

第5章 项目初始化

5-1 项目初始化概要

项目初始化

navcat初始化项目数据库：

- 下载mmall.sql
- 执行mmall.sql
- 刷新验证

安装IDEA：

- 版本：IDEA15

maven创建web项目并验证：

- 配置JDK
- 配置Maven
- 配置Tomcat
- 快捷键配置
- 通过maven的archetype创建web空白项目
- 初始化项目文件夹结构
- 发布验证

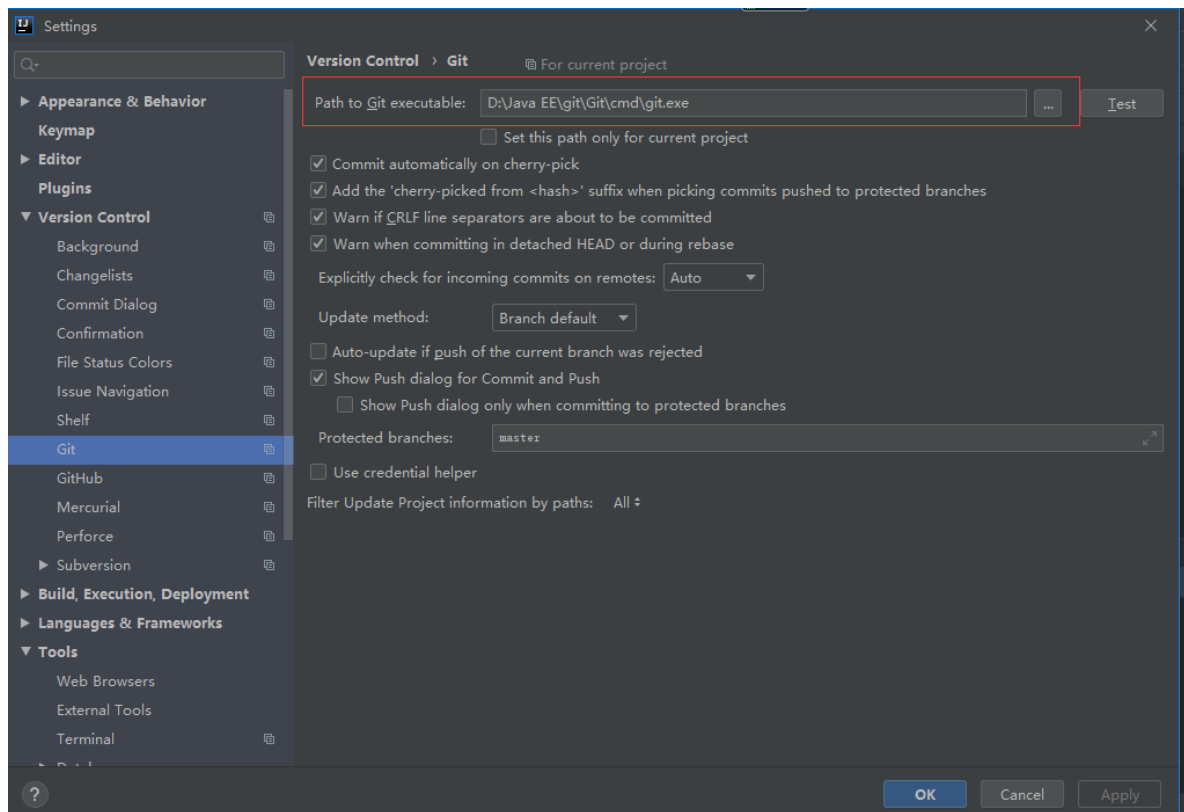
Git创建仓库及初始化：

- 创建和使用git仓库
- git初始化
- .gitignore文件配置
- 添加更新文件
- 推送到远程git仓库
- 创建及切换分支

注：前提是安装git并配置git的ssh，否则在pull和push的时候会提示无权限。

[IDEA配置GIT](#)

IDEA配置git：

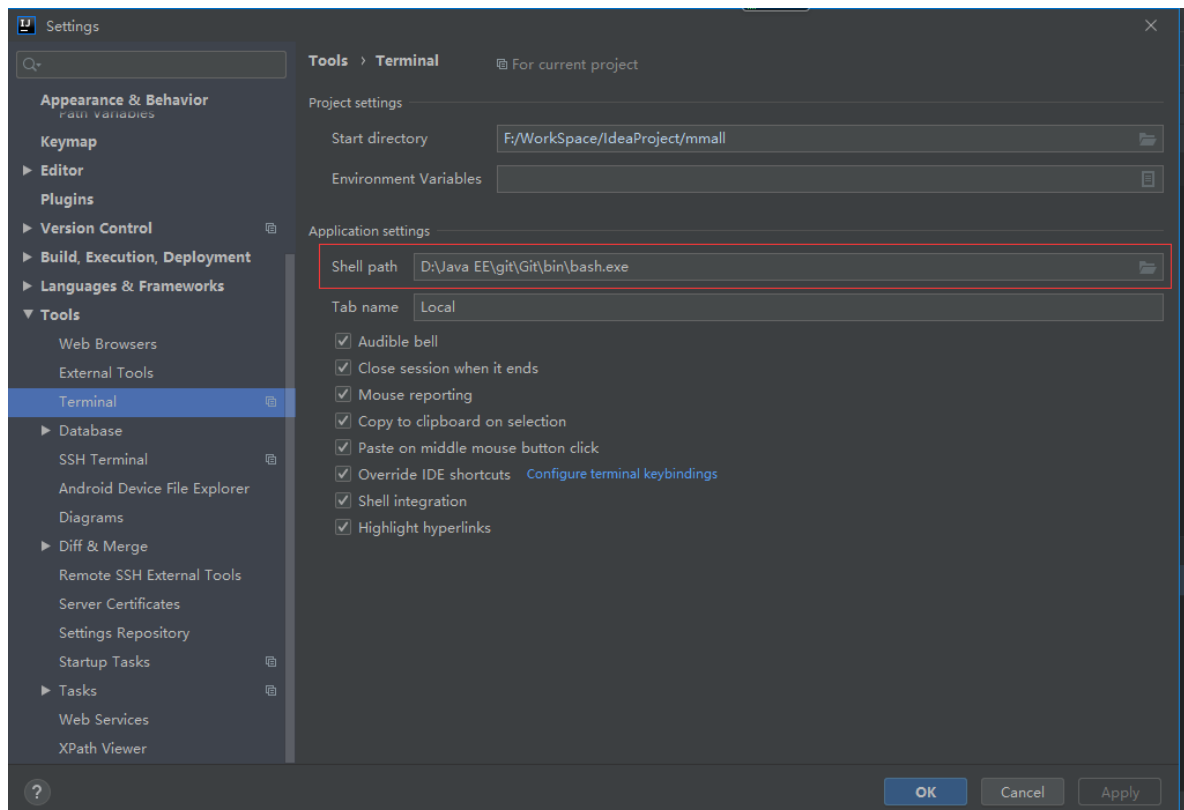


idea中terminal配置成git终端:

File—>settings—>Tools—>Terminal—>

设置shell path 为D:\Java EE\git\bin\bash.exe

也就是你的git中bin目录下的bash.exe



Maven之POM初始化:

- 认识Maven的pom文件

项目包结构设计:

- 创建项目包结构

Mybatis三剑客：

- Mybatis-generator

自动化生成数据库交互代码

- Mybatis-plugin

IDEA的超级好用的Mybatis的插件，可以实现mybatis的接口文件和实现xml自动化跳转，验证正确性，在xml中智能提示等功能；

- Mybatis-pagehelper

Mybatis非常好用的分页组件

web.xml初始化：

- web.xml配置初始化

Spring配置初始化：

- Spring容器配置文件applicationContext.xml配置

SpringMVC配置初始化：

- SpringMVC配置文件dispatcher-servlet.xml配置

Logback初始化

- 日志管理logback的初始化 及配置

```
[22:16:12.498][DEBUG][c.m.d.C.selectCategoryChildrenByParentId][http-bio-8080-exec-3] ==> Preparing: select  
d, parent_id, name, status, sort_order, create_time, update_time from mmall_category where parent_id = ?  
[22:16:12.498][DEBUG][c.m.d.C.selectCategoryChildrenByParentId][http-bio-8080-exec-3] ==> Parameters: 100023(  
nteger)  
[22:16:12.499][DEBUG][c.m.d.C.selectCategoryChildrenByParentId][http-bio-8080-exec-3] <==      Total: 0
```

FTP服务器配置：

- FTP服务器的配置讲解

IDEA注入和实时编译的配置：

- IDEA使用mybatis及spring scan时，autowired注入时报错处理
- 开启Problem窗口，实时编译的配置及作用

工欲善其事必先利其器：

- Restlet Client

和postman同类型软件

- FE助手

主要用里面的json格式化

5-2 数据库初始化

5-3 idea项目开发工具安装实操(mac)

5-4 idea项目开发工具安装实操(windows)

