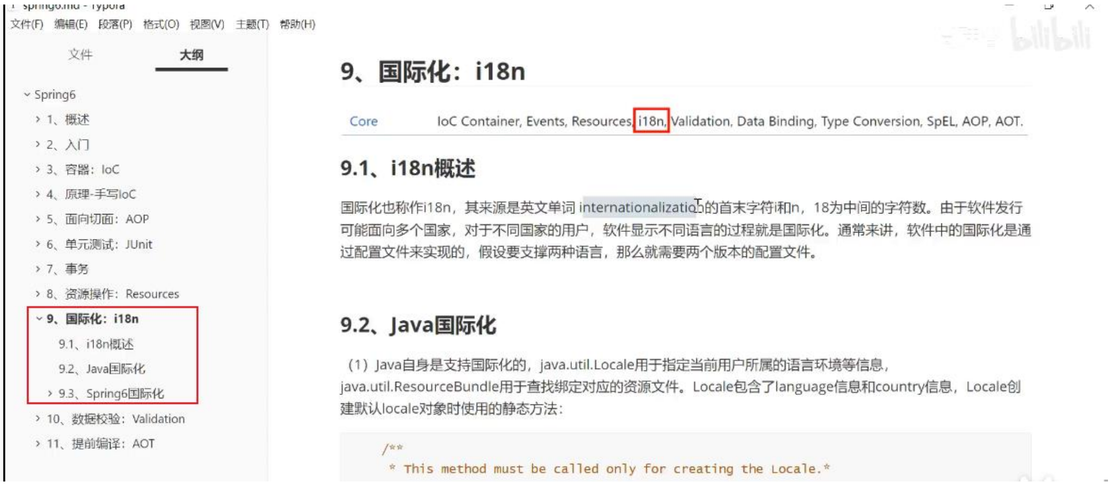


9、国际化：i18n

Core　　IoC Container, Events, Resources, i18n, Validation, Data Binding, Type Conversion, SpEL, AOP, AOT.

9.1、i18n概述

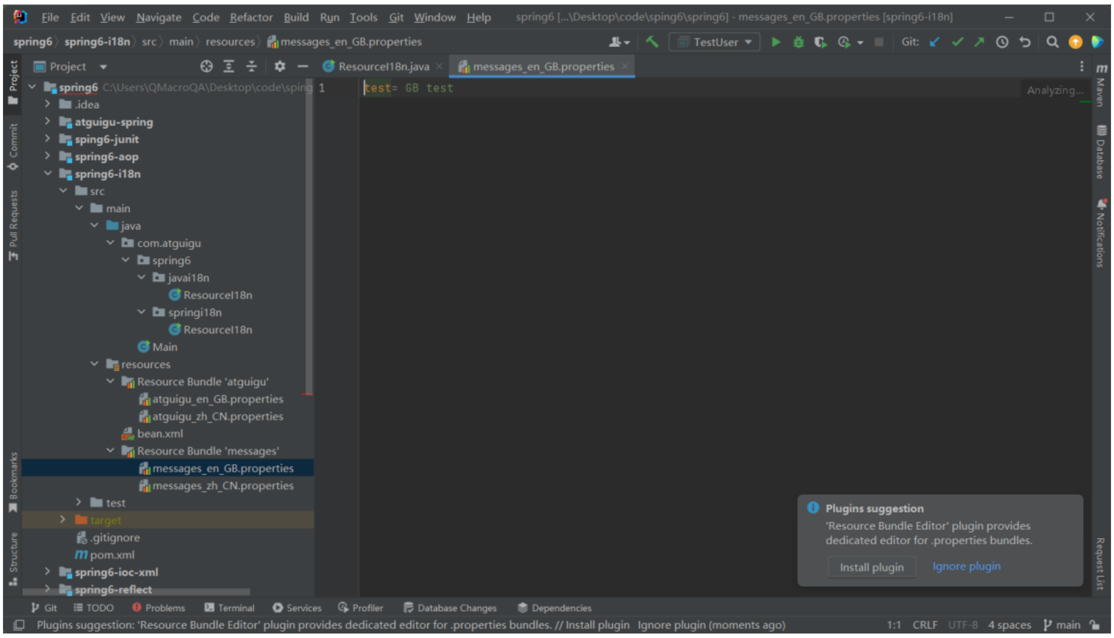
国际化也称作i18n，其来源是英文单词 internationalization的首末字符i和n，18为中间的字符数。由于软件发行可能面向多个国家，对于不同国家的用户，软件显示不同语言的过程就是国际化。通常来讲，软件中的国际化是通过配置文件来实现的，假设要支撑两种语言，那么就需要两个版本的配置文件。

