

# Inventory.java

```

1  package edu.towson.cis.cosc603.project5.coffeemaker;
2
3  /**
4   * Inventory for the coffee maker
5   * @author Josh
6   * @version $Revision: 1.0 $
7   */
8  public class Inventory {
9
10     private static int coffee;
11     private static int milk;
12     private static int sugar;
13     private static int chocolate;
14
15     public Inventory() {
16         1  setCoffee(15);
17         1  setMilk(15);
18         1  setSugar(15);
19         1  setChocolate(15);
20     }
21
22     /**
23      * Method getChocolate.
24      * @return int
25      */
26     public int getChocolate() {
27         1  return chocolate;
28     }
29     /**
30      * Method setChocolate.
31      * @param chocolate int
32      */
33     public void setChocolate(int chocolate) {
34         2  if(chocolate >= 0) {
35             Inventory.chocolate = chocolate;
36         }
37         else {
38             Inventory.chocolate = 0;
39         }
40     }
41 }
42 /**
43  * Method getCoffee.
44  * @return int
45  */
46     public int getCoffee() {
47         1  return coffee;
48     }
49     /**
50      * Method setCoffee.
51      * @param coffee int
52      */
53     public void setCoffee(int coffee) {
54         2  if(coffee >= 0) {
55             Inventory.coffee = coffee;
56         }
57         else {
58             Inventory.coffee = 0;
59         }
60     }
61     /**
62      * Method getMilk.
63      * @return int
64      */

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65     public int getMilk() {
66 1         return milk;
67     }
68     /**
69     * Method setMilk.
70     * @param milk int
71     */
72     public void setMilk(int milk) {
73 2         if(milk >= 0) {
74             Inventory.milk = milk;
75         }
76     }
77     else {
78         Inventory.milk = 0;
79     }
80     /**
81     * Method getSugar.
82     * @return int
83     */
84     public int getSugar() {
85 1         return sugar;
86     }
87     /**
88     * Method setSugar.
89     * @param sugar int
90     */
91     public void setSugar(int sugar) {
92 2         if(sugar >= 0) {
93             Inventory.sugar = sugar;
94         }
95     }
96     else {
97         Inventory.sugar = 0;
98     }
99
100    /**
101    * Returns true if there are enough ingredients to make
102    * the beverage.
103    * @param r
104
105    * @return boolean */
106    public boolean enoughIngredients(Recipe r) {
107        boolean isEnough = true;
108 2        if(Inventory.coffee < r.getAmtCoffee()) {
109            isEnough = false;
110        }
111 2        if(Inventory.milk < r.getAmtMilk()) {
112            isEnough = false;
113        }
114 2        if(Inventory.sugar < r.getAmtSugar()) {
115            isEnough = false;
116        }
117 2        if(Inventory.chocolate < r.getAmtChocolate()) {
118            isEnough = false;
119        }
120 1        return isEnough;
121    }
122
123    /**
124    * Method toString.
125    * @return String
126    */
127    public String toString() {
128        final String newLine = System.getProperty("line.separator");
129 1        return ("Coffee: " + getCoffee() + newLine +
130            "Milk: " + getMilk() + newLine +

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131         "Sugar: " + getSugar() + newLine +
132         "Chocolate: " + getChocolate() + newLine);
133
134
135     }
136 }

```

## Mutations

16	1. removed call to edu/towson/cis/cosc603/project5/coffeemaker/Inventory::setCoffee → KILLED
17	1. removed call to edu/towson/cis/cosc603/project5/coffeemaker/Inventory::setMilk → KILLED
18	1. removed call to edu/towson/cis/cosc603/project5/coffeemaker/Inventory::setSugar → KILLED
19	1. removed call to edu/towson/cis/cosc603/project5/coffeemaker/Inventory::setChocolate → KILLED
27	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
34	1. changed conditional boundary → SURVIVED
	2. negated conditional → KILLED
47	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
54	1. changed conditional boundary → SURVIVED
	2. negated conditional → KILLED
66	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
73	1. changed conditional boundary → SURVIVED
	2. negated conditional → KILLED
85	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
92	1. changed conditional boundary → SURVIVED
	2. negated conditional → KILLED
108	1. changed conditional boundary → KILLED
	2. negated conditional → KILLED
111	1. changed conditional boundary → KILLED
	2. negated conditional → KILLED
114	1. changed conditional boundary → KILLED
	2. negated conditional → KILLED
117	1. changed conditional boundary → KILLED
	2. negated conditional → KILLED
120	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
129	1. mutated return of Object value for edu/towson/cis/cosc603/project5/coffeemaker/Inventory::toString to ( if (x != null) null else throw new RuntimeException ) → KILLED

## Active mutators

- INCREMENTS\_MUTATOR
- VOID\_METHOD\_CALL\_MUTATOR
- RETURN\_VALS\_MUTATOR
- MATH\_MUTATOR
- NEGATE\_CONDITIONALS\_MUTATOR
- INVERT\_NEGS\_MUTATOR
- CONDITIONALS\_BOUNDARY\_MUTATOR

## Tests examined

- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEnoughIngredientsGoodChocolate5(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEqualsRecipeSame(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetAmtMilko(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEnoughIngredientsBadChocolate0(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEditRecipe2(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testGetAmtMilk(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testPurchaseBeveragePriceNeg(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testAddInventory1(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (14 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testPurchaseBeverageSugar0(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testGetChocolate(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (8 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetPrice0(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testToStringRecipe(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEnoughIngredientsGood(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEnoughIngredientsBadSugar3(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetMilkWithNeg(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetAmtChocolateNeg(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testPurchaseBeverage3(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testPurchaseBeverageSugar0(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (4 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetMilkWithPos(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetAmtCoffee0(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testCheckInventorySetSugarNeg10(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testCheckInventory(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testAddRecipeCopy(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testAddInventoryFailNegMilk(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (4 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetAmtChocolatePos(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEnoughIngredientsBadChocolateNeg(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testPurchaseBeverageGoodBuyWithChange(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetName(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (8 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testCheckInventorySetSugarNeg10(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testGetMilk(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetAmtSugar0(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testSetAmtMilkNeg(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (1 ms)
- edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest.testEnoughIngredientsBadMilk3(edu.towson.cis.cosc603.project5.coffeemaker.CoffeeMakerTest) (2 ms)