5-5 jdk、tomcat、maven配置及初始化web空白项目

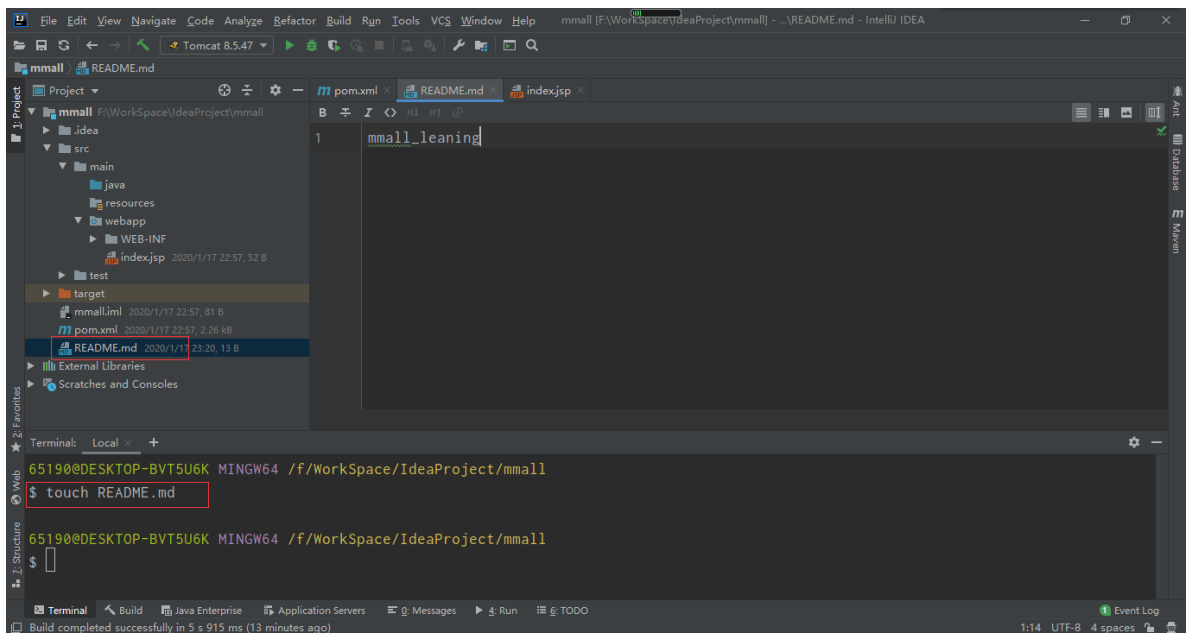
5-6 git初始化

码云

<https://gitee.com/ZiChenMuFeng/dashboard/projects>

The top screenshot shows the 'New Project' (新建仓库) form on Gitee. The repository name is 'mmall', the owner is 'ZiChenMuFeng', and the path is 'mmall'. The language is set to 'Java'. The 'Use README file to initialize this repository' (使用Readme文件初始化这个仓库) checkbox is checked. The bottom screenshot shows the repository page for 'ZiChenMuFeng / mmall'. The 'Clone/Download' (克隆/下载) dropdown menu is open, showing the SSH URL 'git@gitee.com:ZiChenMuFeng:mmall' which has been copied.

\$ touch README.md 创建README.md文件



\$ touch .gitignore 配置的配置文件匹配上的进行忽略，不会推送到git仓库上，也不会检查到本地项目的变化

.gitignore :

```
#忽略什么配什么
*.class

#package file
*.war
*.ear

#kdiff3 ignore
*.orig

#maven ignore
target/

#eclipse ignore
.settings/
.project
.classpath

#idea
.idea/
/idea/
*.ipr
*.iml
*.iws

#temp file
*.log
*.cache
*.diff
*.patch
*.tmp

#system ignore
.DS_Store
```

\$git init 初始化

\$git status 查看哪些文件发生了变化

\$git add . 添加所有的变更文件

\$git status

\$git commit -am 'first commit init project' -am后面直接加注释 提交到本地仓库上

\$git remote add origin git@gitee.com:ZiChenMuFeng/mmall.git 连接远程仓库

\$git branch 查看分支

\$git push -u origin master 将本地的推送到远程分支上

\$git pull 分支上的文件拉取过来

\$git push -u origin master

\$git push -u -f origin master 强制推送 -f

\$git branch 查看分支

\$git branch -r 查看远程分支

本项目是分支开发主干发布（分支开发合并到主分支master然后发布master）业界普片使用的做法；业界也有主干开发，分支发布...等等。

\$git checkout -b v1.0 origin/master git checkout检出 -b开分支 v1.0 origin/master并取名字

\$git branch

\$git push origin HEAD -u 推送到远程上

解决码云出现git@gitee.com: Permission denied (publickey):

<http://git.mydoc.io/?t=154712>

5-7 maven的pom文件配置

[maven的中央仓库](#)

5-8 项目包结构初始化

PO,BO,VO和POJO的区别: [文章地址](#)

PO: persistent object 持久对象

1. 有时也被称为Data对象，对应数据库中的entity，可以简单认为一个PO对应数据库中的一条记录。
2. 在hibernate持久化框架中与insert/delete操作密切相关。
3. PO中不应该包含任何对数据库的操作。

POJO: plain ordinary java object 无规则简单java对象

一个中间对象，可以转化为PO、DTO、VO。

1. POJO持久化之后==> PO

(在运行期, 由Hibernate中的cglib动态把POJO转换为PO, PO相对于POJO会增加一些用来管理数据库entity状态的属性和方法。PO对于programmer来说完全透明, 由于是运行期生成PO, 所以可以支持增量编译, 增量调试。)

2. POJO传输过程中==> DTO

3. POJO用作表示层==> VO

PO 和VO都应该属于它。

BO: business object 业务对象

业务对象主要作用是把业务逻辑封装为一个对象。这个对象可以包括一个或多个其它的对象。

比如一个简历, 有教育经历、工作经历、社会关系等等。我们可以把教育经历对应一个PO, 工作经历对应一个PO, 社会关系对应一个PO。

建立一个对应简历的BO对象处理简历, 每个BO包含这些PO。

这样处理业务逻辑时, 我们就可以针对BO去处理。

封装业务逻辑为一个对象(可以包括多个PO, 通常需要将BO转化成PO, 才能进行数据的持久化, 反之, 从DB中得到的PO, 需要转化成BO才能在业务层使用)。

关于BO主要有三种概念

- 1、只包含业务对象的属性;
- 2、只包含业务方法;
- 3、两者都包含。

在实际使用中, 认为哪一种概念正确并不重要, 关键是实际应用中适合自己项目的需要。

VO: value object 值对象 / view object 表现层对象

1. 主要对应页面显示(web页面/swt、swing界面)的数据对象。
 2. 可以和表对应, 也可以不, 这根据业务的需要。
-

DTO (TO) : Data Transfer Object 数据传输对象

1. 用在需要跨进程或远程传输时, 它不应该包含业务逻辑。
 2. 比如一张表有100个字段, 那么对应的PO就有100个属性(大多数情况下, DTO内的数据来自多个表)。但view层只需显示10个字段, 没有必要把整个PO对象传递到client, 这时我们就可以用只有这10个属性的DTO来传输数据到client, 这样也不会暴露server端表结构。到达客户端以后, 如果用这个对象来对应界面显示, 那此时它的身份就转为VO。
-

DAO: data access object数据访问对象

1. 主要用来封装对DB的访问(CRUD操作)。
2. 通过接收Business层的数据, 把POJO持久化为PO。

简易的关系图:


```

<!--指定特定数据库的jdbc驱动jar包的位置-->
<classpathEntry location="${db.driverLocation}"/>
<!--<classpathEntry location="F:/WorkSpace/IdeaProject/mmall/mysql-connector-java-5.1.6.jar" />-->

<context id="default" targetRuntime="MyBatis3">

    <!-- optional, 旨在创建class时, 对注释进行控制 -->
    <commentGenerator>
        <property name="suppressDate" value="true"/>
        <property name="suppressAllComments" value="true"/>
    </commentGenerator>

    <!--jdbc的数据库连接 -->
    <jdbcConnection>
        <property name="driverClass" value="${db.driverClassName}"/>
        <property name="connectionURL" value="${db.url}"/>
        <property name="userId" value="${db.username}"/>
        <property name="password" value="${db.password}"/>
    </jdbcConnection>

    <!-- 非必需, 类型处理器, 在数据库类型和java类型之间的转换控制-->
    <jdbcTypeResolver>
        <property name="forceBigDecimals" value="false"/>
    </jdbcTypeResolver>

    <!-- Model模型生成器,用来生成含有主键key的类, 记录类 以及查询Example类
        targetPackage      指定生成的model生成所在的包名
        targetProject      指定在该项目下所在的路径
    -->
    <!--<jdbcTypeResolver targetPackage="com.trt.mmall.pojo"
targetProject=".\\src\\main\\java"-->
    <jdbcTypeResolver targetPackage="com.trt.mmall.pojo"
targetProject=".\\src/main/java">
        <!-- 是否允许子包, 即targetPackage.schemaName.tableName -->
        <property name="enableSubPackages" value="false"/>
        <!-- 是否对model添加 构造函数 -->
        <property name="constructorBased" value="true"/>
        <!-- 是否对类CHAR类型的列的数据进行trim操作 -->
        <property name="trimStrings" value="true"/>
        <!-- 建立的Model对象是否 不可改变 即生成的Model对象不会有 setter方法, 只有构造方法 -->
        <property name="immutable" value="false"/>
    </jdbcTypeResolver>

    <!--mapper映射文件生成所在的目录 为每一个数据库的表生成对应的SqlMap文件 -->
    <!--<sqlMapGenerator targetPackage="mappers"
targetProject=".\\src\\main\\resources"-->
    <sqlMapGenerator targetPackage="mappers"
targetProject=".\\src/main/resources">
        <property name="enableSubPackages" value="false"/>
    </sqlMapGenerator>

    <!-- 客户端代码, 生成易于使用的针对Model对象和XML配置文件 的代码
        type="ANNOTATEDMAPPER",生成Java Model 和基于注解的Mapper对象
    -->

