

全国大学生软件测试大赛

开发者测试



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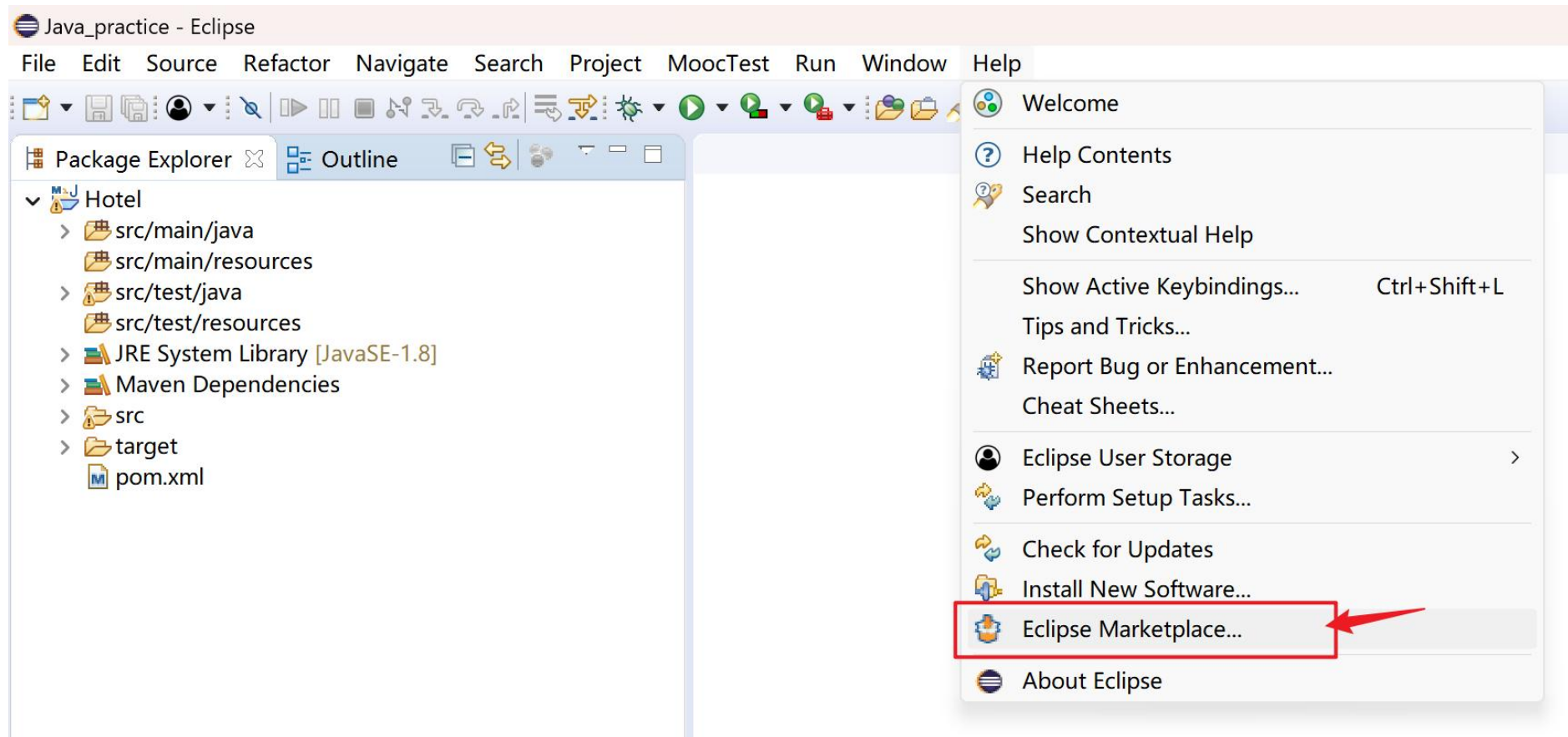
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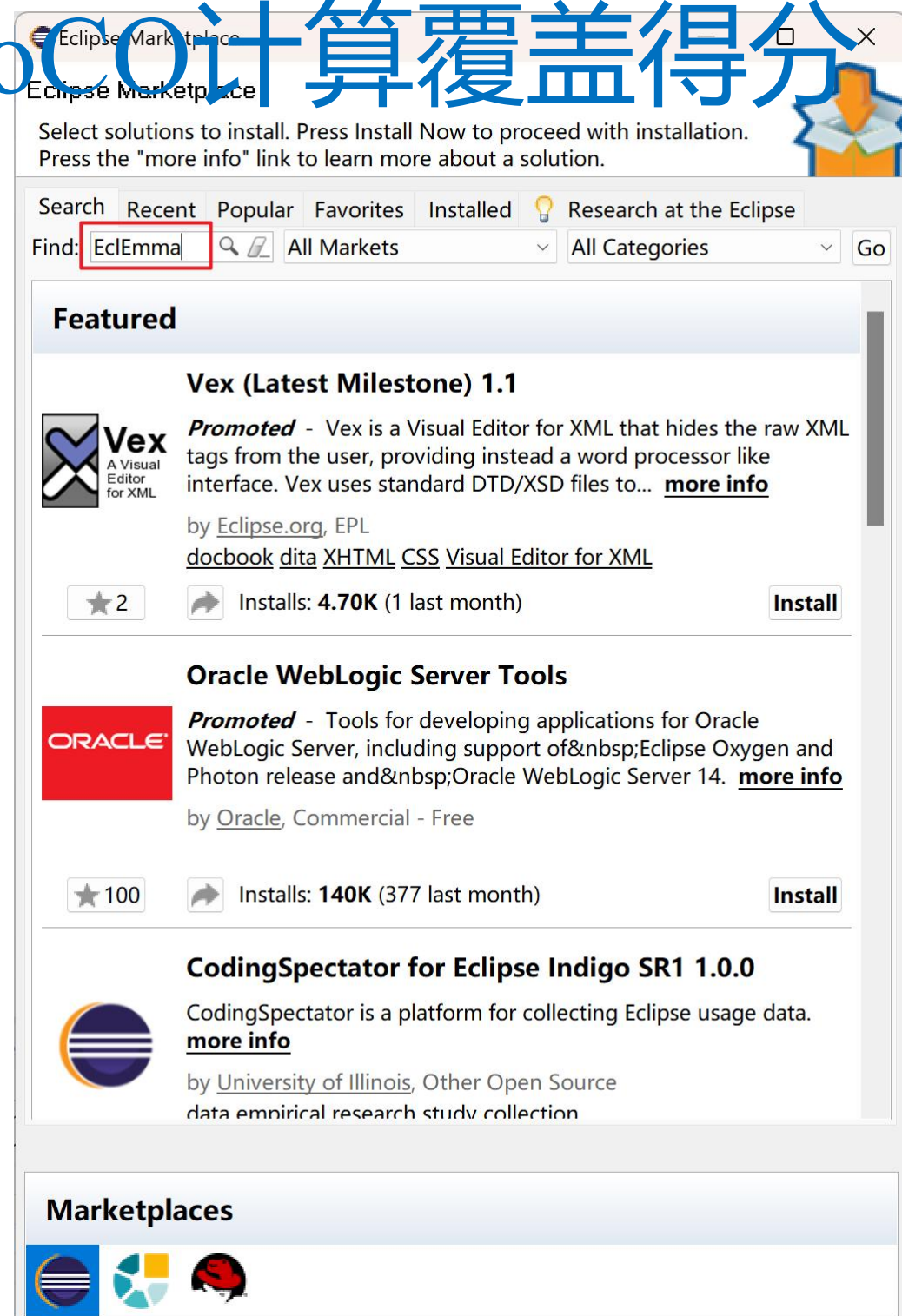
在Eclipse中使用JaCoCo计算覆盖得分

