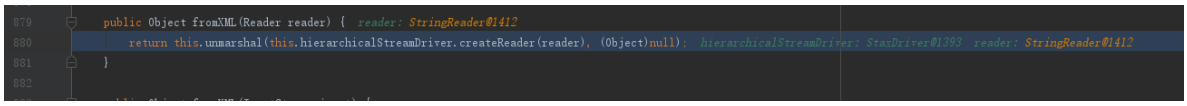
xstream反序列化流程分析

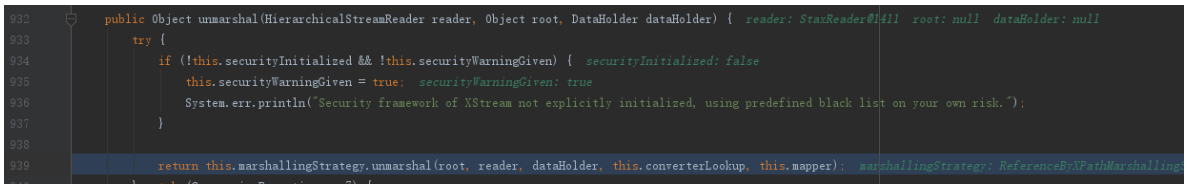
测试demo代码如下所示：

```
XStream xStream = new XStream(new StaxDriver());
xStream.fromXML(xml);
```

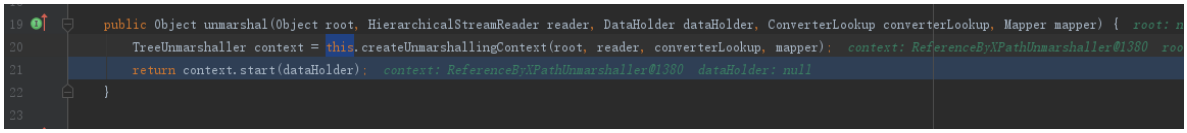
跟入`com.thoughtworks.xstream`的`fromXML`函数，接收前端传入的`String`形式的xml文本内容，再调用`fromXML`函数将`String`形式xml转化为`StringReader`如下所示：

进入上述调用的`fromXML`函数，使用`hierarchicalStreamDriver.createReader(reader)`将之前的`StringReader`形式内容转换为`HierarchicalStreamDriver`格式，调用`MarshallingStrategy`的`unmarshal`方法进行解组获取相应的节点信息。

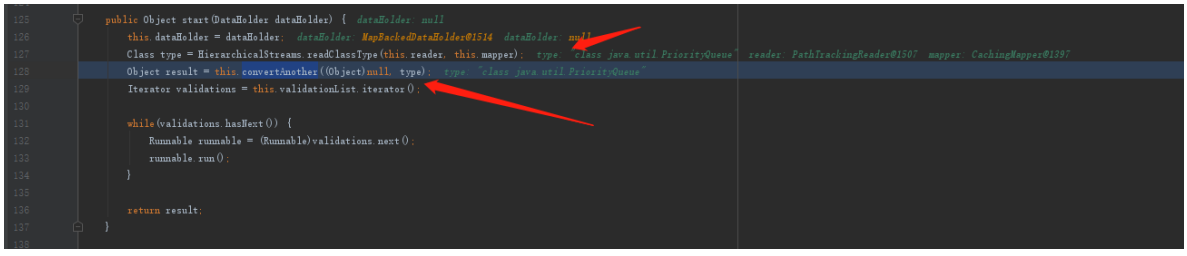




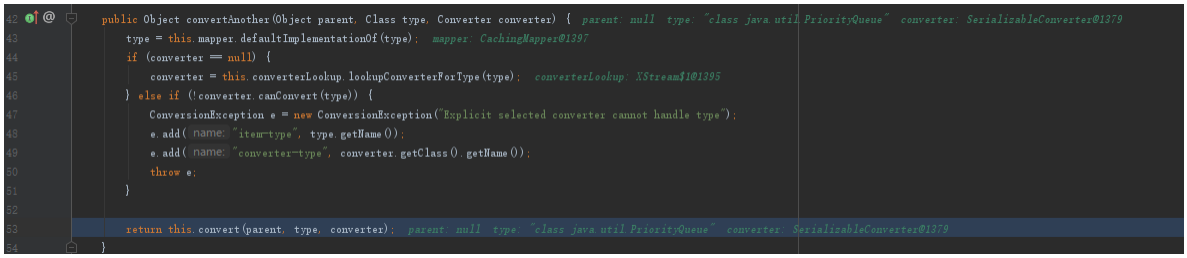
进入`com.thoughworks.xstream.core.AbstractTreeMarsshallingStrategy.class`的`unmarshal`方法，创建出`TreeUnmarshaller`，进入`TreeUnmarshaller`的`start`函数开始启动解析。