```

```

        type="MIXEDMAPPER",生成基于注解的Java Model 和相应的Mapper对象
        type="XMLMAPPER",生成SQLMap XML文件和独立的Mapper接口

-->

<!-- targetPackage: mapper接口dao生成的位置 -->
<!--<javaClientGenerator type="XMLMAPPER" targetPackage="com.mmall.dao"
targetProject=".\\src\\main\\java">-->
    <javaClientGenerator type="XMLMAPPER" targetPackage="com.trt.mmall.dao"
targetProject=".\\src/main/java">
        <!-- enableSubPackages:是否让schema作为包的后缀 -->
        <property name="enableSubPackages" value="false" />
    </javaClientGenerator>

    <table tableName="mmall_shipping" domainObjectName="Shipping"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_cart" domainObjectName="Cart"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_cart_item" domainObjectName="CartItem"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_category" domainObjectName="Category"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_order" domainObjectName="Order"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_order_item" domainObjectName="OrderItem"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_pay_info" domainObjectName="PayInfo"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>
    <table tableName="mmall_product" domainObjectName="Product"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false">
        <columnOverride column="detail" jdbcType="VARCHAR" />
        <columnOverride column="sub_images" jdbcType="VARCHAR" />
    </table>
    <table tableName="mmall_user" domainObjectName="User"
enableCountByExample="false" enableUpdateByExample="false"
enableDeleteByExample="false" enableSelectByExample="false"
selectByExampleQueryId="false"></table>

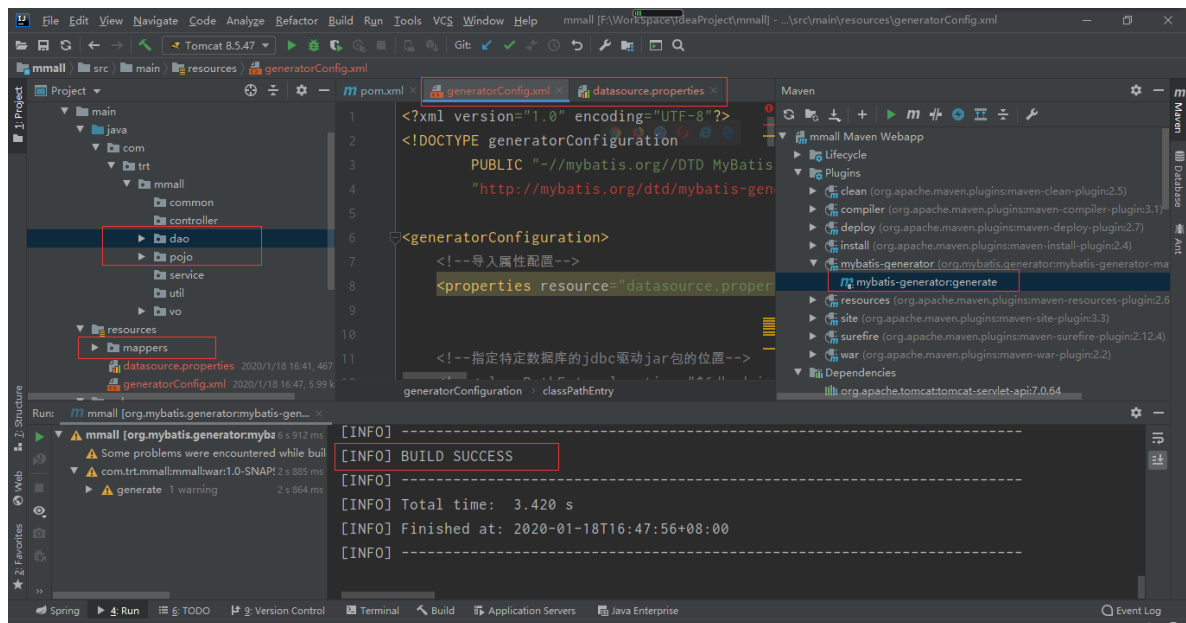
    <!-- geelynote mybatis插件的搭建 -->
</context>
</generatorConfiguration>

```

配置datasource.properties

```
db.driverLocation=/f/Workspace/IdeaProject/mmall/mysql-connector-java-5.1.6.jar
#db.driverLocation=F:/Workspace/IdeaProject/mmall/mysql-connector-java-5.1.6-
bin.jar
db.driverClassName=com.mysql.jdbc.Driver
db.url=jdbc:mysql://127.0.0.1:3306/mmall?characterEncoding=utf-8
db.username=root
db.password=root
```

5-10 mybatis三剑客之mybatis-generator生成数据对象和时间戳优化



XXXXXMapper.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.trt.mmall.dao.CartMapper" >
  <resultMap id="BaseResultMap" type="com.trt.mmall.pojo.Cart" >
    <constructor >
      <idArg column="id" jdbcType="INTEGER" javaType="java.lang.Integer" />
      <arg column="user_id" jdbcType="INTEGER" javaType="java.lang.Integer" />
      <arg column="product_id" jdbcType="INTEGER" javaType="java.lang.Integer" />
    </constructor>
    <arg column="quantity" jdbcType="INTEGER" javaType="java.lang.Integer" />
    <arg column="checked" jdbcType="INTEGER" javaType="java.lang.Integer" />
    <arg column="create_time" jdbcType="TIMESTAMP" javaType="java.util.Date" />
    <arg column="update_time" jdbcType="TIMESTAMP" javaType="java.util.Date" />
  </resultMap>
  <sql id="Base_Column_List" >
    id, user_id, product_id, quantity, checked, create_time, update_time
```

```

</sql>
<select id="selectByPrimaryKey" resultMap="BaseResultMap"
parameterType="java.lang.Integer" >
    select
    <include refid="Base_Column_List" />
    from mmall_cart
    where id = #{id,jdbcType=INTEGER}
</select>
<delete id="deleteByPrimaryKey" parameterType="java.lang.Integer" >
    delete from mmall_cart
    where id = #{id,jdbcType=INTEGER}
</delete>
<!--<insert id="insert" parameterType="com.trt.mmall.pojo.Cart" >
    insert into mmall_cart (id, user_id, product_id,
        quantity, checked, create_time,
        update_time)
    values (#{id,jdbcType=INTEGER}, #{userId,jdbcType=INTEGER}, #
{productId,jdbcType=INTEGER},
        #{quantity,jdbcType=INTEGER}, #{checked,jdbcType=INTEGER}, #
{createTime,jdbcType=TIMESTAMP},
        #{updateTime,jdbcType=TIMESTAMP})
</insert>-->
<insert id="insert" parameterType="com.trt.mmall.pojo.Cart" >
    insert into mmall_cart (id, user_id, product_id,
        quantity, checked, create_time,
        update_time)
    values (#{id,jdbcType=INTEGER}, #{userId,jdbcType=INTEGER}, #
{productId,jdbcType=INTEGER},
        #{quantity,jdbcType=INTEGER}, #{checked,jdbcType=INTEGER}, now(),
        now())
</insert>

<insert id="insertSelective" parameterType="com.trt.mmall.pojo.Cart" >
    insert into mmall_cart
    <trim prefix="(" suffix= ")" suffixOverrides="," >
        <if test="id != null" >
            id,
        </if>
        <if test="userId != null" >
            user_id,
        </if>
        <if test="productId != null" >
            product_id,
        </if>
        <if test="quantity != null" >
            quantity,
        </if>
        <if test="checked != null" >
            checked,
        </if>
        <if test="createTime != null" >
            create_time,
        </if>
        <if test="updateTime != null" >
            update_time,
        </if>
    </trim>
    <trim prefix="values (" suffix= ")" suffixOverrides="," >

```