9.2、Java国际化

（1）Java自身是支持国际化的，java.util.Locale用于指定当前用户所属的语言环境等信息，java.util.ResourceBundle用于查找绑定对应的资源文件。Locale包含了language信息和country信息，Locale创建默认locale对象时使用的静态方法：

```
/**
 * This method must be called only for creating the Locale.*
```

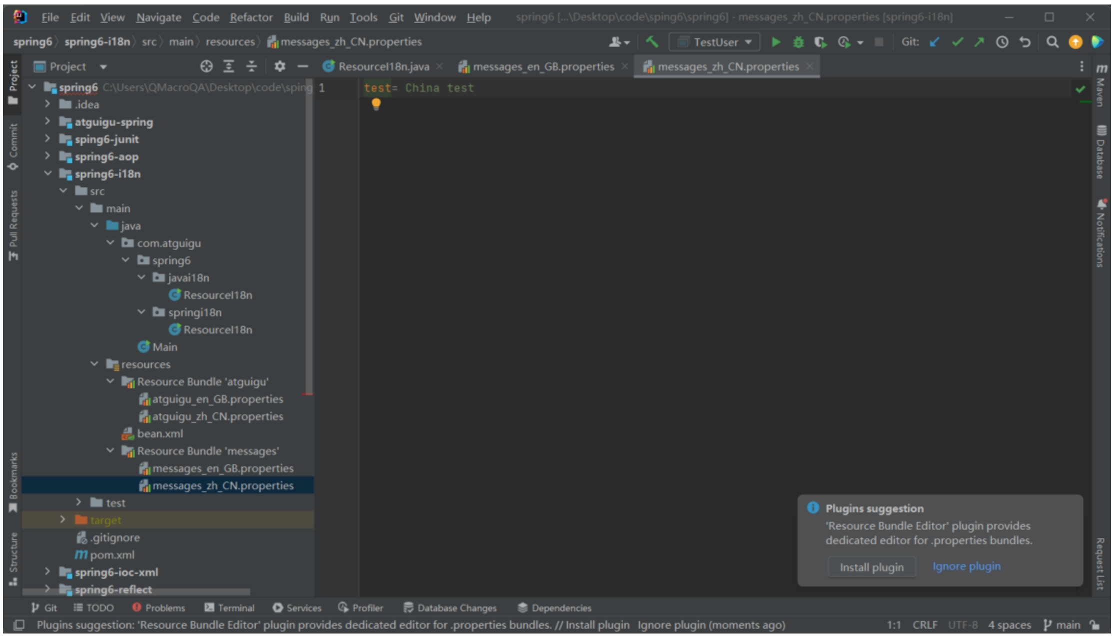
配置文件命名规则:


File Edit View Navigate Code Refactor Build Run Tools Git Window Help
spring6 [...\Desktop\code\sping6\spring6] - messages_en_GB.properties [spring6-i18n]
spring6 › spring6-i18n › src › main › resources › messages_en_GB.properties
TestUser
Project
ResourceI18n.java
messages_en_GB.properties
spring6 C:\Users\QMacroQA\Desktop\code\sping
.idea
atguigu-spring
spring6-junit
spring6-aop
spring6-i18n
src
main
java
com.atguigu
spring6
javai18n
ResourceI18n
springi18n
ResourceI18n
Main
resources
Resource Bundle 'atguigu'
atguigu_en_GB.properties
atguigu_zh_CN.properties
bean.xml
Resource Bundle 'messages'
messages_en_GB.properties
messages_zh_CN.properties
test
target
.gitignore
pom.xml
spring6-ioc-xml
spring6-reflect
Analyzing...
Git TODO Problems Terminal Services Profiler Database Changes Dependencies
1:1 CRLF UTF-8 4 spaces main

```
test= GB test
```

Plugins suggestion
'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles.
Install plugin　Ignore plugin

Plugins suggestion: 'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles. // Install plugin Ignore plugin (moments ago)