1. 安装JaCoCo插件



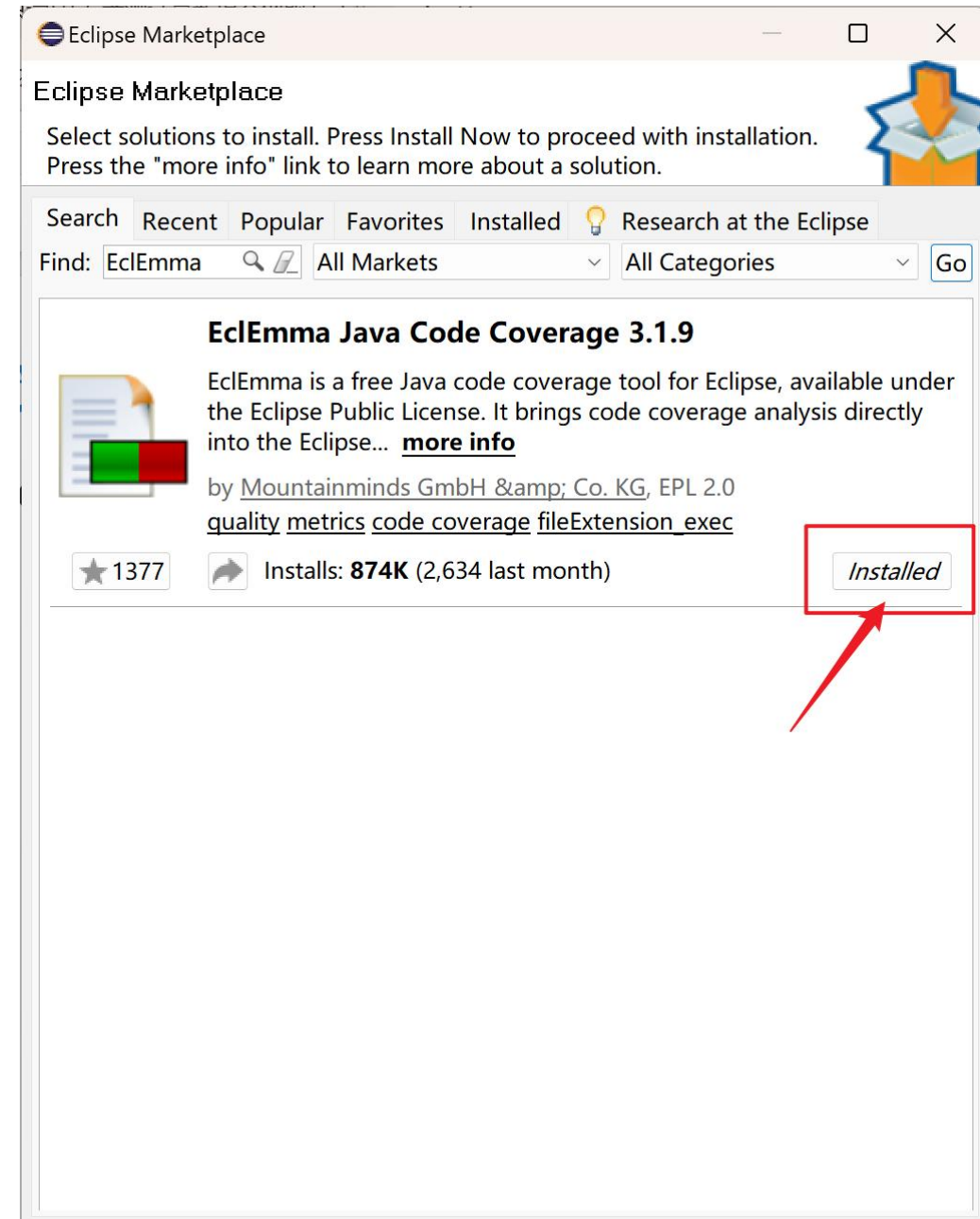
在Eclipse中使用JaCoCo计算覆盖得分

1. 安装JaCoCo插件



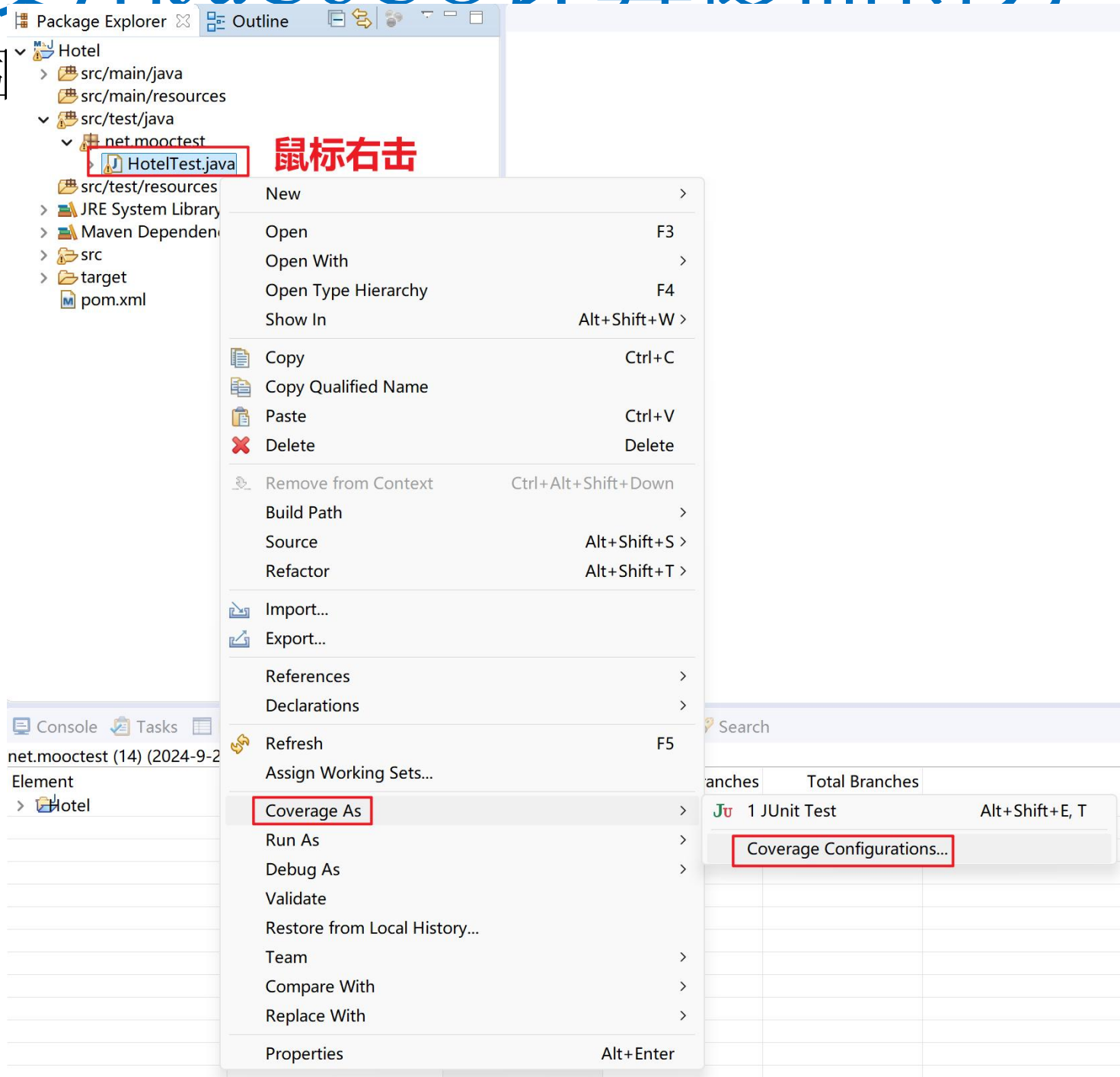
在Eclipse中使用JaCoCo计算覆盖得分

1. 安装JaCoCo插件



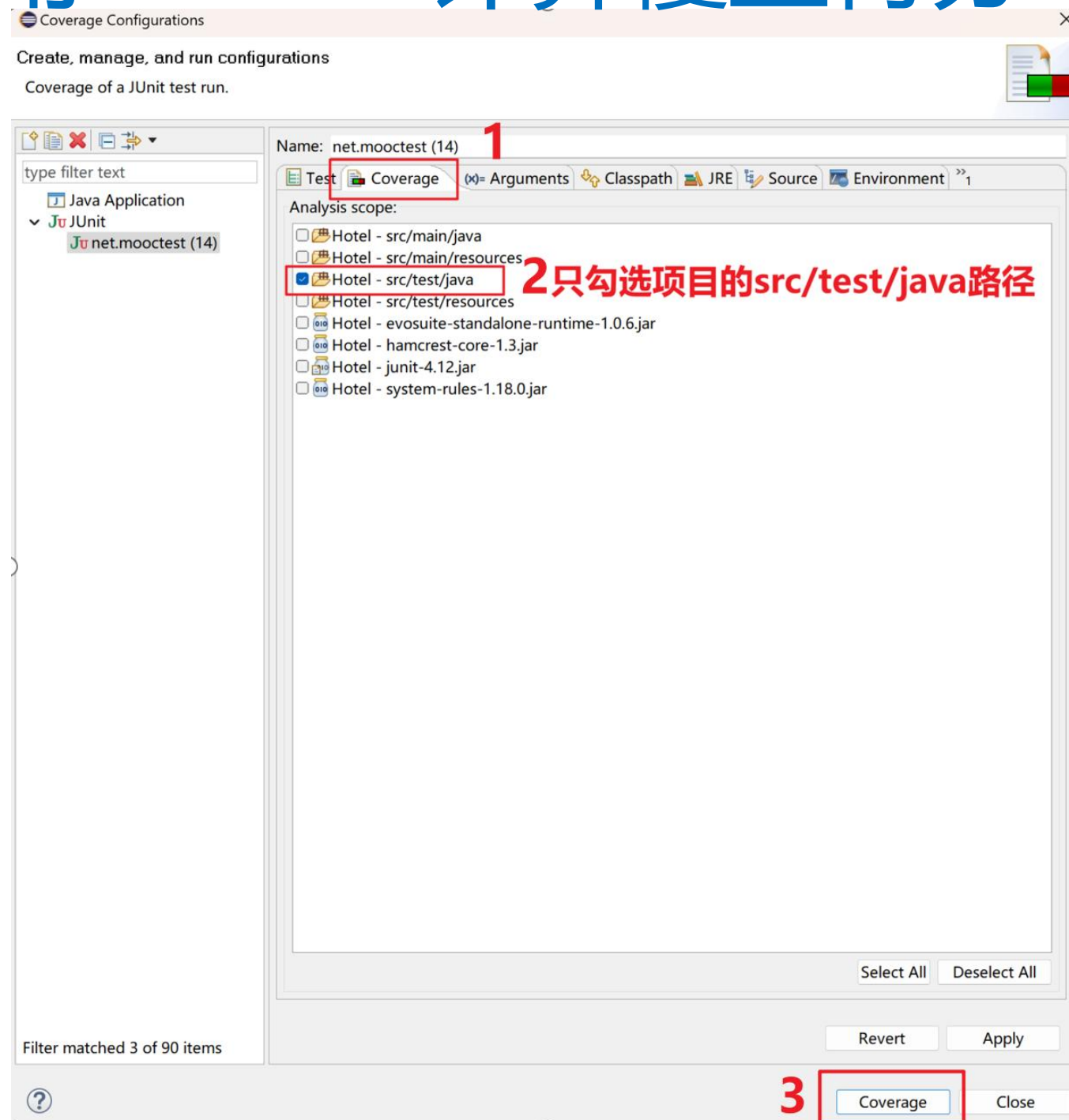
在Eclipse中使用JaCoCO计算覆盖得分

2. 设置覆盖统计范围



在Eclipse中使用JaCoCO计算覆盖得分

2. 设置覆盖统计范围



在Eclipse中使用JaCoCO计算覆盖得分

3.查看分数