```

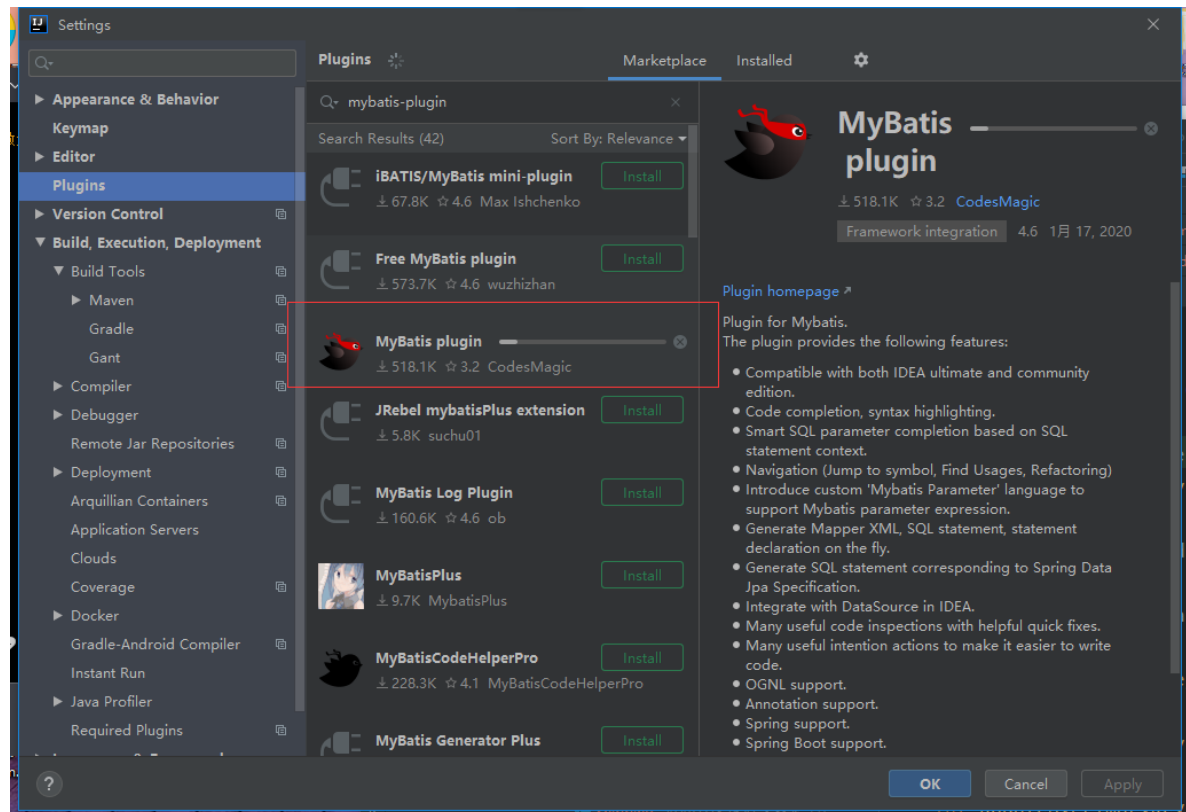
<if test="id != null" >
    #{id,jdbcType=INTEGER},
</if>
<if test="userId != null" >
    #{userId,jdbcType=INTEGER},
</if>
<if test="productId != null" >
    #{productId,jdbcType=INTEGER},
</if>
<if test="quantity != null" >
    #{quantity,jdbcType=INTEGER},
</if>
<if test="checked != null" >
    #{checked,jdbcType=INTEGER},
</if>
<if test="createTime != null" >
    /*#{createTime,jdbcType=TIMESTAMP}*/ now(),
</if>
<if test="updateTime != null" >
    /*#{updateTime,jdbcType=TIMESTAMP}*/now(),
</if>
</trim>
</insert>
<update id="updateByPrimaryKeySelective"
parameterType="com.trt.mmall.pojo.Cart" >
    update mmall_cart
    <set >
        <if test="userId != null" >
            user_id = #{userId,jdbcType=INTEGER},
        </if>
        <if test="productId != null" >
            product_id = #{productId,jdbcType=INTEGER},
        </if>
        <if test="quantity != null" >
            quantity = #{quantity,jdbcType=INTEGER},
        </if>
        <if test="checked != null" >
            checked = #{checked,jdbcType=INTEGER},
        </if>
        <if test="createTime != null" >
            create_time = #{createTime,jdbcType=TIMESTAMP},
        </if>
        <if test="updateTime != null" >
            update_time = now()/*#{updateTime,jdbcType=TIMESTAMP}*/,
        </if>
    </set>
    where id = #{id,jdbcType=INTEGER}
</update>
<update id="updateByPrimaryKey" parameterType="com.trt.mmall.pojo.Cart" >
    update mmall_cart
    set user_id = #{userId,jdbcType=INTEGER},
        product_id = #{productId,jdbcType=INTEGER},
        quantity = #{quantity,jdbcType=INTEGER},
        checked = #{checked,jdbcType=INTEGER},
        create_time = #{createTime,jdbcType=TIMESTAMP},
        update_time = now()/*#{updateTime,jdbcType=TIMESTAMP}*/
    where id = #{id,jdbcType=INTEGER}
</update>

```

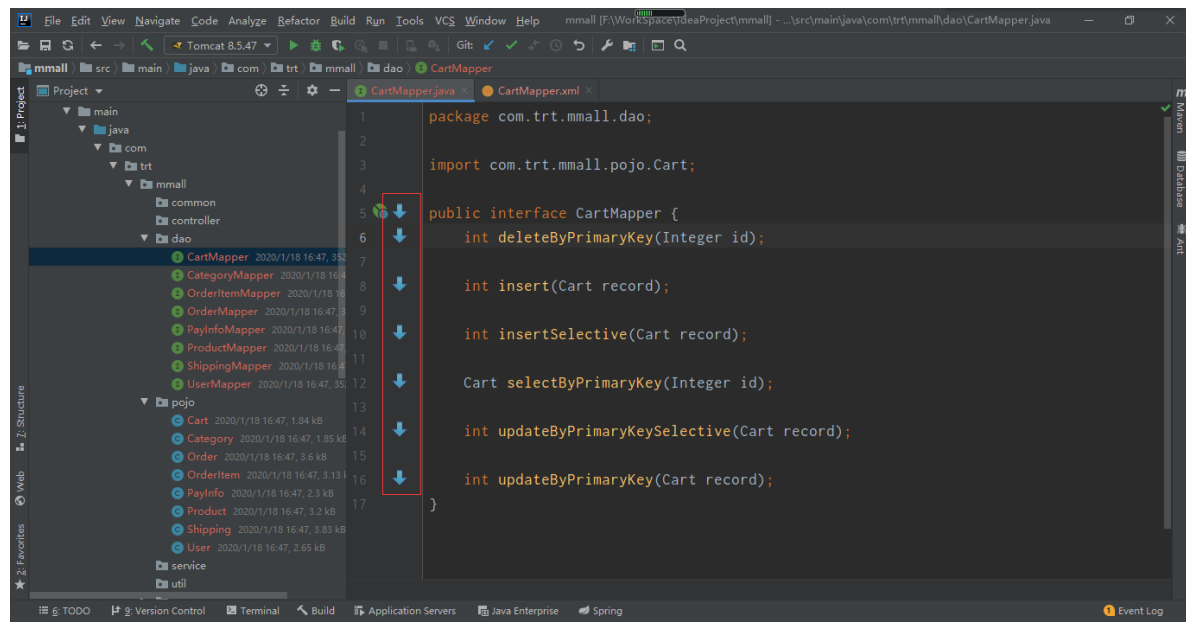
```
</mapper>
```

5-11 mybatis三剑客之mybatis-plugin讲解

安装



效果



5-12 mybatis三剑客之mybatis-pagehelper分页插件讲解

[mybatis-pagehelper地址](#)

pom.xml

```

<!-- mybatis pager begin-->
<dependency>
  <groupId>com.github.pagehelper</groupId>
  <artifactId>pagehelper</artifactId>
  <version>4.1.0</version>
</dependency>

<dependency>
  <groupId>com.github.miemiedev</groupId>
  <artifactId>mybatis-paginator</artifactId>
  <version>1.2.17</version>
</dependency>

<dependency>
  <groupId>com.github.jsqlparser</groupId>
  <artifactId>jsqlparser</artifactId>
  <version>0.9.4</version>
</dependency>
<!-- mybatis pager end-->

```

5-13 spring官方demo指引及配置

[spring官网](#)

[spring-mvc-showcase项目地址](#)

[spring-petclinic项目地址](#)

[greenhouse项目地址](#)

[spring-boot项目地址](#)

5-14 spring、springmvc配置实操

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">

  <display-name>Archetype Created Web Application</display-name>

  <!-- 字符编码过滤器，一定要放在所有过滤器之前 -->
  <filter>
    <filter-name>characterEncodingFilter</filter-name>
    <filter-
class>org.springframework.web.filter.CharacterEncodingFilter</filter-class>
    <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>
<filter-mapping>
    <filter-name>characterEncodingFilter</filter-name>
    <url-pattern>/*</url-pattern>
</filter-mapping>

<!-- 定义SPRING监听器，加载spring -->
<!--主要作用是 如果bean想使用作用域为request的时候需要必须配置的-->
<listener>
    <listener-
class>org.springframework.web.context.request.RequestContextListener</listener-
class>
    </listener>

<!--启动Spring的容器 -->
<context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>
        classpath:applicationContext.xml
    </param-value>
</context-param>
<listener>
    <listener-
class>org.springframework.web.context.ContextLoaderListener</listener-class>
    </listener>

<!--springmvc的前端控制器，拦截所有请求 -->
<servlet>
    <servlet-name>dispatcher</servlet-name>
    <servlet-
class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
    <load-on-startup>1</load-on-startup>
</servlet>
<servlet-mapping>
    <servlet-name>dispatcher</servlet-name>
    <url-pattern>*.do</url-pattern>
</servlet-mapping>

</web-app>

```

applicationContext.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"
    xmlns:aop="http://www.springframework.org/schema/aop"
    xmlns:tx="http://www.springframework.org/schema/tx"
    xmlns:jdbc="http://www.springframework.org/schema/jdbc"
    xmlns:context="http://www.springframework.org/schema/context"
    xsi:schemaLocation="

```



```

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

    <context:component-scan base-package="com.trt.mmall" annotation-
config="true"/>

    <!--<context:annotation-config/>-->
    <!--aop配置-->
    <aop:aspectj-autoproxy/>