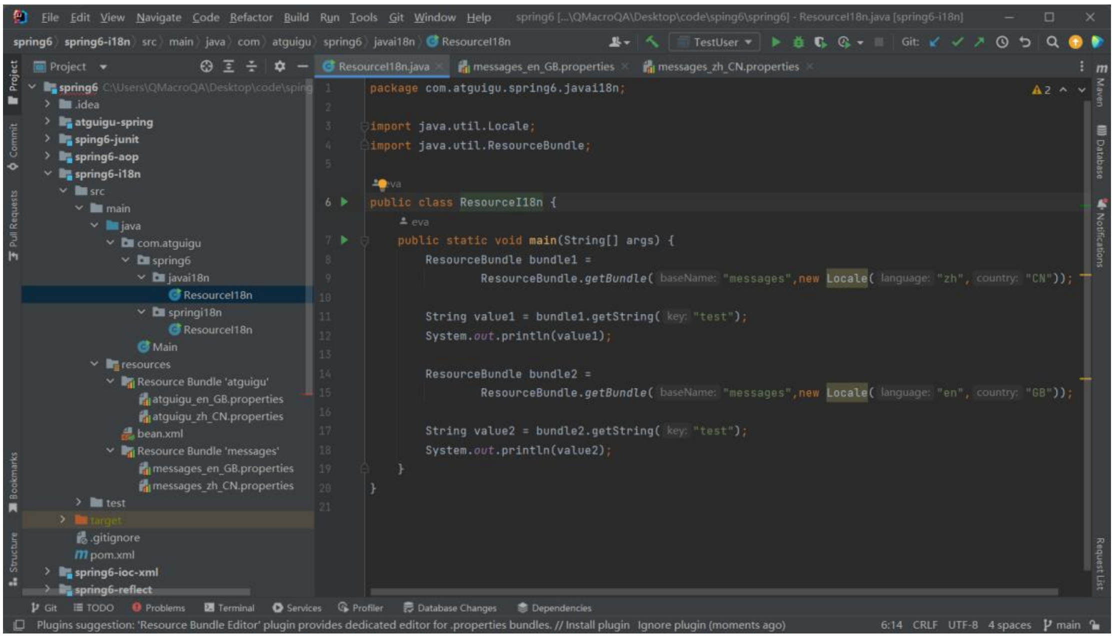

File Edit View Navigate Code Refactor Build Run Tools Git Window Help
spring6 [...\Desktop\code\sping6\spring6] - messages_zh_CN.properties [spring6-i18n]
spring6 › spring6-i18n › src › main › resources › messages_zh_CN.properties
TestUser
Project
ResourceI18n.java
messages_en_GB.properties
messages_zh_CN.properties
spring6 C:\Users\QMacroQA\Desktop\code\sping
.idea
atguigu-spring
sping6-junit
spring6-aop
spring6-i18n
src
main
java
com.atguigu
spring6
javai18n
ResourceI18n
springi18n
ResourceI18n
Main
resources
Resource Bundle 'atguigu'
atguigu_en_GB.properties
atguigu_zh_CN.properties
bean.xml
Resource Bundle 'messages'
messages_en_GB.properties
messages_zh_CN.properties
test
target
.gitignore
pom.xml
spring6-ioc-xml
spring6-reflect
Git TODO Problems Terminal Services Profiler Database Changes Dependencies
1:1 CRLF UTF-8 4 spaces main

```
test= China test
```

Plugins suggestion
'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles.
Install plugin　Ignore plugin

Plugins suggestion: 'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles. // Install plugin Ignore plugin (moments ago)