HotelTest (1) (2024-9-23 11:33:08)

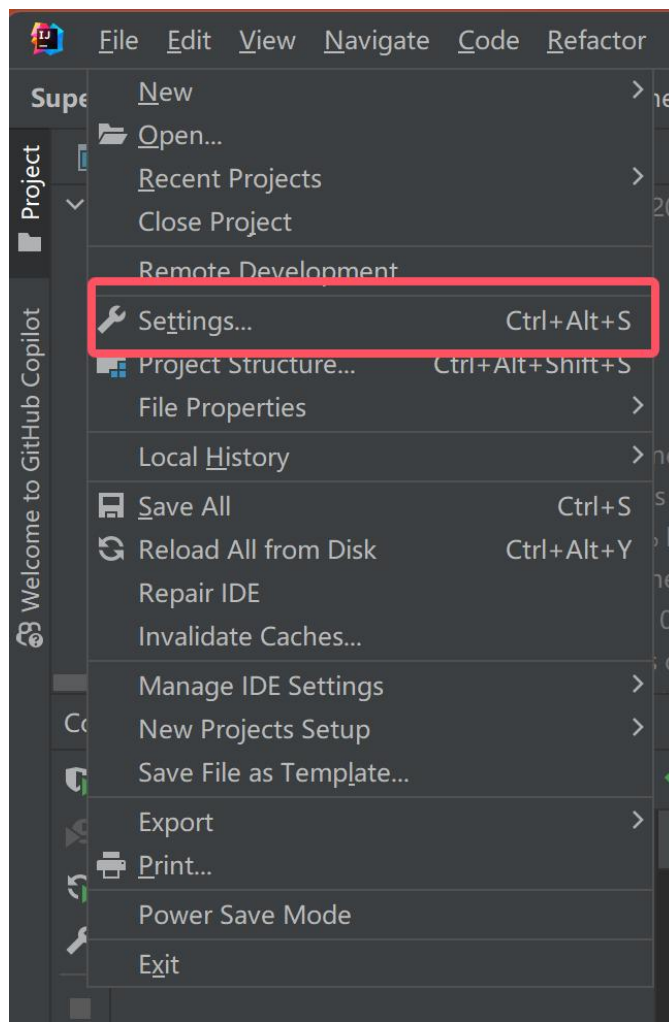
Element	Coverage	Covered Branches	Missed Branches	Total Branches
> Hotel	8.0 %	12	138	150

3

- Show Projects
- Show Package Roots
- Show Packages
- Show Types
- Instruction Counters
- 2 Branch Counters
- Line Counters
- Method Counters
- Type Counters
- Complexity
- Hide Unused Elements