    <!--分离spring配置文件-->
    <import resource="applicationContext-datasource.xml"/>

</beans>

```

applicationContext-datasource.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"
    xmlns:aop="http://www.springframework.org/schema/aop"
    xmlns:tx="http://www.springframework.org/schema/tx"
    xmlns:jdbc="http://www.springframework.org/schema/jdbc"
    xmlns:context="http://www.springframework.org/schema/context"
    xsi:schemaLocation="
        http://www.springframework.org/schema/context
        http://www.springframework.org/schema/context/spring-context.xsd
        http://www.springframework.org/schema/beans
        http://www.springframework.org/schema/beans/spring-beans.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">

    <context:component-scan base-package="com.trt.mmall" annotation-
config="true"/>

    <!--propertyConfigurer 常量进行分离，分离到datasource.properties-->
    <bean id="propertyConfigurer"

class="org.springframework.beans.factory.config.PropertyPlaceholderConfigurer">
        <property name="order" value="2"/>
        <property name="ignoreUnresolvablePlaceholders" value="true"/>
        <property name="locations">
            <list>
                <value>classpath:datasource.properties</value>
            </list>
        </property>
        <property name="fileEncoding" value="utf-8"/>

```

```

</bean>

<!--dbcp连接池-->
<bean id="dataSource" class="org.apache.commons.dbcp.BasicDataSource"
destroy-method="close">
    <property name="driverClassName" value="${db.driverClassName}"/>
    <property name="url" value="${db.url}"/>
    <property name="username" value="${db.username}"/>
    <property name="password" value="${db.password}"/>
    <!-- 连接池启动时的初始值 -->
    <property name="initialSize" value="${db.initialSize}"/>
    <!-- 连接池的最大值 -->
    <property name="maxActive" value="${db.maxActive}"/>
    <!-- 最大空闲值.当经过一个高峰时间后,连接池可以慢慢将已经用不到的连接慢慢释放一部分,
一直减少到maxIdle为止 -->
    <property name="maxIdle" value="${db.maxIdle}"/>
    <!-- 最小空闲值.当空闲的连接数少于阈值时,连接池就会预申请去一些连接,以免洪峰来时来不
及申请 -->
    <property name="minIdle" value="${db.minIdle}"/>
    <!-- 最大建立连接等待时间.如果超过此时间将接到异常.设为-1表示无限制 -->
    <property name="maxWait" value="${db.maxWait}"/>
    <!--#给出一条简单的sql语句进行验证 -->
    <!--<property name="validationQuery" value="select getdate()" />-->
    <property name="defaultAutoCommit" value="${db.defaultAutoCommit}"/>
    <!-- 回收被遗弃的(一般是忘了释放的)数据库连接到连接池中 -->
    <!--<property name="removeAbandoned" value="true" />-->
    <!-- 数据库连接过多长时间不用将被视为被遗弃而收回连接池中 -->
    <!--<property name="removeAbandonedTimeout" value="120" />-->
    <!-- #连接的超时时间,默认为半小时。 -->
    <property name="minEvictableIdleTimeMillis"
value="${db.minEvictableIdleTimeMillis}"/>

    <!--# 失效检查线程运行时间间隔,要小于MySQL默认-->
    <property name="timeBetweenEvictionRunsMillis" value="40000"/>
    <!--# 检查连接是否有效-->
    <property name="testWhileIdle" value="true"/>
    <!--# 检查连接有效性的SQL语句-->
    <property name="validationQuery" value="SELECT 1 FROM dual"/>
</bean>

<!--mybatis的SqlSessionFactoryBean的bean-->
<bean id="sqlSessionFactory"
class="org.mybatis.spring.SqlSessionFactoryBean">
    <property name="dataSource" ref="dataSource"/>
    <property name="mapperLocations" value="classpath*:mappers/*Mapper.xml">
</property>

    <!-- 分页插件 -->
    <property name="plugins">
        <array>
            <bean class="com.github.pagehelper.PageHelper">
                <property name="properties">
                    <value>
                        dialect=mysql
                    </value>
                </property>
            </bean>
        </array>
    </property>

```

```

        </property>

    </bean>

    <!--mybatis的扫描，dao层给service层提供接口的包-->
    <bean name="mapperScannerConfigurer"
class="org.mybatis.spring.mapper.MapperScannerConfigurer">
        <property name="basePackage" value="com.trt.mmall.dao"/>
    </bean>

    <!-- 使用@Transactional进行声明式事务管理需要声明下面这行 -->
    <tx:annotation-driven transaction-manager="transactionManager" proxy-target-
class="true" />
    <!-- 事务管理 -->
    <bean id="transactionManager"
class="org.springframework.jdbc.datasource.DataSourceTransactionManager">
        <property name="dataSource" ref="dataSource"/>
        <property name="rollbackOnCommitFailure" value="true"/>
    </bean>

</beans>

```

dispatcher-servlet.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"
    xmlns:p="http://www.springframework.org/schema/p"
    xmlns:context="http://www.springframework.org/schema/context"
    xmlns:mvc="http://www.springframework.org/schema/mvc"
    xmlns:aop="http://www.springframework.org/schema/aop"
    xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
    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">

    <!--包扫描，扫描controller注解-->
    <context:component-scan base-package="com.trt.mmall" annotation-
config="true"/>

    <!--编码的配置-->
    <mvc:annotation-driven>
        <mvc:message-converters>
            <bean
class="org.springframework.http.converter.StringHttpMessageConverter">
                <property name="supportedMediaTypes">
                    <list>
                        <value>text/plain;charset=UTF-8</value>
                        <value>text/html;charset=UTF-8</value>
                    </list>
                </property>
            </bean>

```

```

        <!-- 自动反序列化的配置 Jackson-->
        <bean
class="org.springframework.http.converter.json.MappingJacksonHttpMessageConverte
r">
            <property name="supportedMediaTypes">
                <list>
                    <value>application/json;charset=UTF-8</value>
                </list>
            </property>
        </bean>
    </mvc:message-converters>
</mvc:annotation-driven>

    <!-- 文件上传 -->
    <bean id="multipartResolver"
class="org.springframework.web.multipart.commons.CommonsMultipartResolver">
        <property name="maxUploadSize" value="10485760"/> <!-- 10m -->
        <property name="maxInMemorySize" value="4096" />
        <property name="defaultEncoding" value="UTF-8"></property>
    </bean>

</beans>

```

5-15 logback配置讲解

logback.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<configuration scan="true" scanPeriod="60 seconds" debug="false">
    <appender name="console" class="ch.qos.logback.core.ConsoleAppender">
        <encoding>UTF-8</encoding>
        <encoder>
            <pattern>[%d{HH:mm:ss.SSS}] [%p] [%c{40}] [%t] %m%n</pattern>
        </encoder>
        <filter class="ch.qos.logback.classic.filter.ThresholdFilter">
            <level>DEBUG</level>
        </filter>
    </appender>

    <!-- 项目的日志，通过日期自动Rolling-->
    <appender name="mmail"
class="ch.qos.logback.core.rolling.RollingFileAppender">
        <!--<File>d:/mmaillog/mmail.log</File>-->
        <!--<File>/developer/apache-tomcat-7.0.73/logs/mmail.log</File>-->
        <File>D:/Java EE/apache-tomcat-8.5.47/logs/mmail.log</File>
        <rollingPolicy
class="ch.qos.logback.core.rolling.TimeBasedRollingPolicy">
            <!--<fileNamePattern>/developer/apache-tomcat-
7.0.73/logs/mmail.log.%d{yyyy-MM-dd}.gz</fileNamePattern>-->
            <fileNamePattern>D:/Java EE/apache-tomcat-
8.5.47/logs/mmail.log.%d{yyyy-MM-dd}.gz</fileNamePattern>
            <append>true</append>
            <maxHistory>10</maxHistory>

```

```

        </rollingPolicy>
        <encoder>
            <pattern>[%d{HH:mm:ss.SSS}] [%p] [%c{40}] [%t] %m%n</pattern>
        </encoder>
    </appender>

    <appender name="error"
class="ch.qos.logback.core.rolling.RollingFileAppender">
        <!--<File>d:/malllog/error.log</File>-->
        <!--<File>/developer/apache-tomcat-7.0.73/logs/error.log</File>-->
        <File>D:/Java EE/apache-tomcat-8.5.47/logs/error.log</File>
        <rollingPolicy
class="ch.qos.logback.core.rolling.TimeBasedRollingPolicy">
            <!--<fileNamePattern>/devsoft/apache-tomcat-
7.0.73/logs/error.log.%d{yyyy-MM-dd}.gz</fileNamePattern>-->
            <!--<fileNamePattern>d:/malllog/error.log.%d{yyyy-MM-
dd}.gz</fileNamePattern>-->
            <fileNamePattern>D:/Java EE/apache-tomcat-
8.5.47/logs/error.log.%d{yyyy-MM-dd}.gz</fileNamePattern>
            <append>true</append>
            <maxHistory>10</maxHistory>
        </rollingPolicy>
        <encoder>
            <pattern>[%d{HH:mm:ss.SSS}] [%p] [%c{40}] [%t] %m%n</pattern>
        </encoder>
        <filter class="ch.qos.logback.classic.filter.LevelFilter">
            <level>ERROR</level>
            <onMatch>ACCEPT</onMatch>
            <onMismatch>DENY</onMismatch>
        </filter>
    </appender>

    <logger name="com.trt.mmall" additivity="false" level="INFO" >
        <appender-ref ref="mall" />
        <appender-ref ref="console"/>
    </logger>

    <!-- geelynote mybatis log 日志 -->
    <logger name="com.trt.mmall.dao" level="DEBUG"/>

    <!--<logger name="com.ibatis.sqlmap.engine.impl.SqlMapClientDelegate"
level="DEBUG" >-->
        <!--<appender-ref ref="console"/>-->
    <!--</logger>-->

    <!--<logger name="java.sql.Connection" level="DEBUG">-->
        <!--<appender-ref ref="console"/>-->
    <!--</logger>-->
    <!--<logger name="java.sql.Statement" level="DEBUG">-->
        <!--<appender-ref ref="console"/>-->
    <!--</logger>-->

    <!--<logger name="java.sql.PreparedStatement" level="DEBUG">-->
        <!--<appender-ref ref="console"/>-->
    <!--</logger>-->