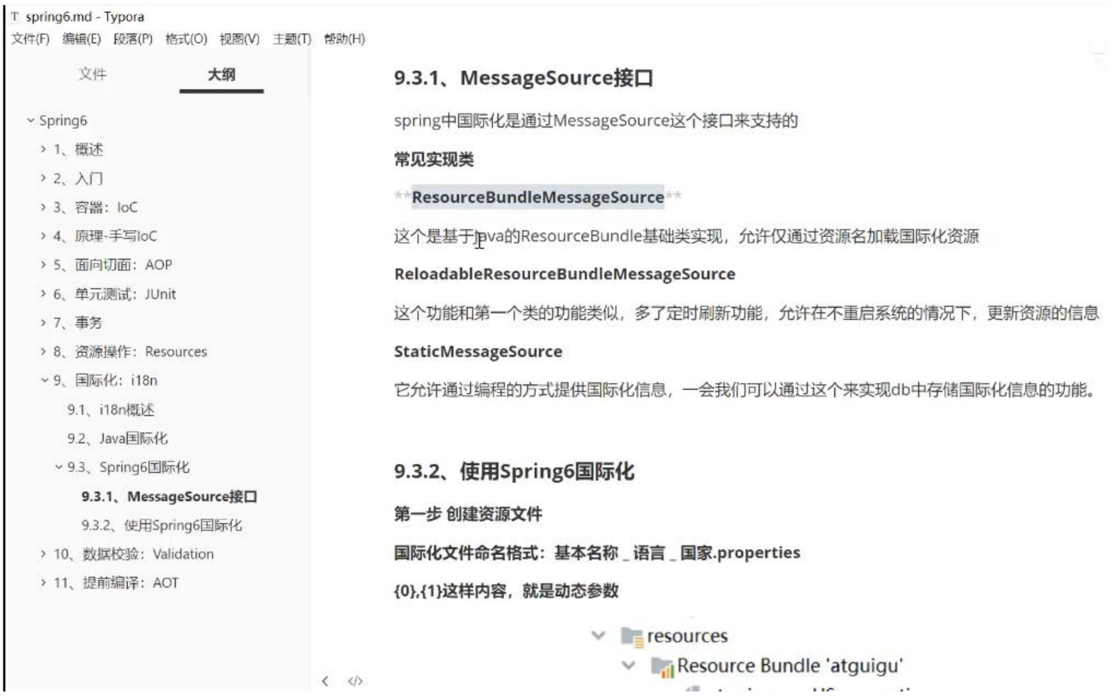
测试：


File Edit View Navigate Code Refactor Build Run Tools Git Window Help
spring6 [...\QMacroQA\Desktop\code\sping6\spring6] - ResourceI18n.java [spring6-i18n]
spring6 › spring6-i18n › src › main › java › com › atguigu › spring6 › javai18n › ResourceI18n
TestUser
Project
ResourceI18n.java
messages_en_GB.properties
messages_zh_CN.properties
spring6 C:\Users\QMacroQA\Desktop\code\spring
.idea
atguigu-spring
sping6-junit
spring6-aop
spring6-i18n
src
main
java
com.atguigu
spring6
javai18n
ResourceI18n
springi18n
ResourceI18n
Main
resources
Resource Bundle 'atguigu'
atguigu_en_GB.properties
atguigu_zh_CN.properties
bean.xml
Resource Bundle 'messages'
messages_en_GB.properties
messages_zh_CN.properties
test
target
.gitignore
pom.xml
spring6-ioc-xml
spring6-reflect
Git TODO Problems Terminal Services Profiler Database Changes Dependencies
6:14 CRLF UTF-8 4 spaces main

```java
package com.atguigu.spring6.javai18n;

import java.util.Locale;
import java.util.ResourceBundle;

public class ResourceI18n {

    public static void main(String[] args) {
        ResourceBundle bundle1 =
                ResourceBundle.getBundle("messages",new Locale("zh", "CN"));

        String value1 = bundle1.getString("test");
        System.out.println(value1);

        ResourceBundle bundle2 =
                ResourceBundle.getBundle("messages",new Locale("en", "GB"));

        String value2 = bundle2.getString("test");
        System.out.println(value2);
    }
}
```

Plugins suggestion: 'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles. // Install plugin Ignore plugin (moments ago)

