencies>
```

此时优先引入的是直接依赖的引用

- > Im Maven: commons-logging:commons-logging:1.2
- Maven: org.springframework:spring-aop:5.0.2.RELEASE
- Maven: org.springframework:spring-beans:4.2.4.RELEASE
- Maven: org.springframework:spring-context:5.0.2.RELEASE
- Maven: org.springframework:spring-core:4.2.8.RELEASE
- > Maven: org.springframework:spring-expression:5.0.2.RELEASE

2.3 jar包冲突:直接排除法

当我们需要排除某个jar包的依赖时,在配置exclusions标签的时候,内部可以不写版本号。pom.xml依赖如下:

```
<!--导入相关依赖包-->
<dependencies>
   <dependency>
       <groupId>org.springframework</groupId>
       <artifactId>spring-beans</artifactId>
       <version>4.2.4.RELEASE
       <! --直接排除-->
       <exclusions>
           <exclusion>
              <groupId>org.springframework
               <artifactId>spring-core</artifactId>
           </exclusion>
       </exclusions>
   </dependency>
   <dependency>
       <groupId>org.springframework</groupId>
       <artifactId>spring-context</artifactId>
       <version>5.0.2.RELEASE
   </dependency>
</dependencies>
```

依赖导入的jar包如下

- Maven: org.springframework:spring-aop:5.0.2.RELEASE
- Maven: org.springframework:spring-beans:4.2.4.RELEASE
- > Maven: org.springframework:spring-context:5.0.2.RELEASE
- > Im Maven: org.springframework:spring-core:5.0.2.RELEASE
- > Maven: org.springframework:spring-expression:5.0.2.RELEASE
- Maven: org.springframework:spring-jcl:5.0.2.RELEASE

第3章 SSM回顾

2.1 ssmweb引入pom.xml

```
<mybatis-spring.version>1.3.0</mybatis-spring.version>
   <druid.version>1.0.9</druid.version>
   <!--文件的编码格式-->
   cproject.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
   oject.reporting.outputEncoding>UTF-8/project.reporting.outputEncoding>
   <maven.compiler.source>1.8</maven.compiler.source>
   <maven.compiler.target>1.8</maven.compiler.target>
</properties>
<!--jar包管理-->
<!--引入依赖-->
<dependencies>
   <!-- spring -->
   <dependency>
        <groupId>org.aspectj</groupId>
        <artifactId>aspectjweaver</artifactId>
       <version>${aspectjweaver.version}</version>
   </dependency>
   <dependency>
       <groupId>org.springframework</groupId>
        <artifactId>spring-aop</artifactId>
        <version>${spring.version}</version>
   </dependency>
   <!--spring包-->
   <dependency>
       <groupId>org.springframework</groupId>
        <artifactId>spring-context</artifactId>
        <version>${spring.version}</version>
    </dependency>
   <!--用于SpringMVC-->
   <dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-webmvc</artifactId>
        <version>${spring.version}</version>
   </dependency>
   <dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-web</artifactId>
        <version>${spring.version}</version>
   </dependency>
   <!--用于数据库源相关操作-->
   <dependency>
        <groupId>org.springframework</groupId>
        <artifactId>spring-jdbc</artifactId>
       <version>${spring.version}</version>
   </dependency>
   <dependency>
       <groupId>org.springframework</groupId>
        <artifactId>spring-tx</artifactId>
```

```
<version>${spring.version}</version>
</dependency>
<!--ServletAPI-->
<dependency>
   <groupId>javax.servlet
   <artifactId>servlet-api</artifactId>
    <version>${servlet-api.version}</version>
   <scope>provided</scope>
</dependency>
<dependency>
   <groupId>javax.servlet.jsp</groupId>
   <artifactId>jsp-api</artifactId>
    <version>${jsp-api.version}</version>
   <scope>provided</scope>
</dependency>
<!--jst1标签-->
<dependency>
   <groupId>jstl
   <artifactId>jstl</artifactId>
   <version>${jstl.version}</version>
</dependency>
<!--MySQL数据库驱动-->
<dependency>
   <groupId>mysql</groupId>
   <artifactId>mysql-connector-java</artifactId>
    <version>${mysql.version}</version>
</dependency>
<!--测试框架-->
<dependency>
   <groupId>org.springframework</groupId>
   <artifactId>spring-test</artifactId>
    <version>${spring.version}</version>
</dependency>
<dependency>
   <groupId>junit
    <artifactId>junit</artifactId>
   <version>${junit.version}</version>
   <scope>compile</scope>
</dependency>
<!-- log start -->
<dependency>
   <groupId>log4j
   <artifactId>log4j</artifactId>
   <version>${log4j.version}</version>
</dependency>
```