```

```
<root level="DEBUG">
  <appender-ref ref="console"/>
  <appender-ref ref="error"/>
</root>

</configuration>
```

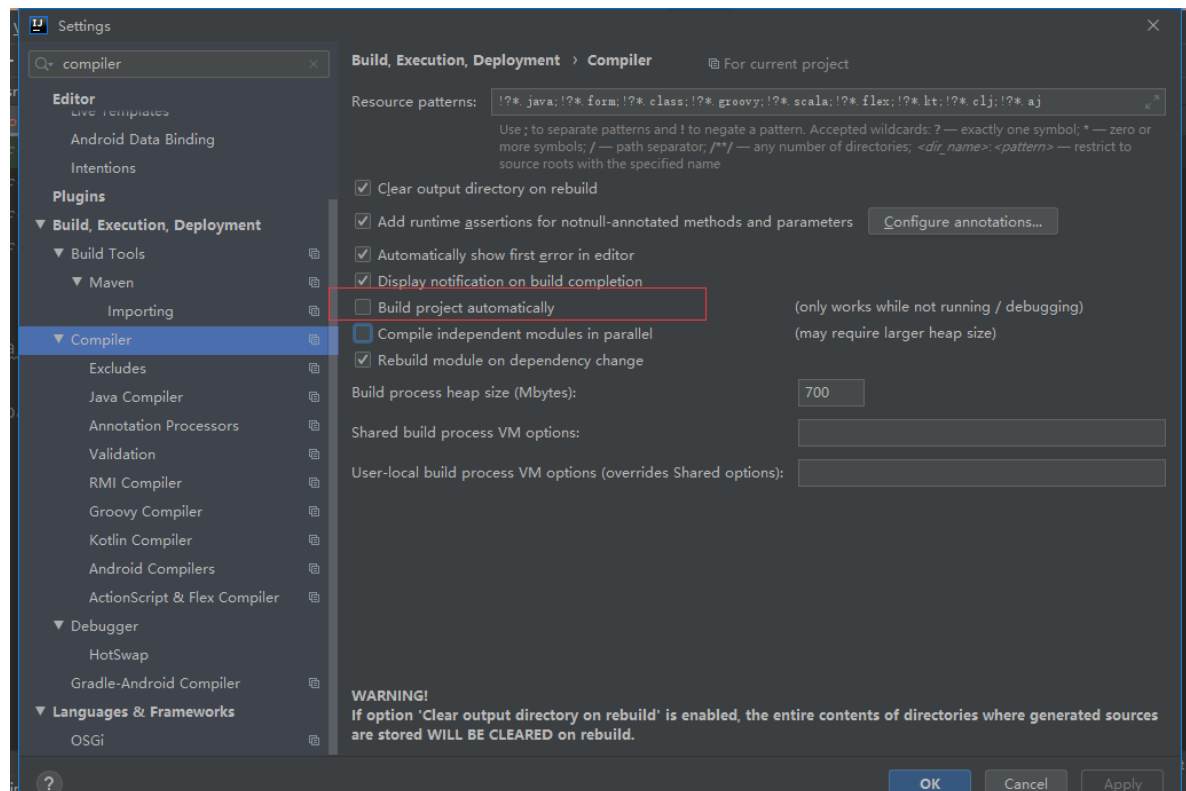
5-16 ftp服务器配置讲解

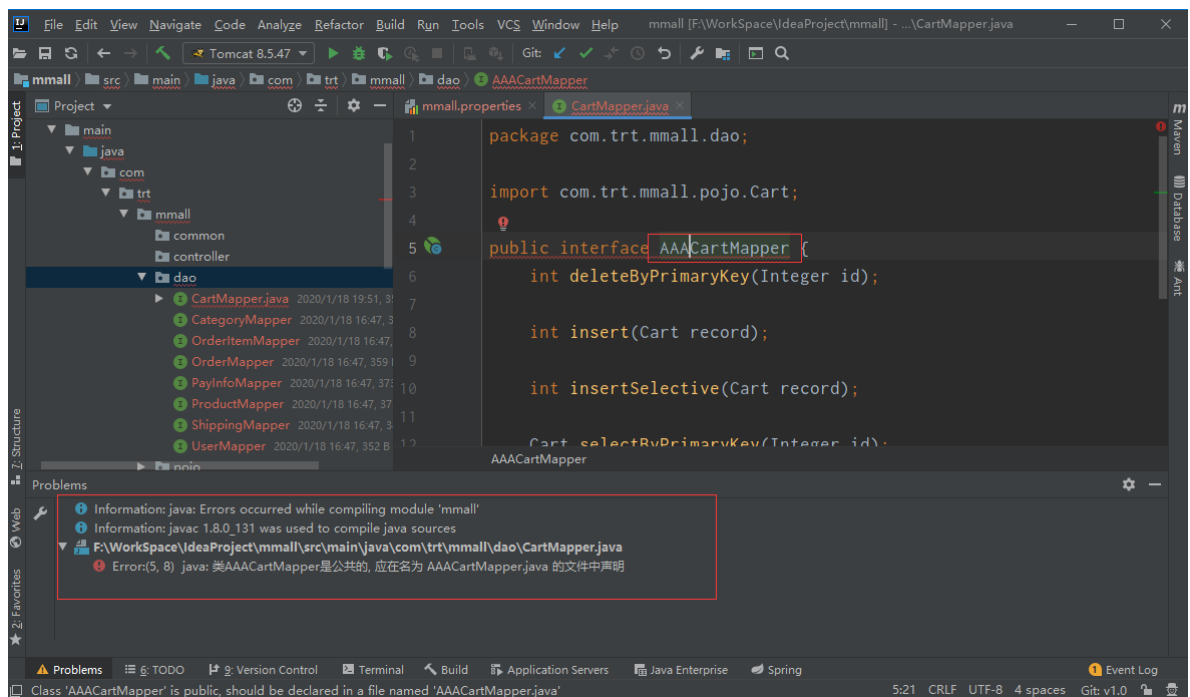
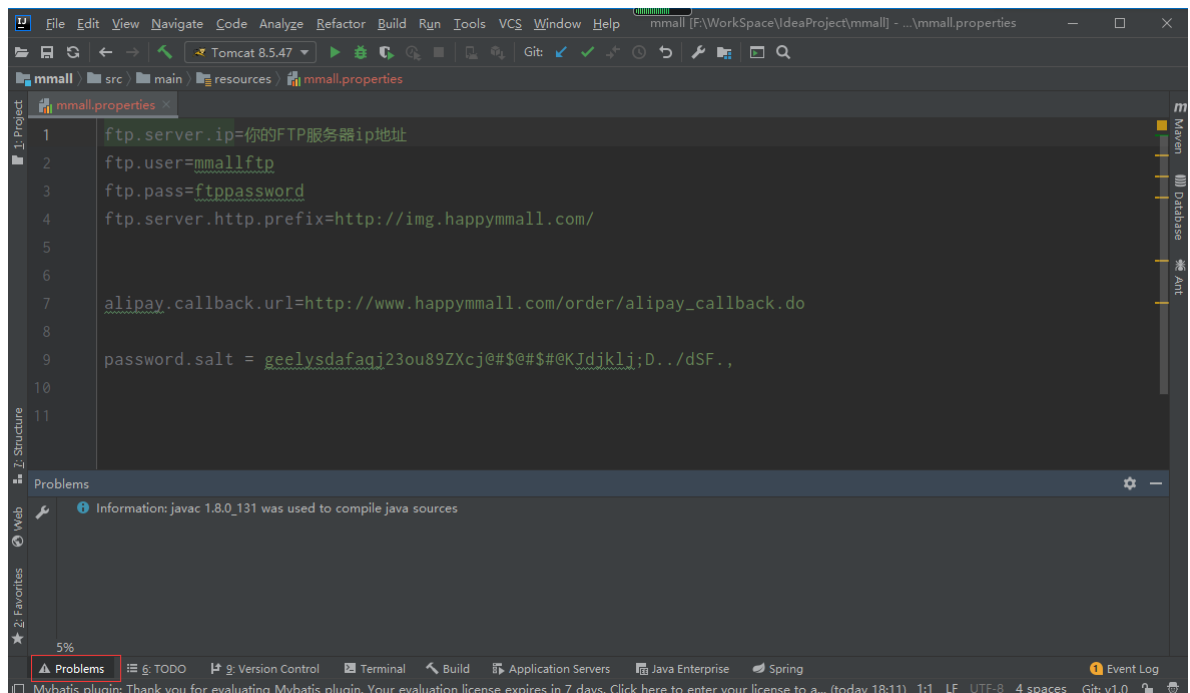
mmall.properties

```
ftp.server.ip=你的FTP服务器ip地址
ftp.user=mmallftp
ftp.pass=ftppassword
ftp.server.http.prefix=http://img.happymmall.com/
```