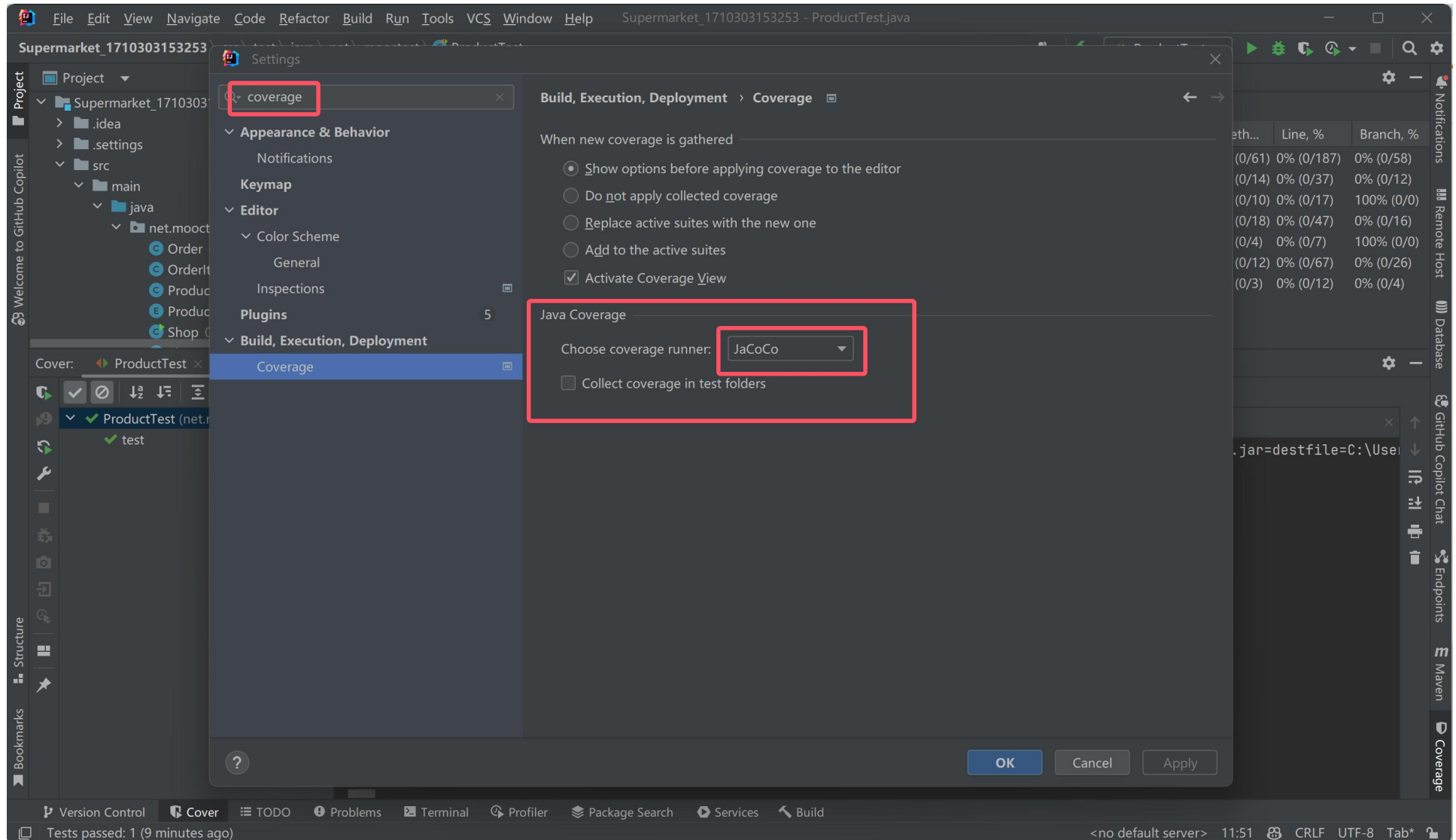
在IntelliJ IDEA中使用JaCoCO 计算覆盖得分

以IntelliJ IDEA 2024.1.3 (Ultimate Edition)为例。打开IDEA，点击左上角File，点击Settings。



在IntelliJ IDEA中使用JaCoCo计算覆盖得分

在左上角搜索框中搜索coverage，点击Build, Execution, Deployment目录下的Coverage，将红框内的IntelliJ IDEA改为JaCoCo



在IntelliJ IDEA中使用JaCoCO计算覆盖得分

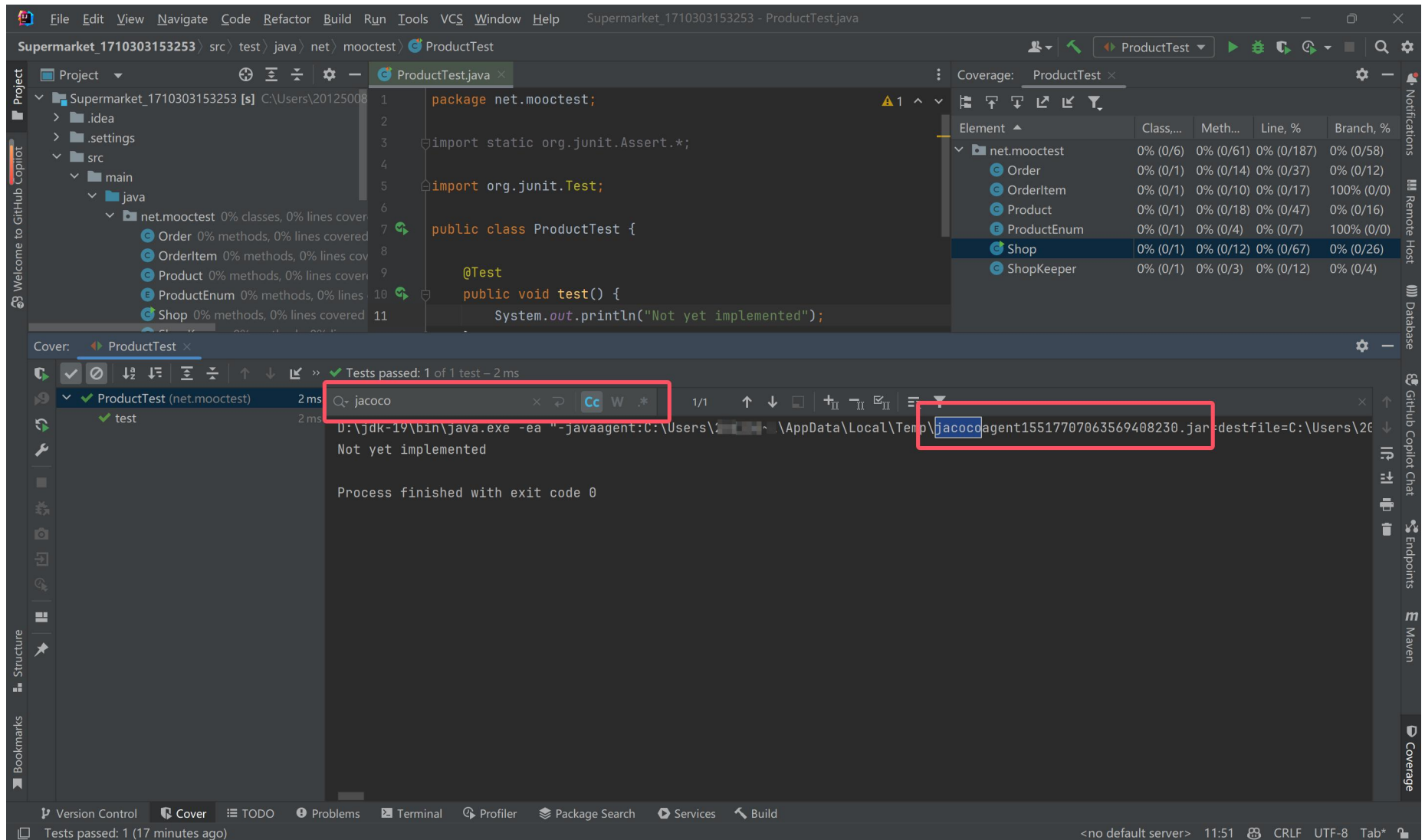
在测试用例文件上鼠标右击，靠近More Run/Debug，点击Run “xxx” with Coverage。之后出现右侧覆盖率表格。

The screenshot shows the IntelliJ IDEA interface with the `ProductTest.java` file open. A right-click context menu is displayed over the file, with the `More Run/Debug` option highlighted. The `Run 'ProductTest' with Coverage` option is also visible. On the right side, the `Coverage: ProductTest` tool window is open, displaying a table of coverage data for the `net.moocost` package.