```
<dependency>
       <groupId>org.slf4j</groupId>
       <artifactId>slf4j-api</artifactId>
       <version>${slf4j.version}</version>
   </dependency>
   <dependency>
       <groupId>org.slf4j</groupId>
       <artifactId>slf4j-log4j12</artifactId>
       <version>${slf4j.version}</version>
   </dependency>
   <!-- log end -->
   <!--mybatis-->
   <dependency>
       <groupId>org.mybatis
       <artifactId>mybatis</artifactId>
       <version>${mybatis.version}</version>
   </dependency>
   <!--MyBatis集成Spring-->
   <dependency>
       <groupId>org.mybatis
       <artifactId>mybatis-spring</artifactId>
       <version>${mybatis-spring.version}</version>
   </dependency>
   <!--数据源-->
   <dependency>
       <groupId>com.alibaba/groupId>
       <artifactId>druid</artifactId>
       <version>${druid.version}</version>
   </dependency>
</dependencies>
<build>
   <!--插件-->
   <plugins>
       <!--tomcat插件-->
       <plugin>
           <groupId>org.apache.tomcat.maven
           <artifactId>tomcat7-maven-plugin</artifactId>
           <version>2.2</version>
           <!--插件使用的相关配置-->
           <configuration>
               <!--端口号-->
               <port>18081</port>
               <!--写当前项目的名字(虚拟路径),如果写/,那么每次访问项目就不需要加项目名字了-->
               <path>/</path>
               <!--解决get请求乱码-->
               <uriEncoding>UTF-8</uriEncoding>
           </configuration>
       </plugin>
```

```
</plugins>
</build>
```

2.2 dao层

2.2.1创建Items实体类

```
package com.itheima.domain;
import java.util.Date;
/**
* pojo
*/
public class Items {
    private Integer id;
    private String name;
    private Float price;
    private String pic;
    private Date createtime;
    private String detail;
    public Integer getId() {
        return id;
    }
    public void setId(Integer id) {
       this.id = id;
    public String getName() {
       return name;
    }
    public void setName(String name) {
       this.name = name;
    public Float getPrice() {
        return price;
    }
    public void setPrice(Float price) {
        this.price = price;
    public String getPic() {
        return pic;
    }
    public void setPic(String pic) {
       this.pic = pic;
    }
```

```
public Date getCreatetime() {
    return createtime;
}

public void setCreatetime(Date createtime) {
    this.createtime = createtime;
}

public String getDetail() {
    return detail;
}

public void setDetail(String detail) {
    this.detail = detail;
}
```

2.2.2 ItemsDao.java

```
package com.itheima.dao;
import com.itheima.domain.Items;
public interface ItemsDao {
    public Items findById(Integer id);
}
```

2.2.3 ItemsDao.xml

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE mapper
    PUBLIC "-//mybatis.org//DTD Mapper 3.0//EN"
    "http://mybatis.org/dtd/mybatis-3-mapper.dtd">
<mapper namespace="com.itheima.dao.ItemsDao">
    <select id="findById" parameterType="Integer" resultType="Items">
        select * from items where id = #{id}
    </select>
</mapper>
```

2.2.4 applicationContext.xml

```
http://www.springframework.org/schema/context
       http://www.springframework.org/schema/context/spring-context.xsd
       http://www.springframework.org/schema/mvc
       http://www.springframework.org/schema/mvc/spring-mvc.xsd
       http://www.springframework.org/schema/tx
       http://www.springframework.org/schema/tx/spring-tx.xsd
       http://www.springframework.org/schema/aop
       http://www.springframework.org/schema/aop/spring-aop.xsd
       http://www.springframework.org/schema/cache
       http://www.springframework.org/schema/cache/spring-cache.xsd">
   <!-- 数据库连接池 -->
   <bean id="dataSource" class="com.alibaba.druid.pool.DruidDataSource"</pre>
         destroy-method="close">
       <property name="url" value="jdbc:mysql://127.0.0.1:3306/maven?characterEncoding=utf8" />
       cproperty name="username" value="root" />
       cproperty name="password" value="admin" />
       cproperty name="driverClassName" value="com.mysql.jdbc.Driver" />
   </bean>
   <!-- SqlSessionFactoryBean -->
   <bean id="sqlSessionFactoryBean" class="org.mybatis.spring.SqlSessionFactoryBean">
       cproperty name="dataSource" ref="dataSource" />
       <!--别名-->
       cproperty name="typeAliasesPackage" value="com.itheima.domain"/>
   </bean>
   <!-- 配置接口扫描包 -->
   <bean class="org.mybatis.spring.mapper.MapperScannerConfigurer">
           <!--指定接口位置-->
           cproperty name="basePackage" value="com.itheima.dao"/>
   </bean>
</beans>
```

