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SER316 Assignment 6

4/28/20

Checkstyle and Spotbugs:

① file:///E:/Git/SER316HW/SER316-Assignment6/build/reports/checkstyle/test.html   ··· ♡ ☆   Q drawer pull bar →

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CheckStyle Audit
Designed for use with CheckStyle and Ant.

Summary	
Files	**Errors**
4	0

Files	
Name	**Errors**
E:\Git\SER316HW\SER316-Assignment6\src\test\java\AnimalFactoryTest.java	0
E:\Git\SER316HW\SER316-Assignment6\src\test\java\CropFactoryTest.java	0
E:\Git\SER316HW\SER316-Assignment6\src\test\java\DayEventsTest.java	0
E:\Git\SER316HW\SER316-Assignment6\src\test\java\NightEventsTest.java	0

File E:\Git\SER316HW\SER316-Assignment6\src\test\java\AnimalFactoryTest.java	
Error Description	**Line**

Back to top

File E:\Git\SER316HW\SER316-Assignment6\src\test\java\CropFactoryTest.java	
Error Description	**Line**

Back to top

File E:\Git\SER316HW\SER316-Assignment6\src\test\java\DayEventsTest.java	
Error Description	**Line**

Back to top

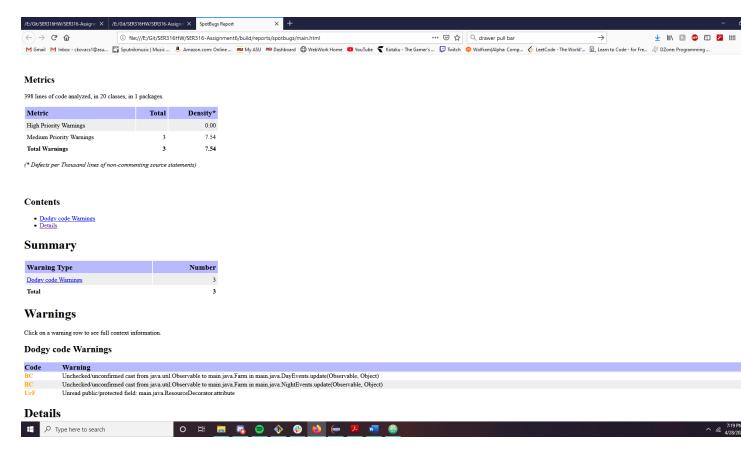| File E:\Git\SER316HW\SER316-Assignment6\src\test\java\NightEventsTest.java	
Error Description	**Line**

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Zero errors in checkstyle. I removed the Javadoc modules in the checkstyle config file.

Metrics

398 lines of code analyzed, in 20 classes, in 1 packages.

Metric	Total	Density*
High Priority Warnings		0.00
Medium Priority Warnings	3	7.54
Total Warnings	**3**	**7.54**

(Defects per Thousand lines of non-commenting source statements)*

Contents

- Dodgy code Warnings
- Details

Summary

Warning Type	Number
Dodgy code Warnings	3
Total	**3**

Warnings

Click on a warning row to see full context information.

Dodgy code Warnings

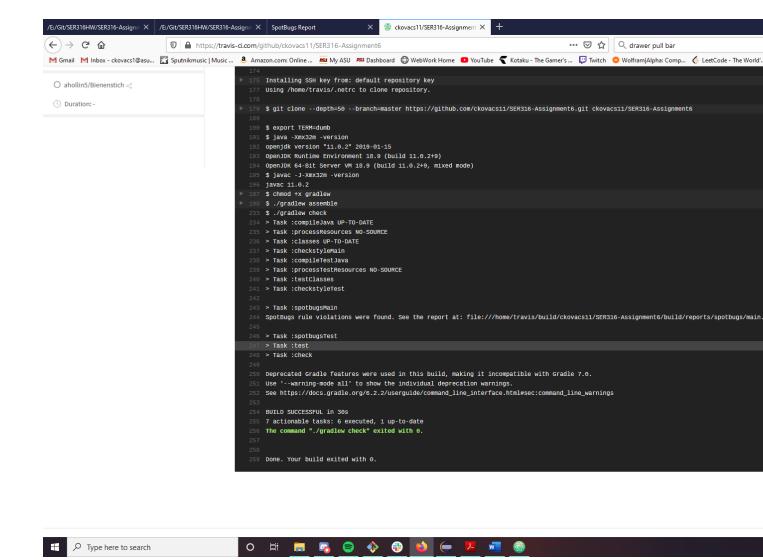| Code	Warning
BC	Unchecked/unconfirmed cast from java.util.Observable to main.java.Farm in main.java.DayEvents.update(Observable, Object)
BC	Unchecked/unconfirmed cast from java.util.Observable to main.java.Farm in main.java.NightEvents.update(Observable, Object)
UrF	Unread public/protected field: main.java.ResourceDecorator.attribute