接口实现国际化：



9.3.1、MessageSource接口

spring中国际化是通过MessageSource这个接口来支持的

常见实现类

ResourceBundleMessageSource

这个是基于Java的ResourceBundle基础类实现，允许仅通过资源名加载国际化资源

ReloadableResourceBundleMessageSource

这个功能和第一个类的功能类似，多了定时刷新功能，允许在不重启系统的情况下，更新资源的信息

StaticMessageSource

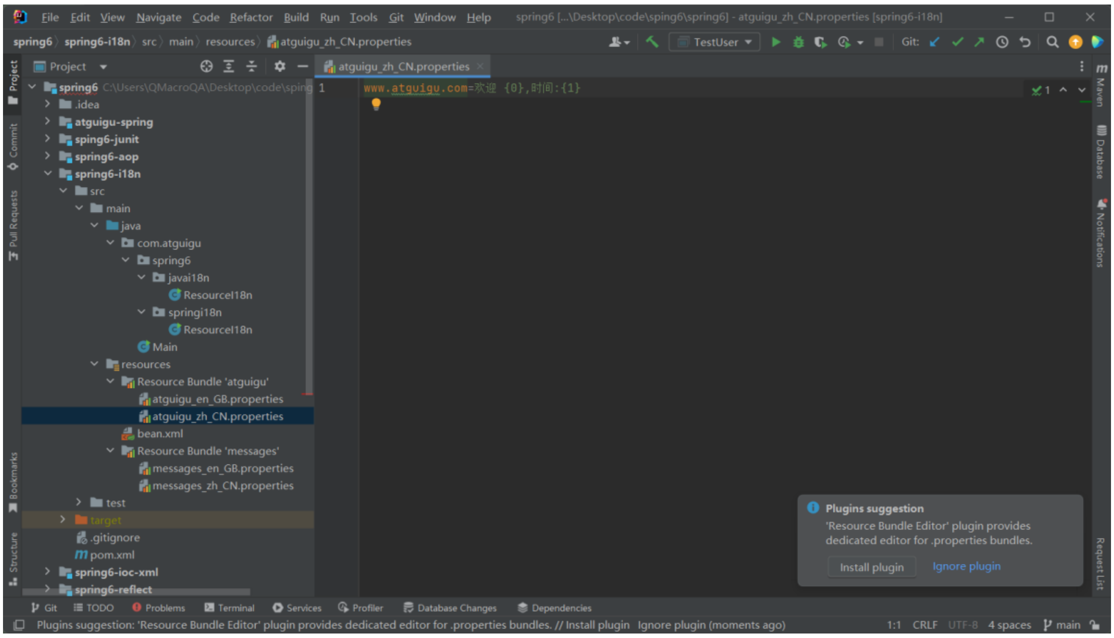
它允许通过编程的方式提供国际化信息，一会我们可以通过这个来实现db中存储国际化信息的功能。

9.3.2、使用Spring6国际化

第一步 创建资源文件

国际化文件命名格式：基本名称 _ 语言 _ 国家.properties

{0},{1}这样内容，就是动态参数

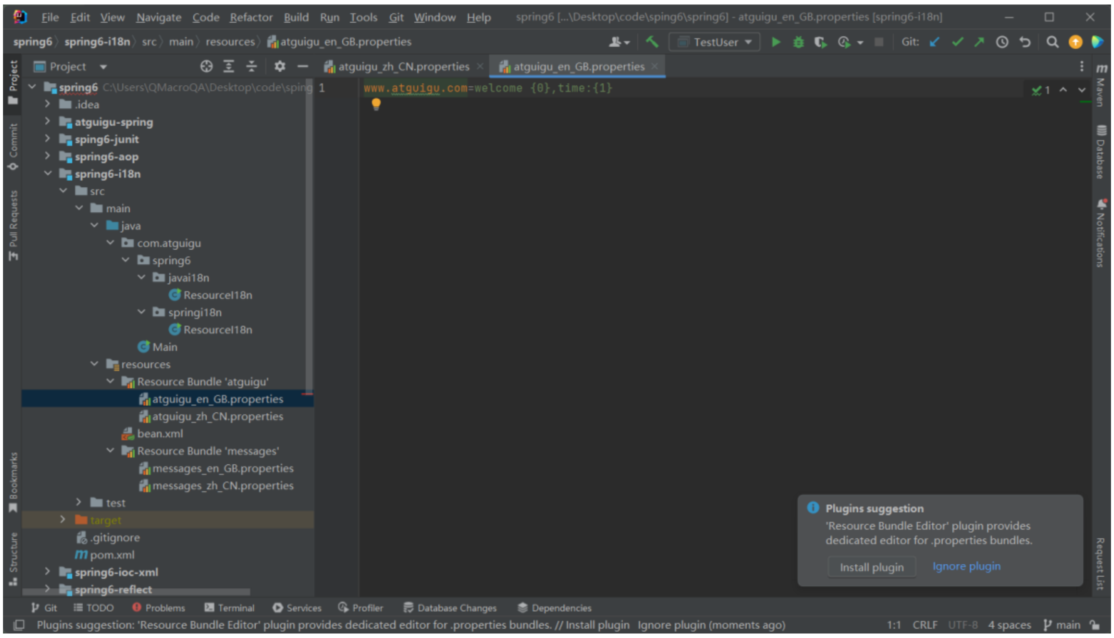


atguigu_zh_CN.properties

```
www.atguigu.com=欢迎 {0},时间:{1}
```

Plugins suggestion
'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles.