Element	Class, %	Meth, %	Line, %	Branch, %
net.moocost	0% (0/6)	0% (0/61)	0% (0/187)	0% (0/58)
Order	0% (0/1)	0% (0/14)	0% (0/37)	0% (0/12)
OrderItem	0% (0/1)	0% (0/10)	0% (0/17)	100% (0/0)
Product	0% (0/1)	0% (0/18)	0% (0/47)	0% (0/16)
ProductEnum	0% (0/1)	0% (0/4)	0% (0/7)	100% (0/0)
Shop	0% (0/1)	0% (0/12)	0% (0/67)	0% (0/26)
ShopKeeper	0% (0/1)	0% (0/3)	0% (0/12)	0% (0/4)

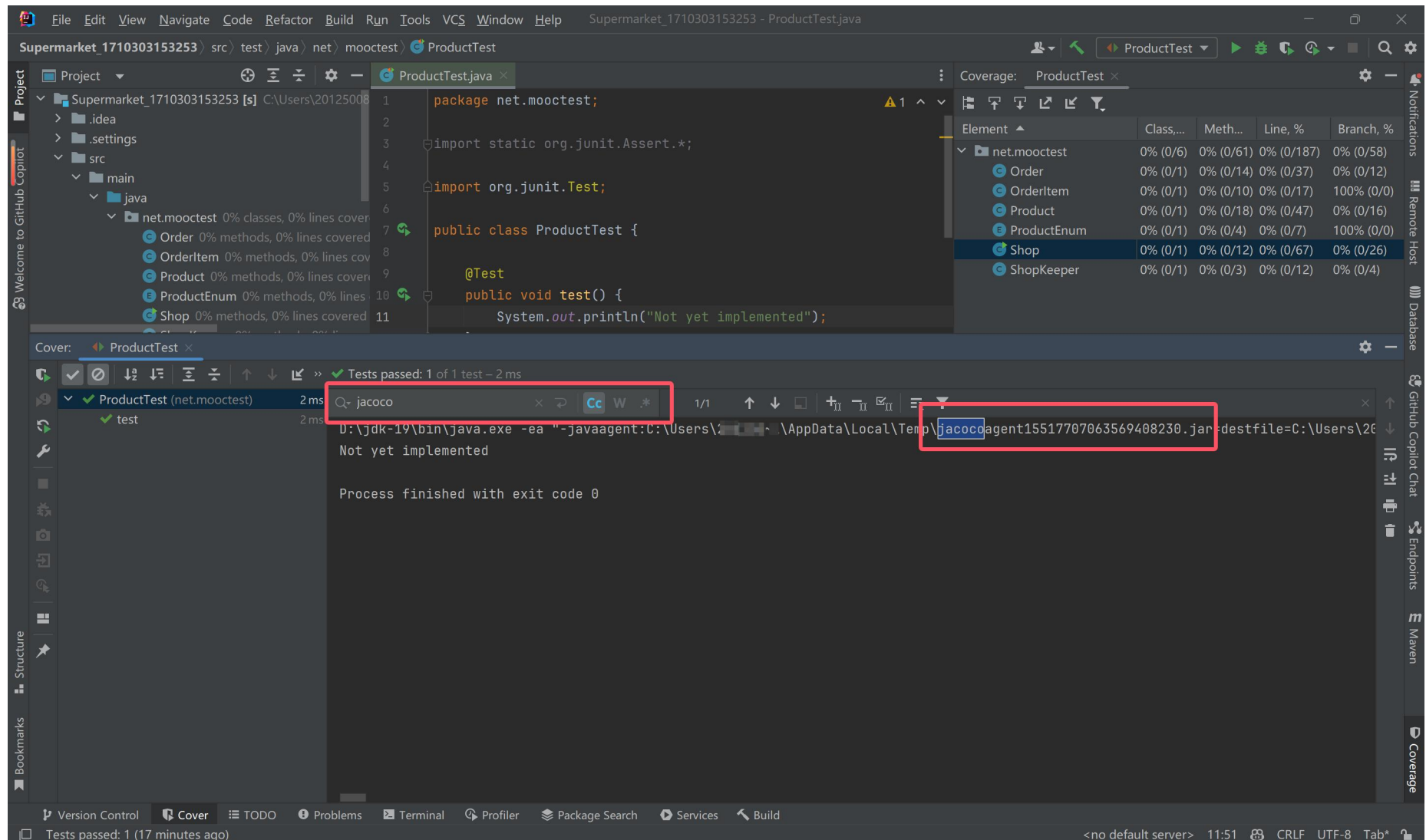