5-17 idea的注入和自动编译配置

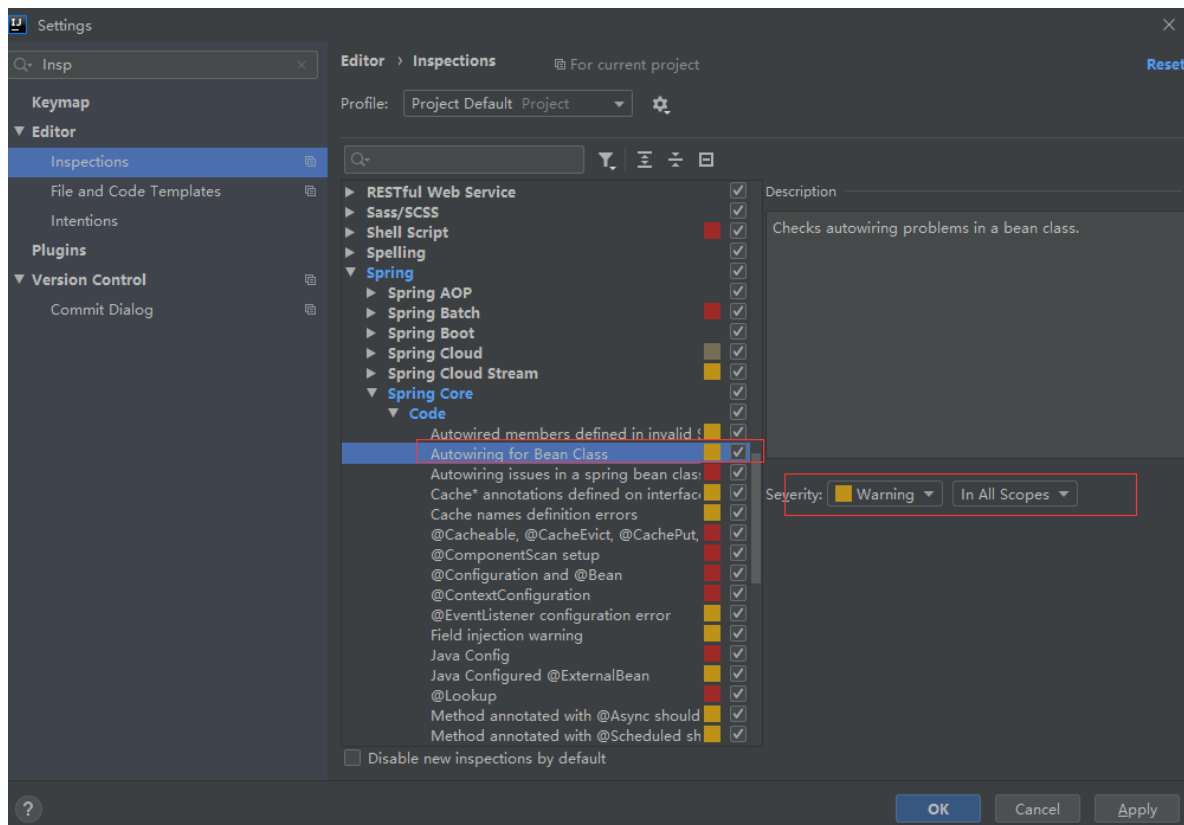
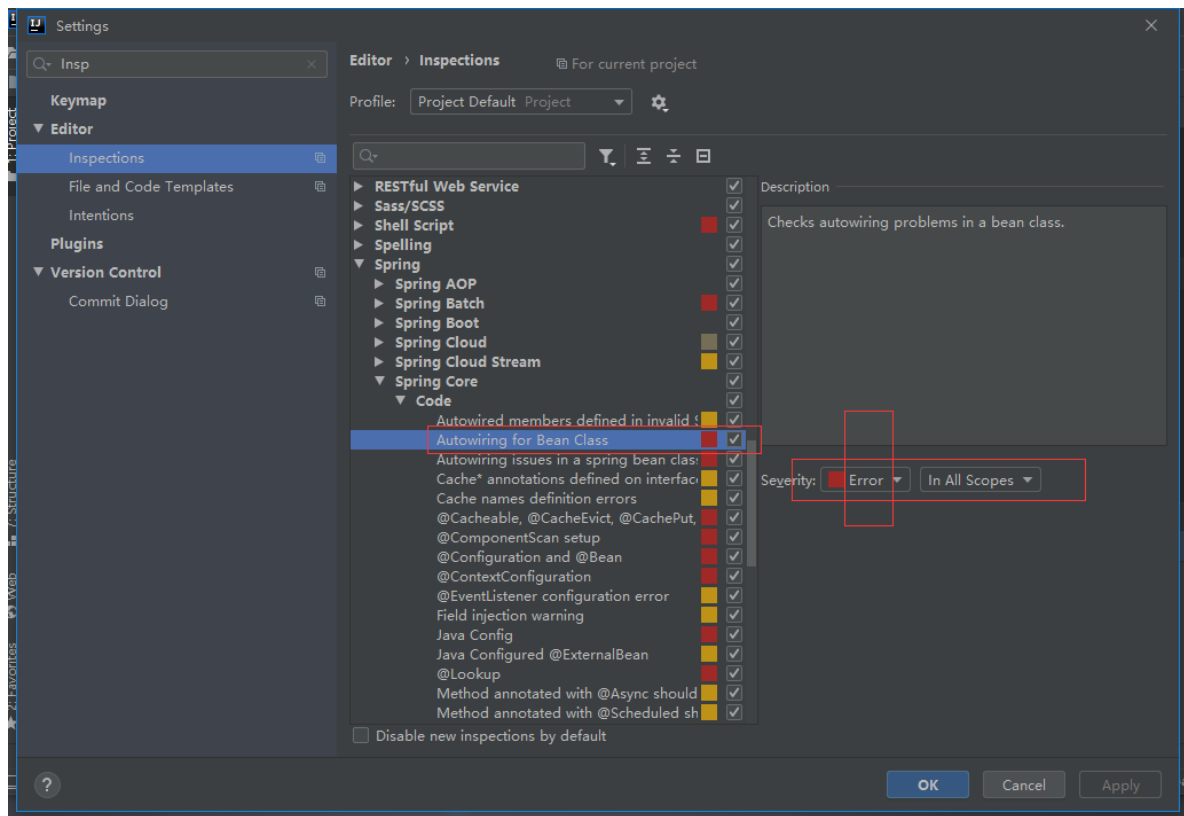
自动编译配置:有错立马显示





idea的注入

将error修改为warning



5-18 项目初始化代码提交

```
65190@DESKTOP-BVT5U6K MINGW64 /f/Workspace/IdeaProject/mma11 (v1.0)
$ git status
On branch v1.0
Your branch is up to date with 'origin/v1.0'.

Changes not staged for commit:
```


(use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
modified: pom.xml
modified: src/main/webapp/WEB-INF/web.xml

Untracked files:

(use "git add <file>..." to include in what will be committed)
mysql-connector-java-5.1.6.jar
src/main/java/
src/main/resources/
src/main/webapp/WEB-INF/dispatcher-servlet.xml

no changes added to commit (use "git add" and/or "git commit -a")

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)

\$ git add .

warning: LF will be replaced by CRLF in

src/main/resources/datasource.properties.

The file will have its original line endings in your working directory

warning: LF will be replaced by CRLF in src/main/resources/logback.xml.

The file will have its original line endings in your working directory

warning: LF will be replaced by CRLF in src/main/resources/mmall.properties.

The file will have its original line endings in your working directory

warning: LF will be replaced by CRLF in src/main/webapp/WEB-INF/dispatcher-servlet.xml.

The file will have its original line endings in your working directory

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)

\$ git status

On branch v1.0

Your branch is up to date with 'origin/v1.0'.

Changes to be committed:

