

Unit test plan

D.

How the software was tested:

The software was tested with a combination of unit testing and system testing performed by myself.

Scope

This unit test plan will be testing the domain module of the 'joe's guitar' inventory web application.

Test Objectives

The objectives of the unit test plan are to discover any unexpected behavior and verify correct operation of the software units being tested. Any failed tests will cause the software to be developed until all tests pass.

Test Cases and Coverage

There are tests written to test every method in the domain module. This covers Guitar, GuitarPart, FenderGuitarPart, and GibsonGuitarPart and all their methods.

Test Environment

The test environment consists of Junit test framework, maven, and optionally intellij ultimate for GUI based test access.

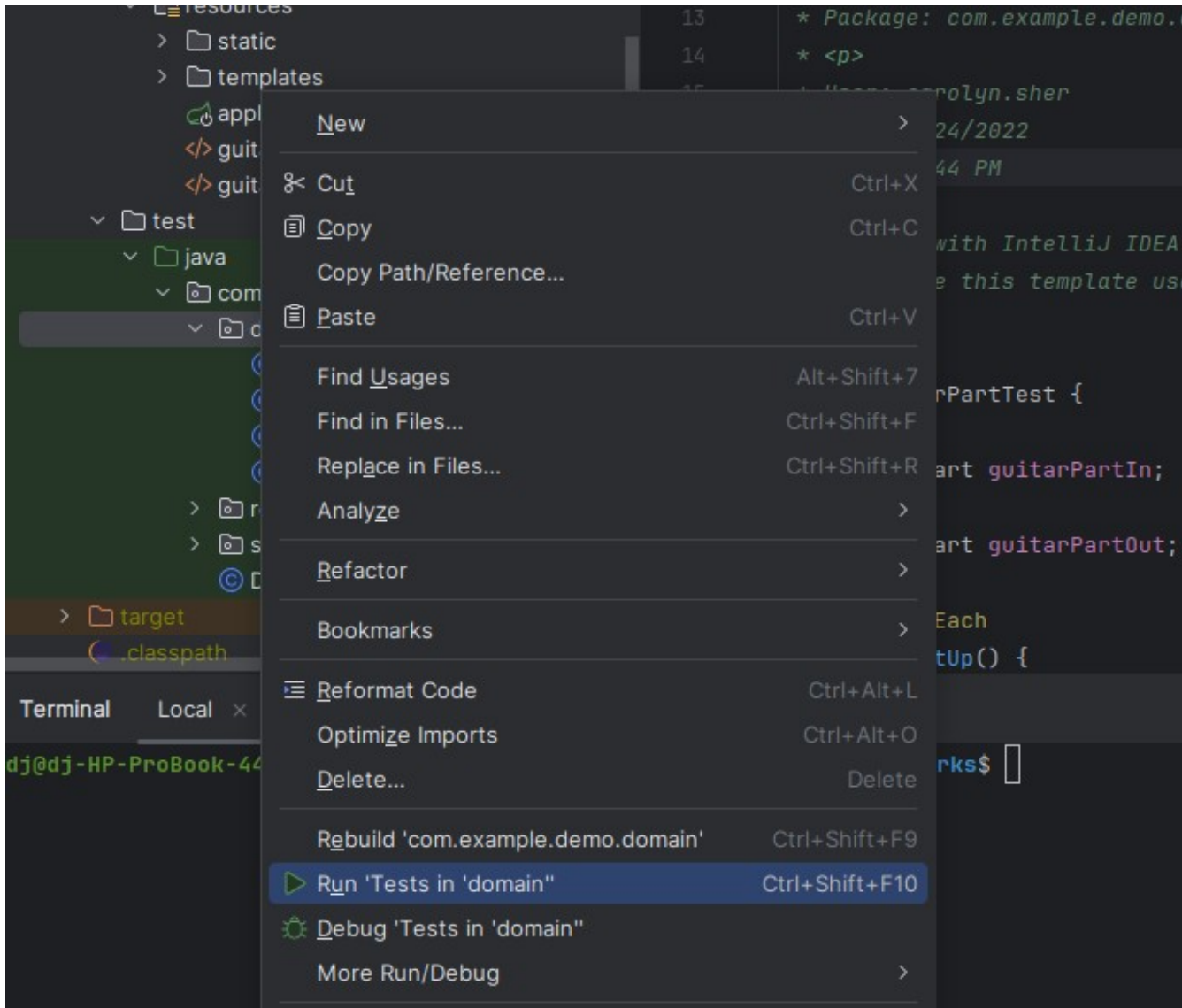
Reporting

The unit tests are pass fail. The results can be visually verified in the intellij GUI interface or they can be run from the command line. The command line output can optionally be redirected to a file if desired.

Changes made from unit testing

My unit testing went pretty smoothly so I did not have to change any application code due to the testing. However I did find some incorrectly written unit tests that I had to fix.

Run unit tests from IntelliJ



Test Results

Run domain in demo

✓ domain (com.example.demo) 25 ms

- ✓ GibsonGuitarPartTest 13 ms
 - ✓ getCompanyName() 12 ms
 - ✓ setCompanyName() 1 ms
- ✓ GuitarTest 7 ms
 - ✓ getInv() 1 ms
 - ✓ testToString() 1 ms
 - ✓ setInv()
 - ✓ getName()
 - ✓ getId() 1 ms
 - ✓ setId() 1 ms
 - ✓ testHashCode() 1 ms