在IntelliJ IDEA中使用JaCoCO计算覆盖得分

可以在执行指令中搜索jacoco，确认是使用jacoco计算覆盖得分



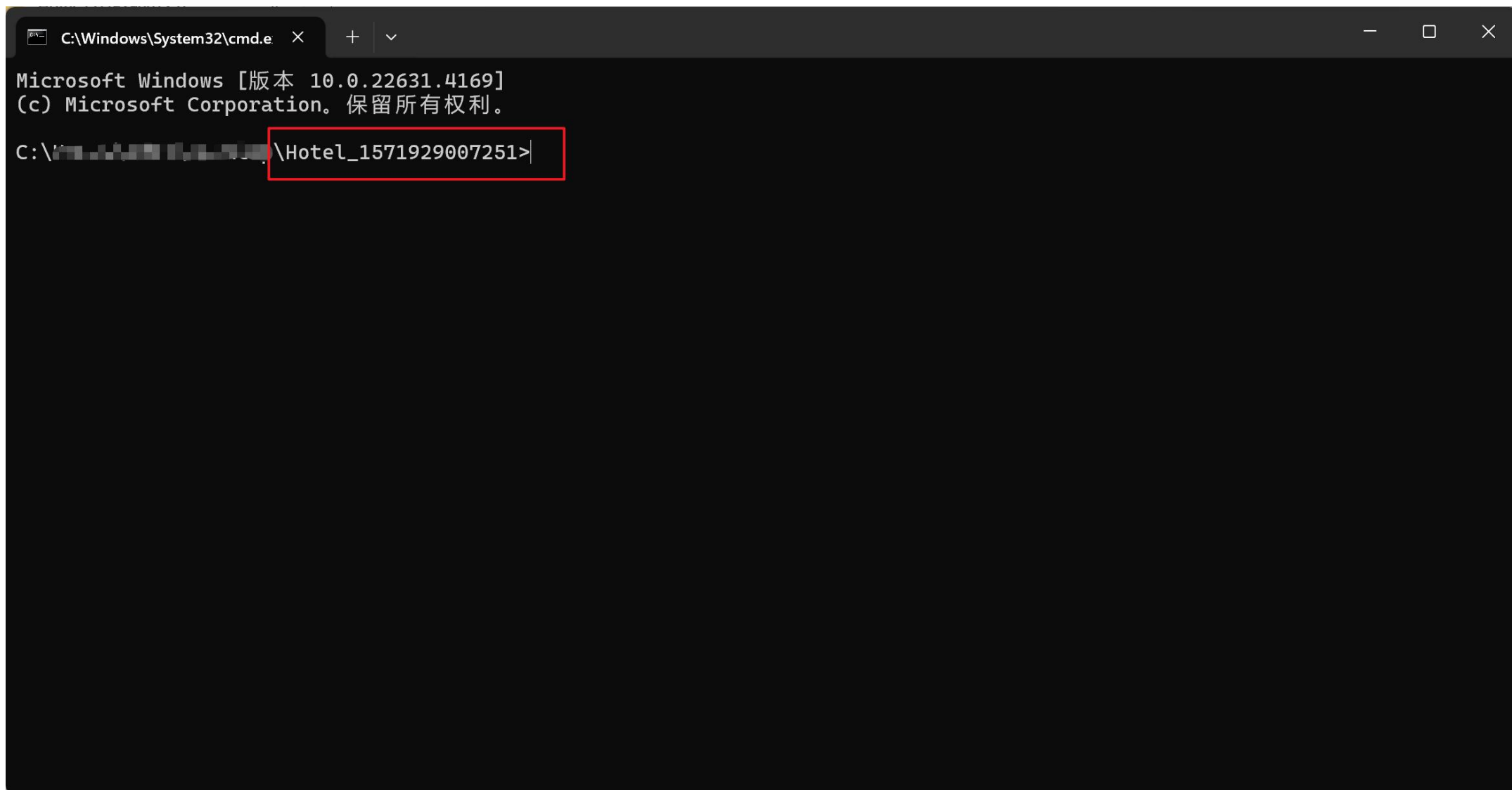
在IntelliJ IDEA中使用JaCoCO计算覆盖得分

可以在执行指令中搜索jacoco，确认是使用jacoco计算覆盖得分



计算变异得分

在被测项目的根目录下打开cmd命令行



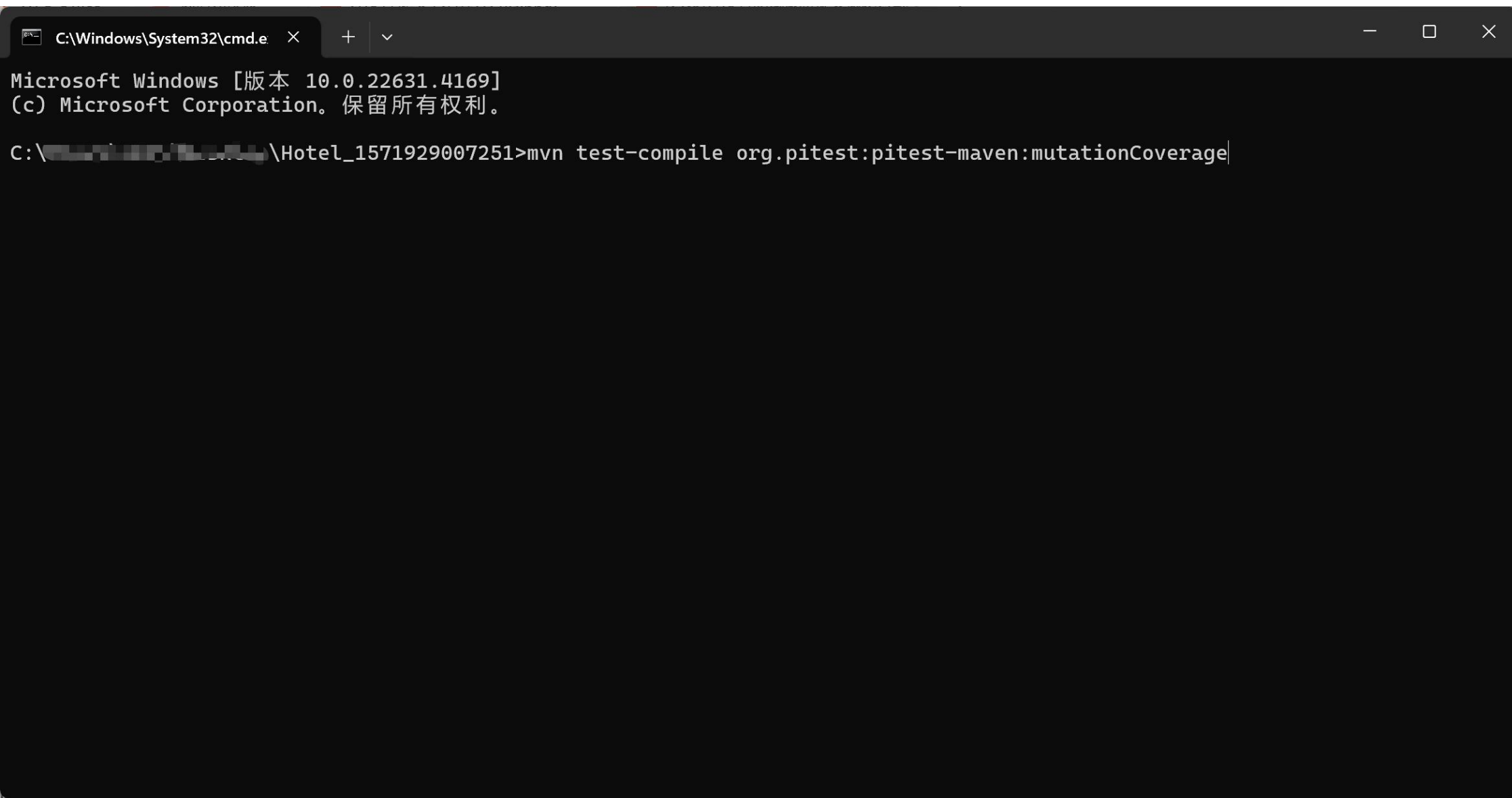
```
C:\Windows\System32\cmd.e  ×  +  ∨  
Microsoft Windows [版本 10.0.22631.4169]  
(c) Microsoft Corporation. 保留所有权利。  
C:\[redacted]\Hotel_1571929007251>
```