(use "git restore --staged <file>..." to unstage)
modified: pom.xml
new file: src/main/java/com/trt/mmall/dao/CartMapper.java
new file: src/main/java/com/trt/mmall/dao/CategoryMapper.java
new file: src/main/java/com/trt/mmall/dao/OrderItemMapper.java
new file: src/main/java/com/trt/mmall/dao/OrderMapper.java
new file: src/main/java/com/trt/mmall/dao/PayInfoMapper.java
new file: src/main/java/com/trt/mmall/dao/ProductMapper.java
new file: src/main/java/com/trt/mmall/dao/ShippingMapper.java
new file: src/main/java/com/trt/mmall/dao/UserMapper.java
new file: src/main/java/com/trt/mmall/pojo/Cart.java
new file: src/main/java/com/trt/mmall/pojo/Category.java
new file: src/main/java/com/trt/mmall/pojo/Order.java
new file: src/main/java/com/trt/mmall/pojo/OrderItem.java
new file: src/main/java/com/trt/mmall/pojo/PayInfo.java
new file: src/main/java/com/trt/mmall/pojo/Product.java
new file: src/main/java/com/trt/mmall/pojo/Shipping.java
new file: src/main/java/com/trt/mmall/pojo/User.java
new file: src/main/java/com/trt/mmall/vo/TestVo.java
new file: src/main/resources/applicationContext-datasource.xml
new file: src/main/resources/applicationContext.xml
new file: src/main/resources/datasource.properties
new file: src/main/resources/generatorConfig.xml
new file: src/main/resources/logback.xml
new file: src/main/resources/mappers/CartMapper.xml

```

    new file:    src/main/resources/mappers/CategoryMapper.xml
    new file:    src/main/resources/mappers/OrderItemMapper.xml
    new file:    src/main/resources/mappers/OrderMapper.xml
    new file:    src/main/resources/mappers/PayInfoMapper.xml
    new file:    src/main/resources/mappers/ProductMapper.xml
    new file:    src/main/resources/mappers/ShippingMapper.xml
    new file:    src/main/resources/mappers/UserMapper.xml
    new file:    src/main/resources/mmall.properties
    new file:    src/main/tools/mysql-connector-java-5.1.6.jar
    new file:    src/main/webapp/WEB-INF/dispatcher-servlet.xml
    modified:    src/main/webapp/WEB-INF/web.xml
65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git commit -am 'project init commit'
[v1.0 43c00c2] project init commit
35 files changed, 3109 insertions(+), 74 deletions(-)
rewrite pom.xml (61%)
create mode 100644 src/main/java/com/trt/mmall/dao/CartMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/CategoryMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/OrderItemMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/OrderMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/PayInfoMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/ProductMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/ShippingMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/UserMapper.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Cart.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Category.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Order.java
create mode 100644 src/main/java/com/trt/mmall/pojo/OrderItem.java
create mode 100644 src/main/java/com/trt/mmall/pojo/PayInfo.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Product.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Shipping.java
create mode 100644 src/main/java/com/trt/mmall/pojo/User.java
create mode 100644 src/main/java/com/trt/mmall/vo/TestVo.java
create mode 100644 src/main/resources/applicationContext-datasource.xml
create mode 100644 src/main/resources/applicationContext.xml
create mode 100644 src/main/resources/datasource.properties
create mode 100644 src/main/resources/generatorConfig.xml
create mode 100644 src/main/resources/logback.xml
create mode 100644 src/main/resources/mappers/CartMapper.xml
create mode 100644 src/main/resources/mappers/CategoryMapper.xml
create mode 100644 src/main/resources/mappers/OrderItemMapper.xml
create mode 100644 src/main/resources/mappers/OrderMapper.xml
create mode 100644 src/main/resources/mappers/PayInfoMapper.xml
create mode 100644 src/main/resources/mappers/ProductMapper.xml
create mode 100644 src/main/resources/mappers/ShippingMapper.xml
create mode 100644 src/main/resources/mappers/UserMapper.xml
create mode 100644 src/main/resources/mmall.properties
create mode 100644 src/main/tools/mysql-connector-java-5.1.6.jar
create mode 100644 src/main/webapp/WEB-INF/dispatcher-servlet.xml
rewrite src/main/webapp/WEB-INF/web.xml (93%)

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git push
Enumerating objects: 58, done.
Counting objects: 100% (58/58), done.
Delta compression using up to 4 threads
Compressing objects: 100% (46/46), done.
writing objects: 100% (51/51), 679.66 KiB | 3.45 MiB/s, done.

```

```

Total 51 (delta 16), reused 0 (delta 0)
remote: Powered by GITEE.COM [GNK-3.8]
To gitee.com:ZiChenMuFeng/mmall.git
ff94ab0..43c00c2 v1.0 -> v1.0

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git branch
  master
* v1.0

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git status
On branch v1.0
Your branch is up to date with 'origin/v1.0'.

nothing to commit, working tree clean

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$

```

```

Terminal: Local +
65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git status
On branch v1.0
Your branch is up to date with 'origin/v1.0'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   pom.xml
        modified:   src/main/webapp/WEB-INF/web.xml

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        mysql-connector-java-5.1.6.jar
        src/main/java/
        src/main/resources/
        src/main/webapp/WEB-INF/dispatcher-servlet.xml

no changes added to commit (use "git add" and/or "git commit -a")

```

```

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git add .
warning: LF will be replaced by CRLF in src/main/resources/datasource.properties.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/main/resources/logback.xml.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/main/resources/mmall.properties.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/main/webapp/WEB-INF/dispatcher-servlet.xml.
The file will have its original line endings in your working directory

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git status
On branch v1.0
Your branch is up to date with 'origin/v1.0'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   pom.xml

```

```
new file:   src/main/java/com/trt/mmall/dao/CartMapper.java
new file:   src/main/java/com/trt/mmall/dao/CategoryMapper.java
new file:   src/main/java/com/trt/mmall/dao/OrderItemMapper.java
new file:   src/main/java/com/trt/mmall/dao/OrderMapper.java
new file:   src/main/java/com/trt/mmall/dao/PayInfoMapper.java
new file:   src/main/java/com/trt/mmall/dao/ProductMapper.java
new file:   src/main/java/com/trt/mmall/dao/ShippingMapper.java
new file:   src/main/java/com/trt/mmall/dao/UserMapper.java
new file:   src/main/java/com/trt/mmall/pojo/Cart.java
new file:   src/main/java/com/trt/mmall/pojo/Category.java
new file:   src/main/java/com/trt/mmall/pojo/Order.java
new file:   src/main/java/com/trt/mmall/pojo/OrderItem.java
new file:   src/main/java/com/trt/mmall/pojo/PayInfo.java
new file:   src/main/java/com/trt/mmall/pojo/Product.java
new file:   src/main/java/com/trt/mmall/pojo/Shipping.java
new file:   src/main/java/com/trt/mmall/pojo/User.java
new file:   src/main/java/com/trt/mmall/vo/TestVo.java
new file:   src/main/resources/applicationContext-datasource.xml
new file:   src/main/resources/applicationContext.xml
new file:   src/main/resources/datasource.properties
```

```
new file:   src/main/resources/generatorConfig.xml
new file:   src/main/resources/logback.xml
new file:   src/main/resources/mappers/CartMapper.xml
new file:   src/main/resources/mappers/CategoryMapper.xml
new file:   src/main/resources/mappers/OrderItemMapper.xml
new file:   src/main/resources/mappers/OrderMapper.xml
new file:   src/main/resources/mappers/PayInfoMapper.xml
new file:   src/main/resources/mappers/ProductMapper.xml
new file:   src/main/resources/mappers/ShippingMapper.xml
new file:   src/main/resources/mappers/UserMapper.xml
new file:   src/main/resources/mmall.properties
new file:   src/main/tools/mysql-connector-java-5.1.6.jar
new file:   src/main/webapp/WEB-INF/dispatcher-servlet.xml
modified:   src/main/webapp/WEB-INF/web.xml
```

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)

\$ git commit -am 'project init commit'

[v1.0 43c00c2] project init commit

35 files changed, 3109 insertions(+), 74 deletions(-)

rewrite pom.xml (61%)

create mode 100644 src/main/java/com/trt/mmall/dao/CartMapper.java

```
create mode 100644 src/main/java/com/trt/mmall/dao/CategoryMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/OrderItemMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/OrderMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/PayInfoMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/ProductMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/ShippingMapper.java
create mode 100644 src/main/java/com/trt/mmall/dao/UserMapper.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Cart.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Category.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Order.java
create mode 100644 src/main/java/com/trt/mmall/pojo/OrderItem.java
create mode 100644 src/main/java/com/trt/mmall/pojo/PayInfo.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Product.java
create mode 100644 src/main/java/com/trt/mmall/pojo/Shipping.java
create mode 100644 src/main/java/com/trt/mmall/pojo/User.java
create mode 100644 src/main/java/com/trt/mmall/vo/TestVo.java
create mode 100644 src/main/resources/applicationContext-datasource.xml
create mode 100644 src/main/resources/applicationContext.xml
create mode 100644 src/main/resources/datasource.properties
create mode 100644 src/main/resources/generatorConfig.xml
```

```
create mode 100644 src/main/resources/logback.xml
create mode 100644 src/main/resources/mappers/CartMapper.xml
create mode 100644 src/main/resources/mappers/CategoryMapper.xml
create mode 100644 src/main/resources/mappers/OrderItemMapper.xml
create mode 100644 src/main/resources/mappers/OrderMapper.xml
create mode 100644 src/main/resources/mappers/PayInfoMapper.xml
create mode 100644 src/main/resources/mappers/ProductMapper.xml
create mode 100644 src/main/resources/mappers/ShippingMapper.xml
create mode 100644 src/main/resources/mappers/UserMapper.xml
create mode 100644 src/main/resources/mmall.properties
create mode 100644 src/main/tools/mysql-connector-java-5.1.6.jar
create mode 100644 src/main/webapp/WEB-INF/dispatcher-servlet.xml
rewrite src/main/webapp/WEB-INF/web.xml (93%)
```

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)

\$ git push

Enumerating objects: 58, done.

Counting objects: 100% (58/58), done.

Delta compression using up to 4 threads

Compressing objects: 100% (46/46), done.

```
Writing objects: 100% (51/51), 679.66 KiB | 3.45 MiB/s, done.
Total 51 (delta 16), reused 0 (delta 0)
remote: Powered by GITEE.COM [GNK-3.8]
To gitee.com:ZiChenMuFeng/mmall.git
   ff94ab0..43c00c2  v1.0 -> v1.0

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1
.0)
$ git branch
  master
* v1.0
65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
$ git status
On branch v1.0
Your branch is up to date with 'origin/v1.0'.

nothing to commit, working tree clean

65190@DESKTOP-BVT5U6K MINGW64 /f/WorkSpace/IdeaProject/mmall (v1.0)
```

5-19 两个提高工作效率的神器-Restlet Client和fe助手

fe助手

FeHelper: json序列化化

工具类似JSON-handle、JSON Lite

Restlet Client

Restlet Client: RESTClient 接口测试

工具类似postman