

# Homework 07

## Sorting Laundry

### Objective:

Write a program that will sort a basket of clothes into their proper drawers. If you were not aware you are sort clothes by their type in this order:

- Top Drawer – Undergarments
- Next Drawer – Socks or Stockings
- The Following Drawer – Tops
- The Subsequent Drawer – Bottoms
- The Cape Drawer – Capes

### Requirements:

- Functionality. (80pts)
  - No Syntax Errors. (80pts\*)
    - \*Code that cannot be compiled due to syntax errors is nonfunctional code and will receive no points for this entire section.
  - Write a class called **Clothing** with the following (10pts):
    - Instance Variables (1pt)
      - Type: A value that represents the type of clothing, and can only have the value “Undergarment”, “Socks”, “Stockings”, “Top”, “Bottom”, or “Cape”. Its default value should be “Socks”
      - Color: A value that represents the color of the clothing, and can only have the value “Brown”, “Red”, “Pink”, “Black”, “White”, “Orange”, “Green”, “Blue”, “Purple”, or “Grey”. Its default value should be “Black”.
      - All must have the private scope, and all above must apply for full credit.
    - Constructors (2pts)
      - Default: Must set all properties to their default values mentioned in the “Instance Variables” section.
      - Parameterized: Must take in a parameter for each instance variable in the order named above. This means the first instance variable is the first parameter, the second instance variable is the second parameter, and so on. This must set the instance variable values only if the given values are valid, but otherwise it must set the instance variables to their default values.
      - All above must apply for full credit.
    - Methods
      - Accessors for the instance variables. (1pt)
        - All must be written for full credit.



drawer. If that drawer is full, then the program may ignore the request.

- If the user chooses to remove clothes from the dresser, then the user must be prompted to enter the clothes' information. Once entered the program must search and remove that article of clothing from the dresser. If the item being removed does not exist in the dresser, then the program may ignore the request.
- After every operation, the program must clearly print out the items contained in the dresser.
- All above must apply for full credit.

□ Coding Style. (10pts)

- Code functionality organized within multiple methods other than the main method, and methods organized within multiple classes where appropriate. (5pts)
- Readable Code. (5pts)
  - Meaningful identifiers for data and methods.
  - Proper indentation that clearly identifies statements within the body of a class, a method, a branching statement, a loop statement, etc.
  - All the above must apply for full credit.

□ Comments. (10pts)

- Your name in every file. (5pts)
- At least 5 meaningful comments in addition to your name. These must describe the function of the code it is near. (5pts)

**Example Dialog:**

\*The following Example Dialog demonstrates the interactions between a user and ONE possible implementation of the required software's front-end / user interface. The software's front-end / user interface may be implemented in MANY different ways and will receive full credit as long as it meets the most minimal of the above requirements. While you may use the example dialog as a guide, it is strongly encouraged to create the front-end / user interface in your own way. \*

Key	
Unhighlighted Text	Program's Output
Highlighted Text	User's Input

```
Welcome to the dresser!  
Enter 1: to add an item  
Enter 2: to remove an item  
Enter 3: to print out the dresser contents  
Enter 9: to quit
```

1

Enter the type

It may be undergarment, socks, stockings,  
top, bottom, or cape

top

Enter a color

It may be brown, pink, orange, green, blue,  
purple, or grey

red

Enter 1: to add an item

Enter 2: to remove an item

Enter 3: to print out the dresser contents

Enter 9: to quit

1

Enter the type

It may be undergarment, socks, stockings,  
top, bottom, or cape

cape

Enter a color

It may be brown, pink, orange, green, blue,  
purple, or grey

purple

Enter 1: to add an item

Enter 2: to remove an item

Enter 3: to print out the dresser contents

Enter 9: to quit

1

Enter the type

It may be undergarment, socks, stockings,  
top, bottom, or cape

socks

Enter a color

It may be brown, pink, orange, green, blue,  
purple, or grey  
grey

Enter 1: to add an item  
Enter 2: to remove an item  
Enter 3: to print out the dresser contents  
Enter 9: to quit

1

Enter the type  
It may be undergarment, socks, stockings,  
top, bottom, or cape

cape

Enter a color  
It may be brown, pink, orange, green, blue,  
purple, or grey

blue

Enter 1: to add an item  
Enter 2: to remove an item  
Enter 3: to print out the dresser contents  
Enter 9: to quit

1

Enter the type  
It may be undergarment, socks, stockings,  
top, bottom, or cape

undergarment

Enter a color  
It may be brown, pink, orange, green, blue,  
purple, or grey

pink

Enter 1: to add an item  
Enter 2: to remove an item  
Enter 3: to print out the dresser contents

Enter 9: to quit

3

Drawer 0

undergarment pink

Drawer 1

socks grey

Drawer 2

top red

Drawer 3

Drawer 4

cape purple

cape blue

Enter 1: to add an item

Enter 2: to remove an item

Enter 3: to print out the dresser contents

Enter 9: to quit

2

Enter the type

It may be undergarment, socks, stockings,  
top, bottom, or cape

socks

Enter a color

It may be brown, pink, orange, green, blue,  
purple, or grey

grey

Enter 1: to add an item

Enter 2: to remove an item

Enter 3: to print out the dresser contents

Enter 9: to quit

3

Drawer 0  
undergarment pink

Drawer 1

Drawer 2  
top red

Drawer 3

Drawer 4  
cape purple  
cape blue

Enter 1: to add an item

Enter 2: to remove an item

Enter 3: to print out the dresser contents

Enter 9: to quit

9

Goodbye

**Finally:**

Upload all java source files (.JAVA extension) to the CSCE Dropbox