计算变异得分

注：计算变异得分时，测试用例不可有**error**、**fail**等错误情况

在cmd命令行执行命令

```
mvn clean test-compile org.pitest:pitest-maven:mutationCoverage
```



The screenshot shows a Windows Command Prompt window with the title bar 'C:\Windows\System32\cmd.e'. The window content displays the Microsoft Windows version information and the execution of the Maven command 'mvn test-compile org.pitest:pitest-maven:mutationCoverage' in a directory path that is partially obscured by a redacted area.

```
Microsoft Windows [版本 10.0.22631.4169]  
(c) Microsoft Corporation。保留所有权利。  
  
C:\[redacted]\Hotel_1571929007251>mvn test-compile org.pitest:pitest-maven:mutationCoverage|
```


计算变异得分

注：计算变异得分时，测试用例不可有error、fail等错误情况

命令执行成功

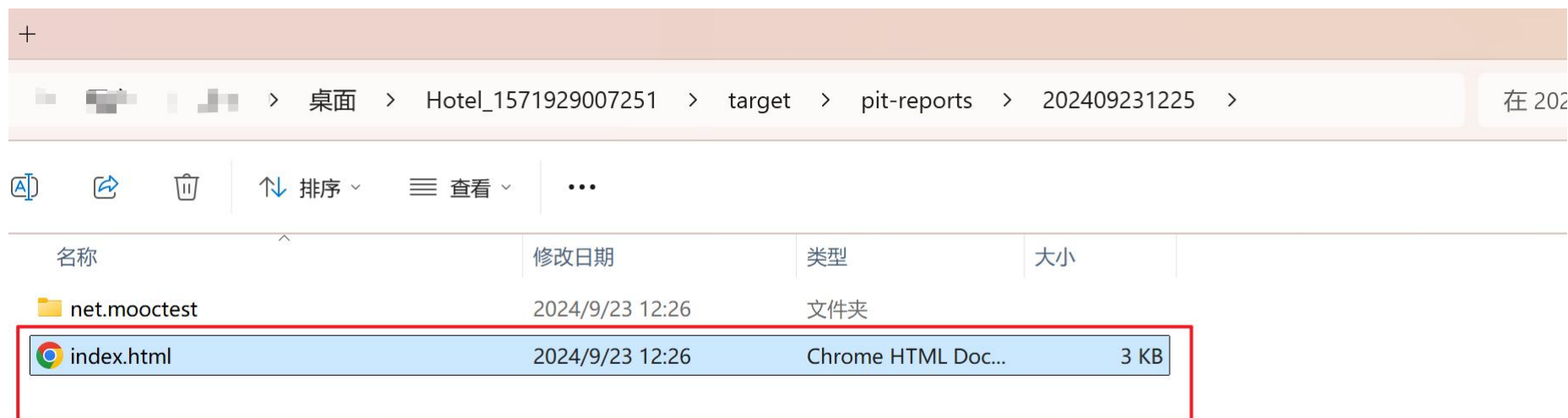
```
C:\Windows\System32\cmd.e  ×  +  v

> KILLED 0 SURVIVED 6 TIMED_OUT 0 NON_VIABLE 0
> MEMORY_ERROR 0 NOT_STARTED 0 STARTED 0 RUN_ERROR 0
> NO_COVERAGE 51
-----
> org.pitest.mutationtest.engine.gregor.mutators.ReturnValsMutator
>> Generated 47 Killed 1 (2%)
> KILLED 1 SURVIVED 0 TIMED_OUT 0 NON_VIABLE 0
> MEMORY_ERROR 0 NOT_STARTED 0 STARTED 0 RUN_ERROR 0
> NO_COVERAGE 46
-----
> org.pitest.mutationtest.engine.gregor.mutators.MathMutator
>> Generated 44 Killed 4 (9%)
> KILLED 4 SURVIVED 2 TIMED_OUT 0 NON_VIABLE 0
> MEMORY_ERROR 0 NOT_STARTED 0 STARTED 0 RUN_ERROR 0
> NO_COVERAGE 38
-----
> org.pitest.mutationtest.engine.gregor.mutators.NegateConditionalsMutator
>> Generated 75 Killed 10 (13%)
> KILLED 10 SURVIVED 3 TIMED_OUT 0 NON_VIABLE 0
> MEMORY_ERROR 0 NOT_STARTED 0 STARTED 0 RUN_ERROR 0
> NO_COVERAGE 62
-----
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.102 s
[INFO] Finished at: 2024-09-23T12:26:02+08:00
[INFO] -----
```


计算变异得分

注：计算变异得分时，测试用例不可有error、fail等错误情况

前往被测项目下的target\pit-reports\xxxx，打开index.html



计算变异得分

注：计算变异得分时，测试用例不可有error、fail等错误情况

前往被测项目下的target\pit-reports\xxxx，打开index.html

Pit Test Coverage Report

Project Summary

Number of Classes

12

Line Coverage

14%

55/390

Mutation Coverage

5%

15/285

总变异得分

Breakdown by Package

Name

Number of Classes

Line Coverage

Mutation Coverage

[net.moocTest](#) 12

14%

55/390

5%

15/285

Report generated by [PIT](#) 1.1.10

查看变异体杀死情况