 - ✓ testEquals()
 - ✓ setParts()
 - ✓ setPrice()
 - ✓ getParts() 1 ms
 - ✓ getPrice() 1 ms
 - ✓ setName()
- ✓ GuitarPartTest 5 ms
 - ✓ getInv()
 - ✓ testToString()
 - ✓ setInv() 1 ms
 - ✓ getName()
 - ✓ getId()
 - ✓ setId()
 - ✓ setMaxInv()
 - ✓ setMinInv() 1 ms
 - ✓ getMaxInv() 1 ms
 - ✓ getMinInv()
 - ✓ testHashCode()
 - ✓ setProducts()
 - ✓ getProducts()
 - ✓ testEquals()
 - ✓ setPrice() 1 ms
 - ✓ getPrice() 1 ms
 - ✓ setName()

✓ Tests passed: 32

/home/dj/jdk/openjdk-11.0.2/bin/java

Process finished

1007 java -cp demo\bin\demo.jar com.example.demo

Run Tests From The Command Line

```
xr-x 4 dj dj 4096 Sep 26 11:04 src/  
xr-x 8 dj dj 4096 Oct 1 11:42 target/  
-r-- 1 dj dj 144 Oct 1 11:42 testscript.sh  
HP-ProBook-445-G8-Notebook-PC:~/IdeaProjects/d287-java-frameworks$ sh testscript.sh
```

Contents of testscript.sh

```
1  #!/bin/sh  
2  
3  
4  mvn -Dtest=GuitarPartTest test  
5  mvn -Dtest=FenderGuitarPartTest test  
6  mvn -Dtest=GibsonGuitarPartTest test  
7  mvn -Dtest=GuitarTest test  
8
```

Command line results

```
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.048 s -- in com.example.demo.  
[INFO] Running com.example.demo.service.FenderGuitarGuitarPartServiceTest  
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.001 s -- in com.example.demo.  
[INFO]  
[INFO] Results:  
[INFO]  
[INFO] Tests run: 36, Failures: 0, Errors: 0, Skipped: 0  
[INFO]  
[INFO] -----  
[INFO] BUILD SUCCESS  
[INFO] -----  
[INFO] Total time: 4.290 s  
[INFO] Finished at: 2023-10-01T11:46:26-07:00  
[INFO] -----  
dj@dj-HP-ProBook-445-G8-Notebook-PC:~/IdeaProjects/d287-java-frameworks$
```

d287-java-frameworks > testscript.sh