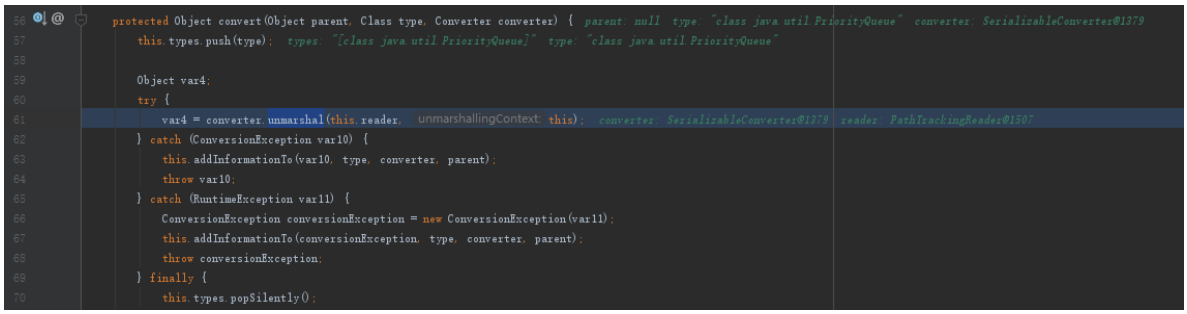
跟进`com.thoughworks.xstream.core.TreeUnmarshaller`的`start`方法，调用`readClassType`方法获取`reader`中节点名将mapper中对应的值转换为相应的class类。调用`TreeUnmarshaller`的`convertAnother`方法将class类转换为相应的java对象。



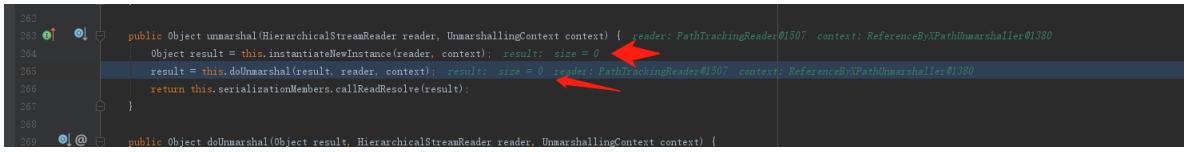
`convertAnother`方法中，首先使用`ConverterLookup`中的`lookupConverterForType`方法寻找对应的`convert`，根据找到的`convert`将`type`转换为相对应的java对象



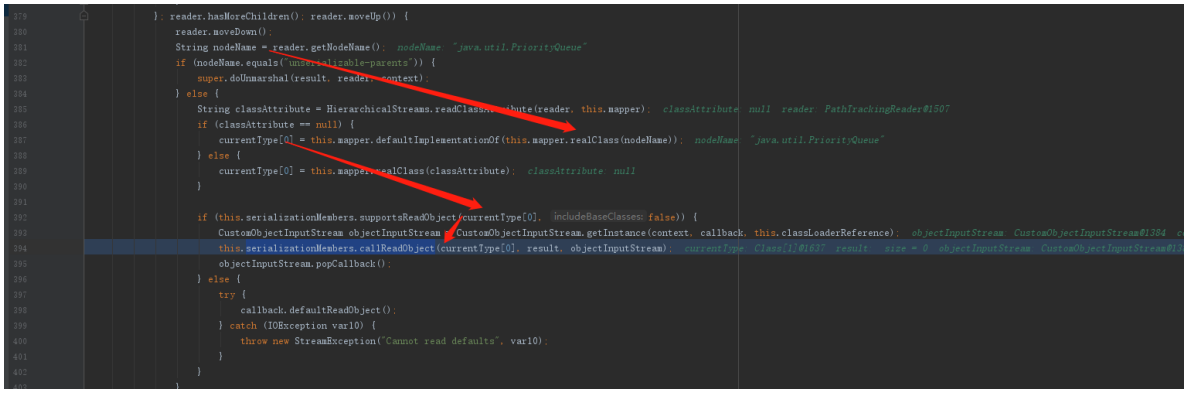
跟入`com.thoughworks.xstream.core.TreeUnmarshaller`的`convert`,调用`unmarshal`方法。