Plugins suggestion: 'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles. // Install plugin Ignore plugin (moments ago)



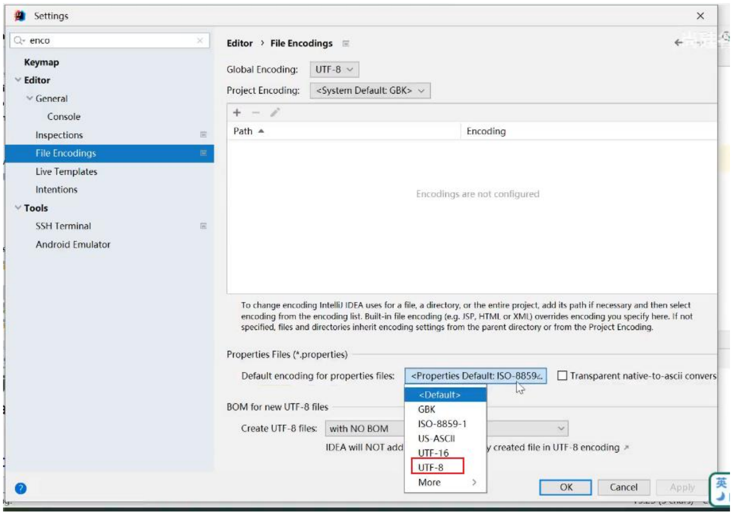
atguigu_en_GB.properties

```
www.atguigu.com=welcome {0},time:{1}
```

Plugins suggestion
'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles.

Plugins suggestion: 'Resource Bundle Editor' plugin provides dedicated editor for .properties bundles. // Install plugin Ignore plugin (moments ago)

注意，并修改配置文件的内容：



Settings

Editor › File Encodings

Global Encoding: UTF-8

Project Encoding: <System Default: GBK>

Path	Encoding

Encodings are not configured

To change encoding IntelliJ IDEA uses for a file, a directory, or the entire project, add its path if necessary and then select encoding from the encoding list. Built-in file encoding (e.g. JSP, HTML or XML) overrides encoding you specify here. If not specified, files and directories inherit encoding settings from the parent directory or from the Project Encoding.

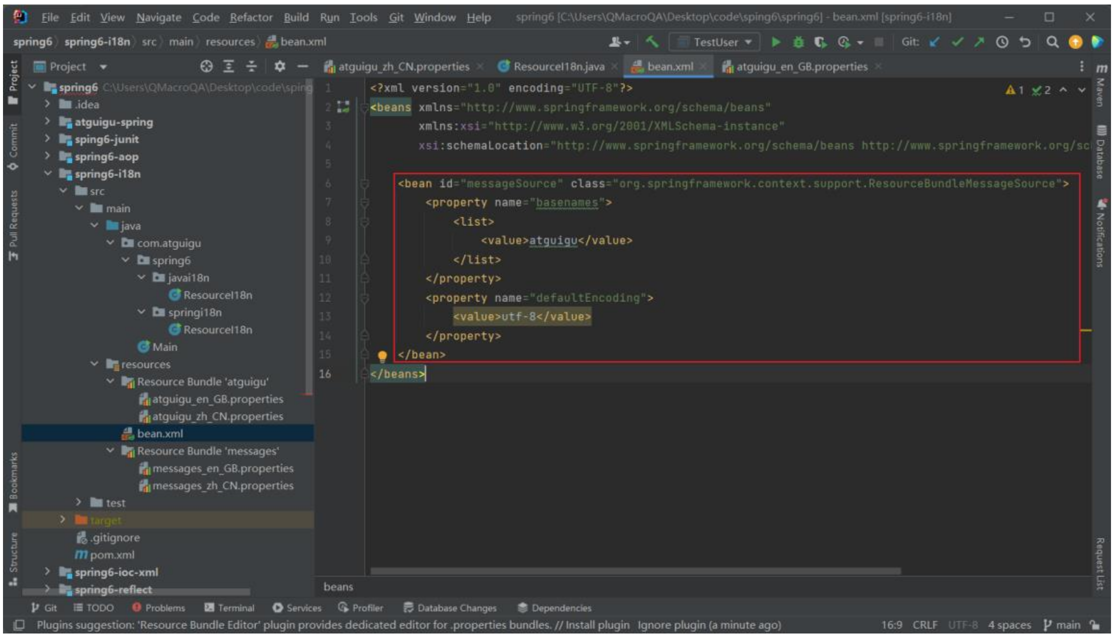
Properties Files (*.properties)

