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SER316 Assignment 2- Junit

Spring B 2020

Task 1:

Equivalence Partitions:

- 1) Age:
  - a. 0-20 are underage (15)
  - b.  $\geq 21$  are of-age (23)
  - c.  $< 0$  is not a valid input (-2)
- 2) Produce:
  - a. 1-2 to test the base price. (1)
  - b.  $3 - [\text{cart-capacity}]$  to test for the discount. (6, 5)
- 3) Alcohol + frozen food:
  - a. Quantity for alcohol must be 0 while frozen food  $> 0$ . (0, 2)
  - b. Quantity for frozen food must be 0 while alcohol  $> 0$ . (2, 0)
  - c. Quantity for both for checking the AND must be  $> 0$ . (1, 3)

Boundary analysis:

- Check age = 21
- Check empty cart
- Fill the cart with too many items (20 of each?)

Cart 4 is the only cart that passes all the test cases.

Carts 2 and 5 do not properly check the age of the person. I think cart 2 has a flipped less-than sign when checking the age. [test 2 + 1]

Cart 0 does not calculate the tax. [all tests except test 7]

Cart 1 does not calculate the produce discount when buying 3 or more. [test 4]

Cart 3 does not calculate the frozen food and alcohol discount properly. [test 8]

Cart 0 throws the underage exception for a person who is 21 years old. [test 8]

Cart 2 has the wrong discount for produce. [test 4]

All but cart 4 has issues with too many items in the cart. [test 10]

**Message: “ALWAYS CODE AS IF THE PERSON WHO ENDS UP MAINTAINING YOUR CODE WILL BE A VIOLENT PSYCHOPATH WHO KNOWS WHERE YOU LIVE” – MARTIN GOLDING**

Test case 4 found part 1.

Test case 8 found part 2.

Test case 1 found part 3.

Test case 10 found part 4.

Test case 2 found part 5.

The screenshot displays a web browser window with a 'Test Summary' page and a terminal window showing test results.

**Test Summary**

tests	failures	ignored	duration
61	20	0	0.081s

**67% successful**

**Failed tests** Packages Classes

- [BlackBoxGiven.calcCostCart10\[0\]](#)
- [BlackBoxGiven.calcCostCart10\[1\]](#)
- [BlackBoxGiven.calcCostCart10\[2\]](#)
- [BlackBoxGiven.calcCostCart10\[3\]](#)
- [BlackBoxGiven.calcCostCart10\[5\]](#)
- [BlackBoxGiven.calcCostCart1\[0\]](#)
- [BlackBoxGiven.calcCostCart1\[2\]](#)
- [BlackBoxGiven.calcCostCart1\[3\]](#)
- [BlackBoxGiven.calcCostCart2\[2\]](#)
- [BlackBoxGiven.calcCostCart2\[5\]](#)
- [BlackBoxGiven.calcCostCart4\[0\]](#)
- [BlackBoxGiven.calcCostCart4\[1\]](#)
- [BlackBoxGiven.calcCostCart4\[2\]](#)
- [BlackBoxGiven.calcCostCart5\[0\]](#)
- [BlackBoxGiven.calcCostCart6\[0\]](#)
- [BlackBoxGiven.calcCostCart8\[0\]](#)
- [BlackBoxGiven.calcCostCart8\[3\]](#)
- [BlackBoxGiven.calcCostCart9\[0\]](#)
- [BlackBoxGiven.calcCostCart9\[1\]](#)
- [BlackBoxGiven.calcCostCart9\[2\]](#)

