

## Task 2:

1. minor redundancy- instead of having only one constructor class, with a variable for passing, there are two; one default, one with the variable. It's in nearly every class.
2. BearWorkshop has this but worse, in that it has a default constructor whose only function is to call a more specialized constructor with a string parameter
3. overall, uses a lot of for loops instead of simple multiplication
4. who formats like this? BearWorkshop, line 128; add and remove bear functions are needlessly complex and redundant; instead of if statements, and difficulty formatted ones, you could simply 'return this.BearCart.remove(bear)'
5. Too many nested if statements instead of ifs with && or ||
- 6 (bonus!). in Noisemaker, a switch statement is used when if/else would have worked fine.

## Task 3

To test the 3-for-price-of-2 rule, I made several tests: one to test whether the method holds up for higher numbers of clothes, whether the method hold up for clothes with unequal prices in unexpected configurations, and whether the method can deal with high numbers of clothes in unequal prices.

1. The buy2Get3ClothesDifferentPrice() method failed on classes one and three. This method tests whether a set of 3 clothes with different prices will choose the cheapest clothes item to take off as free.
2. The buy2Get3ClothesHiNumbers() method failed on the first four classes but succeeded on the last. This method tests whether or not the classes could deal with correctly calculating discounts for up to fifteen clothes with the same price. I got easter egg 2 from this class.
3. The buy2Get3ClothesDifferentPriceHiNum() method failed on all comers. This method tested whether or not classes could deal with up to fifteen clothes with different prices, which they could not.

To test the rule for 10% off cost of bear with ten or more accessories, we would need to test whether this method works with all accessories (clothes, noisemakers, embroidery). It would also need to interface well with the 3-for-price-of-2 clothes rule.

(Note: this test also proved that the 3-for-price-of-2 clothes rule for cooperation, by testing whether or not it works with multiples and with other discounts)

1. My oneBearTest10Clothes() methods proved that the 10% off with 10 paid for clothes method interacted well with the buy 2 get one free clothes method in the first 3 classes, but flagged in the fourth and fifth. I got easter eggs 1, 7, 5, and 8.
2. However, my oneBearTest10Noisemakers() methods proved that the method again worked on the first three classes but not on 4 and 5, oddly when it was noisemakers that were applied; the method took almost 2/3 of the price off the bear. For this one I got easter egg 3.

3. My `oneBearTest10LetterEmbroidery()` method failed on all tests. Are we not counting embroidery as accessories? I figured it fits the criteria of 'anything on the bear.' I didn't find any easter eggs for this method.

To test the buy 2 bears, get one free:

You would need to check that it works when bears are of equal price, that it works when all bears have accessories, and checks that it works when the price of a bear is checked with the accessories.

1. My `threeBearsSaveOnCheapestEqual()` method proves the method works well in all test classes, when three bears are equal in price it returns the correct price.
2. The `threeBearsSaveOnCheapestAccessories()` method is meant to test what happens when all three bears have accessories. The first four classes return the correct lowest price, but the fifth returns the highest price. I got easter eggs 6 and 8.
3. The `threeBearsSaveOnCheapestAccessoriesFoam()` is meant to test whether the accessories are counted, or just the base price. For this, I had two down bears (as they are more expensive as a base than the regular bears) and then added enough accessories to a regular bear to make it more expensive. All but class 3 passed this task, but 3 instead returned the bear with the lower base price but more expensive add-ons. I got no easter eggs.

The screenshot shows a Windows desktop environment. On the left, a Notepad window titled 'Untitled - Notepad' is open, showing a file path: `file:///C:/Users/Hannah/Desktop/School/SPR 2022/SER 316/Assignment2/codeGiven203/bdex.html`. The status bar indicates 'Ln 1, Col 17', '100%', 'Windows (CRLF)', and 'UTF-8'. Below the Notepad window, a terminal window shows the output of a Gradle build, indicating a failure: `BUILD FAILED in 17s`. The terminal also shows the command `gradle test` and the resulting error message: `Execution failed for task ':test'. > There were failing tests. See the report at: file:///C:/Users/Hannah/Desktop/School/SPR 2022/SER 316/Assignment2/codeGiven203/bdex.html`. On the right, a web browser window displays the 'Test Summary' page. The page shows the following statistics: 86 tests, 33 failures, 0 ignored, and a duration of 0.314s. A red box indicates that 61% of the tests were successful. Below the statistics, there are tabs for 'Failed tests', 'Packages', and 'Classes'. The 'Failed tests' tab is selected, showing a list of failed tests: `GivenWhiteBox.checkoutOneBear`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiFirst[0]`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiFirst[2]`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiNum[0]`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiNum[1]`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiNum[2]`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiNum[3]`, `GivenBlackBox.buy2Get3ClothesDifferentPriceHiNum[4]`, `GivenBlackBox.buy2Get3Clothes[0]`, `GivenBlackBox.buy2Get3Clothes[1]`, and `GivenBlackBox.buy2Get3Clothes[2]`. A message at the bottom right of the browser window states: 'We can't screenshot this page. This isn't a standard Web page, so you can't take a screenshot of it.'

Task 4:

File Edit Format View Help  
Hannah Robertson

File  
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MINGW64/c/Users/Hannah/Desktop/School/SPR 2022/SER 316/A...  
BUILD FAILED in 5s  
7 actionable tasks: 1 executed, 6 up-to-date  
Hannah@LAPTOP-N2P7OJ01 MINGW64 ~/Desktop/School/SPR 2022/SER 316/A...  
\$ gradle jacocoTestReport  
----- 75% EXECUTING [1s]  
> :jacocoTestReport > Resolve files of :jacocoAnt > c...  
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 and suppress them with the '--no-warnings' flag.  
See https://docs.gradle.org/6.6.1/userguide/command\_line\_warnings.html for more details.  
BUILD SUCCESSFUL in 5s  
2 actionable tasks: 1 executed, 1 up-to-date  
Hannah@LAPTOP-N2P7OJ01 MINGW64 ~/Desktop/School/SPR 2022/SER 316/A...  
\$ |

compass.png Mars4.5 Assembly.jar  
4 Items

ser316-spring2022-C-hr x Sessions CodeGiven 3

file:///C:/Users/Hannah/Desktop/School/SPR 2022/SER 316/Assignments/CodeGiven 3

CodeGiven 3

CodeGiven 3

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed Cxty	Missed Lines	Missed Methods
main.java	231 of 853	72%	26 of 60	56%	27 62	63 200	7 29
Total	231 of 853	72%	26 of 60	56%	27 62	63 200	7 29

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