2.2.5 log4j.properties

```
# Set root category priority to INFO and its only appender to CONSOLE.
#log4j.rootCategory=INFO, CONSOLE debug info warn error fatal
log4j.rootCategory=debug, CONSOLE, LOGFILE

# Set the enterprise logger category to FATAL and its only appender to CONSOLE.
log4j.logger.org.apache.axis.enterprise=FATAL, CONSOLE

# CONSOLE is set to be a ConsoleAppender using a PatternLayout.
log4j.appender.CONSOLE=org.apache.log4j.ConsoleAppender
log4j.appender.CONSOLE.layout=org.apache.log4j.PatternLayout
log4j.appender.CONSOLE.layout.ConversionPattern=%d{ISO8601} %-6r [%15.15t] %-5p %30.30c %x -
%m\n
# LOGFILE is set to be a File appender using a PatternLayout.
```

```
log4j.appender.LOGFILE=org.apache.log4j.FileAppender
log4j.appender.LOGFILE.File=c:\axis.log
log4j.appender.LOGFILE.Append=true
log4j.appender.LOGFILE.layout=org.apache.log4j.PatternLayout
log4j.appender.LOGFILE.layout.ConversionPattern=%d{ISO8601} %-6r [%15.15t] %-5p %30.30c %x -
%m\n
```

2.2.6 dao测试

```
package com.itheima.test;
import com.itheima.dao.ItemsDao;
import com.itheima.domain.Items;
import org.junit.Test;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
public class AppTest {
   @Test
    public void testDao(){
        ApplicationContext ac = new
ClassPathXmlApplicationContext("classpath:applicationContext.xml");
        ItemsDao bean = ac.getBean(ItemsDao.class);
        Items items = bean.findById(1);
        System.out.println(items.getName());
   }
}
```

2.3 service层

2.3.1 ItemService.java

```
package com.itheima.service;
import com.itheima.domain.Items;
public interface ItemsService {
    public Items findById(Integer id);
}
```

2.2.2 ItemsServiceImpl.java

```
package com.itheima.service.impl;
import com.itheima.dao.ItemsDao;
import com.itheima.domain.Items;
import com.itheima.service.ItemsService;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
@Service
public class ItemsServiceImpl implements ItemsService {
```

```
@Autowired
private ItemsDao itemsDao;
public Items findById(Integer id) {
    return itemsDao.findById(id);
}
```

2.3.3 applicationContext.xml

```
<!--service事务开始-->
   <context:component-scan base-package="com.itheima.service"/>
    <!-- 配置事务管理器 -->
    <bean id="transactionManager"</pre>
          class="org.springframework.jdbc.datasource.DataSourceTransactionManager">
        cproperty name="dataSource" ref="dataSource"/>
    </bean>
    <!-- 配置事务的通知-->
    <tx:advice id="txAdvice">
        <tx:attributes>
            <tx:method name="save*" propagation="REQUIRED"/>
            <tx:method name="modify*" propagation="REQUIRED"/>
            <tx:method name="delete*" propagation="REQUIRED"/>
            <tx:method name="find*" read-only="true"/>
            <tx:method name="*" propagation="REQUIRED"/>
        </tx:attributes>
    </tx:advice>
    <!-- 配置切面 -->
    <aop:config>
        <aop:pointcut expression="execution(* com.itheima.service.impl.*.*(..))"</pre>
id="tranpointcut"/>
        <!-- 事务控制 -->
        <aop:advisor advice-ref="txAdvice" pointcut-ref="tranpointcut"/>
    </aop:config>
    <!--service事务结束-->
```

2.3.4 service测试

```
ClassPathXmlApplicationContext("classpath:applicationContext.xml");
    ItemsService bean = ac.getBean(ItemsService.class);
    Items items = bean.findById(1);
    System.out.println(items.getName());
}
```

2.4 web层

2.4.1 ItemsController.java

```
package com.itheima.controller;
import com.itheima.domain.Items;
import com.itheima.service.ItemsService;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.RequestMapping;
@Controller
@RequestMapping(value = "/items")
public class ItemsController {
    @Autowired
    private ItemsService itemsService;
    @RequestMapping(value = "/findDetail")
    public String getById(Model model){
        Items items = itemsService.findById(1);
        model.addAttribute("item",items);
        return "itemDetail";
}
```

2.4.2 itemDetail.jsp

在WEB-INF/pages/目录下

```
</head>
<body>
<form>
  >
      商品名称
      ${item.name } 
    商品价格
       ${item.price } 
    生成日期
       <fmt:formatDate value="${item.createtime}" pattern="yyyy-MM-dd HH:mm:ss"/>
商品简介
      ${item.detail} 
    </form>
</body>
</html>
```