Generated by [Gradle 6.2.2](#) at Mar 28, 2020 9:00:21 PM

**Terminal Output:**

```
Curtis@DESKTOP-A624P9L MINGW64 /e/Git/SER316HW/HW2/Code Spring 2020 given (BlackBox)
$ gradle test

> Task :test FAILED

test.java.BlackBoxGiven > calcCostCart1[0] FAILED
java.lang.AssertionError at BlackBoxGiven.java:216

test.java.BlackBoxGiven > calcCostCart4[0] FAILED
java.lang.AssertionError at BlackBoxGiven.java:236

test.java.BlackBoxGiven > calcCostCart5[0] FAILED
java.lang.AssertionError at BlackBoxGiven.java:242

test.java.BlackBoxGiven > calcCostCart6[0] FAILED
java.lang.AssertionError at BlackBoxGiven.java:248

test.java.BlackBoxGiven > calcCostCart8[0] FAILED
main.java.UnderAgeException at BlackBoxGiven.java:260

test.java.BlackBoxGiven > calcCostCart9[0] FAILED
java.lang.AssertionError at BlackBoxGiven.java:267

test.java.BlackBoxGiven > calcCostCart10[0] FAILED
java.lang.AssertionError at BlackBoxGiven.java:274

test.java.BlackBoxGiven > calcCostCart4[1] FAILED
java.lang.AssertionError at BlackBoxGiven.java:236

test.java.BlackBoxGiven > calcCostCart9[1] FAILED
java.lang.AssertionError at BlackBoxGiven.java:267

test.java.BlackBoxGiven > calcCostCart10[1] FAILED
java.lang.AssertionError at BlackBoxGiven.java:274

test.java.BlackBoxGiven > calcCostCart1[2] FAILED
java.lang.AssertionError at BlackBoxGiven.java:216

test.java.BlackBoxGiven > calcCostCart2[2] FAILED
java.lang.Exception at ExpectException.java:28
Caused by: java.lang.AssertionError at BlackBoxGiven.java:223

test.java.BlackBoxGiven > calcCostCart4[2] FAILED
java.lang.AssertionError at BlackBoxGiven.java:236

test.java.BlackBoxGiven > calcCostCart9[2] FAILED
main.java.UnderAgeException at BlackBoxGiven.java:266

test.java.BlackBoxGiven > calcCostCart10[2] FAILED
java.lang.AssertionError at BlackBoxGiven.java:274

test.java.BlackBoxGiven > calcCostCart1[3] FAILED
java.lang.AssertionError at BlackBoxGiven.java:216

test.java.BlackBoxGiven > calcCostCart8[3] FAILED
java.lang.AssertionError at BlackBoxGiven.java:261

test.java.BlackBoxGiven > calcCostCart10[3] FAILED
java.lang.AssertionError at BlackBoxGiven.java:274

test.java.BlackBoxGiven > calcCostCart2[5] FAILED
java.lang.Exception at ExpectException.java:28
Caused by: java.lang.AssertionError at BlackBoxGiven.java:223
```

## Task 2:

### Code Spring 2020 given

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed Cxty	Missed Lines	Missed Methods	Missed Classes
main.java	<div><div></div></div>	25%	<div><div></div></div>	3%	20 36	64 96	5 21	1 9
Total	246 of 328	25%	26 of 27	3%	20 36	64 96	5 21	1 9

```
MINGW64:/e/Git/SER316HW/HW2/Code Spring 2020 given

61 tests completed, 20 Failed

FAILURE: Build Failed with an exception.

* What went wrong:
Execution failed for task ':test'.
> There were failing tests. See the report at: file:///E:/Git/SER316HW/HW2/Code%
20Spring%202020%20given/build/reports/tests/test/index.html

* Try:
Run with --stacktrace option to get the stack trace. Run with --info or --debug
option to get more log output. Run with --scan to get full insights.

* Get more help at https://help.gradle.org

Deprecated Gradle features were used in this build, making it incompatible with
Gradle 7.0.
Use '--warning-mode all' to show the individual deprecation warnings.
See https://docs.gradle.org/6.2.2/userguide/command_line_interface.html#sec:comm
and_line_warnings

BUILD FAILED in 2s
3 actionable tasks: 1 executed, 2 up-to-date

Curtis@DESKTOP-A624P9L MINGW64 /e/Git/SER316HW/HW2/Code Spring 2020 given (Black
box)
$ gradle jacocoTestReport

Deprecated Gradle features were used in this build, making it incompatible with Gradle 7.0.
Use '--warning-mode all' to show the individual deprecation warnings.
See https://docs.gradle.org/6.2.2/userguide/command_line_interface.html#sec:command_line_warnings

BUILD SUCCESSFUL in 3s
2 actionable tasks: 1 executed, 1 up-to-date
Could not open/create prefs root node Software\JavaSoft\Prefs at root 0x80000002. Windows RegCreateKeyEx(...) returned erro
r code 5.

Curtis@DESKTOP-A624P9L MINGW64 /e/Git/SER316HW/HW2/Code Spring 2020 given (Blackbox)
$ |
```