Default encoding for properties files: <Properties Default: ISO-8859... □ Transparent native-to-ascii convers

BOM for new UTF-8 files

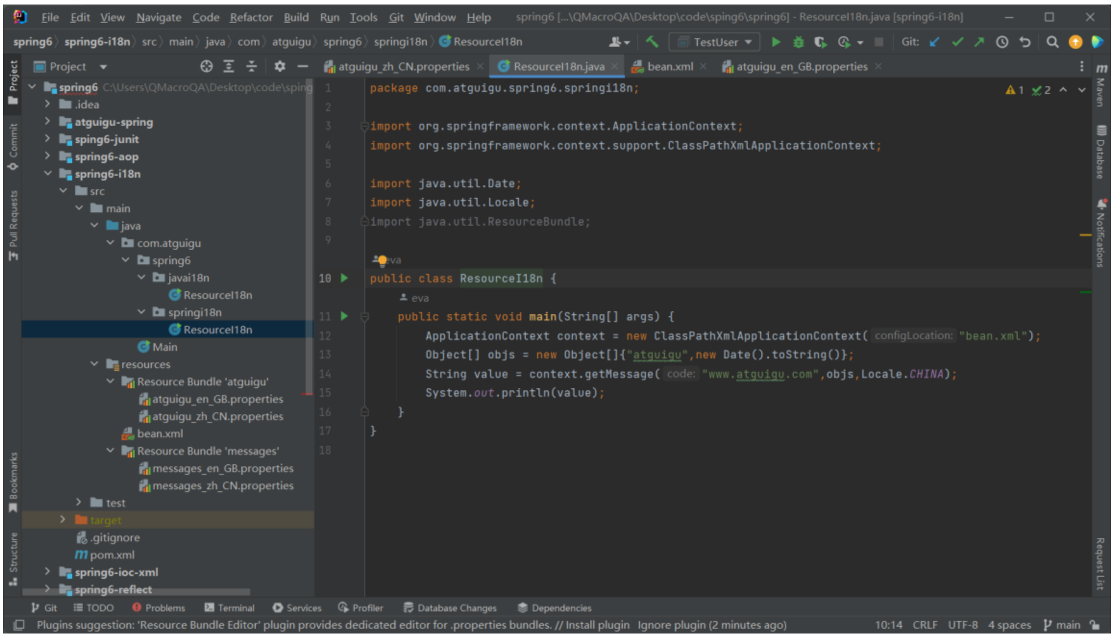
Create UTF-8 files: with NO BOM

IDEA will NOT add ... y created file in UTF-8 encoding



```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"
       xsi:schemaLocation="http://www.springframework.org/schema/beans http://www.springframework.org/sc

    <bean id="messageSource" class="org.springframework.context.support.ResourceBundleMessageSource">
        <property name="basenames">
            <list>
                <value>atguigu</value>
            </list>
        </property>
        <property name="defaultEncoding">
            <value>utf-8</value>
        </property>
    </bean>
</beans>
```

测试;



```java
package com.atguigu.spring6.springi18n;

import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;

import java.util.Date;
import java.util.Locale;
import java.util.ResourceBundle;

public class ResourceI18n {

    public static void main(String[] args) {
        ApplicationContext context = new ClassPathXmlApplicationContext("bean.xml");
        Object[] objs = new Object[]{"atguigu",new Date().toString()};
        String value = context.getMessage("www.atguigu.com",objs,Locale.CHINA);
        System.out.println(value);
    }
}
```