

SYSC2004 – Project Report  
Milestone 4  
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### Change log:

- ➔ Fixed a crash in StoreManager's resetCart function
  - It was throwing a ConcurrentModificationException because items were getting removed from the collection at the same time as the stream was reading them
  - Collecting the stream into a list before resetting the cart solved this issue
- ➔ Added more apples to the inventory
- ➔ Added the GUI version of StoreView
  - Was able to re-use the text-based StoreView's cart printing function by putting the string into a JTextArea.
  - Downloaded images from <https://www.heb.com/static-page/apple-varieties> to serve as the apple pictures
  - Was able to use these images in the GUI after resizing them all to the same resolution, and following a naming convention

### Questions

#### **1. When refactoring the StoreView class into a GUI, did you take a composition or an inheritance approach? Why?**

A composition approach. With composition the panels are made of other panels and components. This made it possible to divide the application into the products list on the left, and the cart display on the right. I'm not entirely sure this can be achieved with inheritance, or it would at least be a lot more complicated to do so, as Swing was designed with composition in mind. With inheritance you can of course make a custom Component type, but at the end of the day in Swing to make any semi-complicated application it is a must to compose panels and components together.