2.4.3 web.xml

```
<!DOCTYPE web-app PUBLIC
"-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
"http://java.sun.com/dtd/web-app_2_3.dtd" >
<web-app xmlns="http://java.sun.com/xml/ns/javaee"</pre>
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
         http://java.sun.com/xml/ns/javaee/web-app 3 0.xsd"
        version="3.0">
 <!--POST编码过滤器-->
 <filter>
   <filter-name>characterEncoding</filter-name>
   <filter-class>org.springframework.web.filter.CharacterEncodingFilter</filter-class>
   <!--指定编码-->
   <init-param>
     <param-name>encoding</param-name>
     <param-value>UTF-8</param-value>
   </init-param>
   <init-param>
     <param-name>forceEncoding</param-name>
     <param-value>true</param-value>
   </init-param>
  </filter>
```

```
<!--编码映射拦截-->
 <filter-mapping>
   <filter-name>characterEncoding</filter-name>
   <url-pattern>/*</url-pattern>
 </filter-mapping>
 <!--spring核心监听器-->
 tener>
   clistener-class>org.springframework.web.context.ContextLoaderListener/listener-class>
 </listener>
 <context-param>
   <param-name>contextConfigLocation</param-name>
   <param-value>classpath:applicationContext.xml</param-value>
 </context-param>
 <!--前端核心控制器-->
 <servlet>
   <servlet-name>springmvc</servlet-name>
   <servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
   <!--指定springmvc核心配置文件-->
   <init-param>
     <param-name>contextConfigLocation</param-name>
     <param-value>classpath:springmvc.xml</param-value>
   </init-param>
   <!--启动加载优先级-->
   <load-on-startup>1</load-on-startup>
 </servlet>
 <!--映射拦截-->
 <servlet-mapping>
   <servlet-name>springmvc</servlet-name>
   <url-pattern>/</url-pattern>
 </servlet-mapping>
</web-app>
```

2.4.3 springmvc.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.springframework.org/schema/context"
    xmlns:context="http://www.springframework.org/schema/context"
    xmlns:mvc="http://www.springframework.org/schema/mvc"
    xsi:schemaLocation="
    http://www.springframework.org/schema/context
    http://www.springframework.org/schema/context/spring-context.xsd
    http://www.springframework.org/schema/mvc
    http://www.springframework.org/schema/mvc/spring-mvc.xsd
    http://www.springframework.org/schema/beans
    http://www.springframework.org/schema/beans
    http://www.springframework.org/schema/beans/spring-beans.xsd">
<!--包扫描-->
    <context:component-scan base-package="com.itheima.controller"/>
<!--注解驱动-->
```

第4章SSM工程注意点

注意点1:新建一个父工程pom 没有选中骨架(一定要有pom文件),本身工程不不要编码

注意点2: 在选中父工程后新建子模块jar

注意点3:web工程选择了骨架(webapp war)

注意点4:在父工程上执行tomcat7:run能够成功 ,在web工程中执行会失败,在父工程中执行install命令将工程

安装到仓库

第5章私服

本地仓库 ==>远程仓库(私服) ==>中央仓库

将项目发布到私服

```
setting配置文件
<server>
    <id>releases</id>
    <username>admin</username>
    <password>admin123</password>
  </server>
  <server>
    <id>snapshots</id>
    <username>admin</username>
    <password>admin123</password>
  </server>
  dao pom.xml
  <distributionManagement>
  <repository>
      <id>releases</id>
      <url>http://localhost:8081/nexus/content/repositories/releases/</url>
   </repository>
   <snapshotRepository>
       <id>snapshots</id>
       <url>http://localhost:8081/nexus/content/repositories/snapshots/</url>
   </snapshotRepository>
```

从私服下载jar包

```
父工程pom.xml
<repositories>
   <repository>
      <releases>
        <enabled>true</enabled>
      </releases>
      <snapshots>
        <enabled>true</enabled>
      </snapshots>
      <id>public</id>
      <name>Public Repositories</name>
      <url>http://localhost:8081/nexus/content/groups/public/</url>
    </repository>
   <repository>
      <snapshots>
        <enabled>false</enabled>
      </snapshots>
      <id>central</id>
      <name>Central Repository</name>
      <url>https://repo.maven.apache.org/maven2</url>
    </repository>
 </repositories>
 <pluginRepositories>
   <plu><pluginRepository>
      <id>public</id>
      <name>Public Repositories</name>
      <url>http://localhost:8081/nexus/content/groups/public/</url>
    </pluginRepository>
   <pluginRepository>
      <releases>
        <updatePolicy>never</updatePolicy>
      </releases>
      <snapshots>
        <enabled>false</enabled>
      </snapshots>
      <id>central</id>
      <name>Central Repository</name>
      <url>https://repo.maven.apache.org/maven2</url>
    </pluginRepository>
  </pluginRepositories>
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