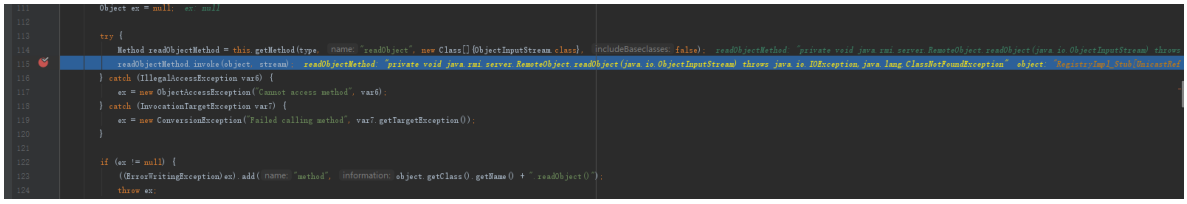
进入`com.thoughtworks.xstream.converters.reflection.class`的`unmarshaller`方法，首先使用`this.instantiateNewInstance`创建对应class的instance,然后调用`this.doUnmarshal`遍历节点获取相应class的变量。



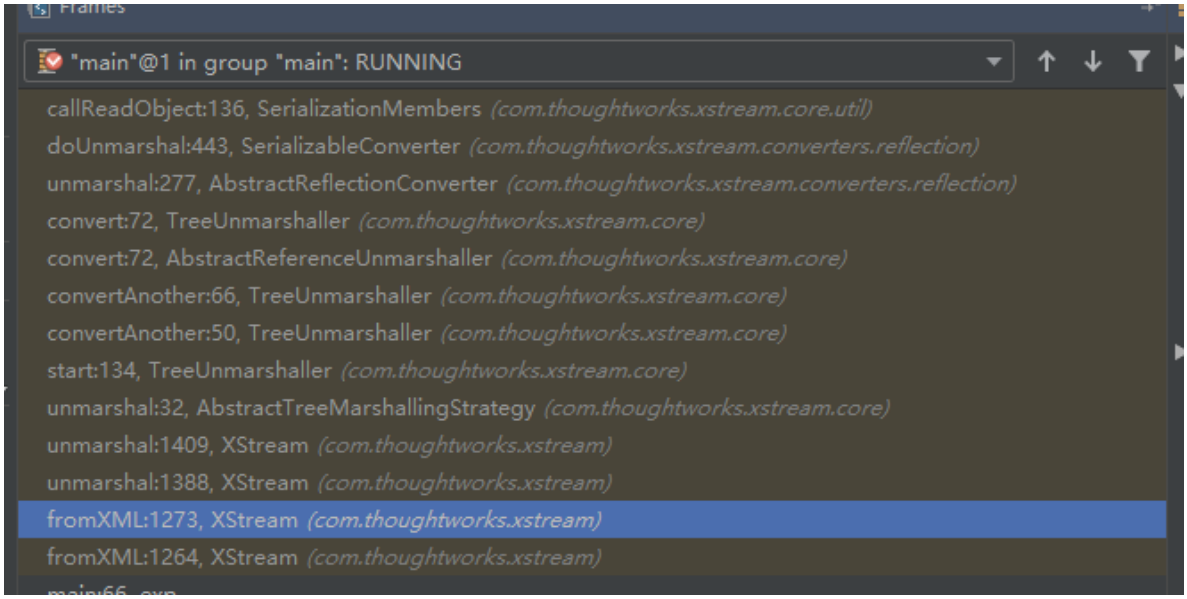
跟入`com.thoughtworks.xstream.converters.reflection.class`的`doUnmarshal`遍历节点获取class,绕后使用`serializationMembers.supportsReadObject`进行判断获取传入的class是否支持`ReadObject`，若支持则调用`serializationMembers.callReadObject`进行反序列化操作。



跟入`callReadObject`方法，获取`readObjectMethod`调用`invoke`进行反序列化；



总体调用链：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"main"@1 in group "main": RUNNING
callReadObject:136, SerializationMembers (com.thoughtworks.xstream.core.util)
doUnmarshal:443, SerializableConverter (com.thoughtworks.xstream.converters.reflection)
unmarshal:277, AbstractReflectionConverter (com.thoughtworks.xstream.converters.reflection)
convert:72, TreeUnmarshaller (com.thoughtworks.xstream.core)
convert:72, AbstractReferenceUnmarshaller (com.thoughtworks.xstream.core)
convertAnother:66, TreeUnmarshaller (com.thoughtworks.xstream.core)
convertAnother:50, TreeUnmarshaller (com.thoughtworks.xstream.core)
start:134, TreeUnmarshaller (com.thoughtworks.xstream.core)
unmarshal:32, AbstractTreeMarshallingStrategy (com.thoughtworks.xstream.core)
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fromXML:1273, XStream (com.thoughtworks.xstream)
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