Details

The only warnings I got for the spotbugs report are for unchecked casts. I could not figure out how to keep the cast in my code and not get this warning.
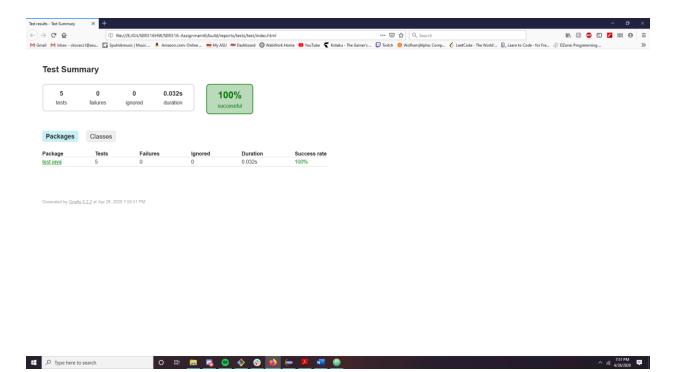

Travis CI:

Build passes and runs checkstyle and spotbugs:

```
175  Installing SSH key from: default repository key
176  Using /home/travis/.netrc to clone repository.
177
178
179  $ git clone --depth=50 --branch=master https://github.com/ckovacs11/SER316-Assignment6.git ckovacs11/SER316-Assignment6
180
190  $ export TERM=dumb
191  $ java -Xmx32m -version
192  openjdk version "11.0.2" 2019-01-15
193  OpenJDK Runtime Environment 18.9 (build 11.0.2+9)
194  OpenJDK 64-Bit Server VM 18.9 (build 11.0.2+9, mixed mode)
195  $ javac -J-Xmx32m -version
196  javac 11.0.2
197  $ chmod +x gradlew
198  $ ./gradlew assemble
233  $ ./gradlew check
234  > Task :compileJava UP-TO-DATE
235  > Task :processResources NO-SOURCE
236  > Task :classes UP-TO-DATE
237  > Task :checkstyleMain
238  > Task :compileTestJava
239  > Task :processTestResources NO-SOURCE
240  > Task :testClasses
241  > Task :checkstyleTest
242
243  > Task :spotbugsMain
244  SpotBugs rule violations were found. See the report at: file:///home/travis/build/ckovacs11/SER316-Assignment6/build/reports/spotbugs/main.
245
246  > Task :spotbugsTest
247  > Task :test
248  > Task :check
249
250  Deprecated Gradle features were used in this build, making it incompatible with Gradle 7.0.
251  Use '--warning-mode all' to show the individual deprecation warnings.
252  See https://docs.gradle.org/6.2.2/userguide/command_line_interface.html#sec:command_line_warnings
253
254  BUILD SUCCESSFUL in 30s
255  7 actionable tasks: 6 executed, 1 up-to-date
256  The command "./gradlew check" exited with 0.
257
258
259  Done. Your build exited with 0.
```

ahollin5/Bienenstich

Duration: -

Type here to search

Junit:

Test Summary

5	0	0	0.032s
tests	failures	ignored	duration

100%
successful

Packages | Classes

Package	Tests	Failures	Ignored	Duration	Success rate
test.java	5	0	0	0.032s	100%

Generated by Gradle 6.2.2 at Apr 28, 2020 7:50:51 PM

Jacoco:

Test results - Test Summary ✕ | main.java ✕ | +

← → C ⌂ | ⓘ file:///E:/Git/SER316HW/SER316-Assignment6/build/reports/jacoco/test/html/main.java/index.html | ··· ⊡ ☆ | 🔍 Search

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SER316-Assignment6 > ⊞ main.java

main.java

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
Farmer		0%		0%	14	14	36	36	2	2	1	1
ResourceGenerator		0%		0%	7	7	25	25	2	2	1	1
Main		0%		0%	4	4	21	21	2	2	1	1
NightEvents		33%		21%	15	17	19	32	0	2	0	1
Farm		48%		0%	15	24	26	52	11	20	0	1
HorseDecorator		0%		0%	9	9	23	23	3	3	1	1
CornDecorator		0%		0%	8	8	19	19	3	3	1	1
SheepDecorator		0%		0%	8	8	19	19	3	3	1	1
DayEvents		62%		50%	3	5	4	12	0	2	0	1
ResourceDecorator		0%		n/a	3	3	6	6	3	3	1	1
FactoryProducer		76%		100%	1	3	1	4	1	2	0	1
Horse		94%		83%	2	6	1	12	1	3	0	1
AnimalFactory		93%		83%	1	5	1	8	0	2	0	1
CropFactory		90%		75%	1	4	1	6	0	2	0	1
Wheat		80%		n/a	1	3	1	4	1	3	0	1
Corn		80%		n/a	1	3	1	4	1	3	0	1
Cow		80%		n/a	1	3	1	4	1	3	0	1
Sheep		80%		n/a	1	3	1	4	1	3	0	1
AbstractFactory		100%		n/a	0	3	0	1	0	1	0	1
Total	774 of 1,056	26%	94 of 118	20%	95	130	206	292	35	64	7	19

Screencast link: https://youtu.be/95e7PdeIry4

Design Pattern: I used 3 design patterns and interweaved them into one main program. I used Abstract Factory for creating the resource factories. The factories created resources which can be decorated with attributes using the Decorator design pattern. I used the Observer design pattern to implement events on a tick-based cycle.