

CS 474: Object Oriented Programming Languages and Environments

Spring 2013

Second Smalltalk project

Due time: 7:00 pm on Friday 3/15/2013

You are required to implement a *Painting manager* system in Cincom Smalltalk. This system keeps track of paintings in an art gallery. There are specifically three kinds of paintings that your system should maintain based on the subject of the painting:

1. *Portrait*—A painting of one or more people.
2. *Landscape*—A painting of a scene in nature.
3. *Still life*—A painting of inanimate objects.

Each painting will have the following items of information.

1. *Title*—This is the title of the painting; it does not need to be unique with respect to other paintings.
2. *Artist first name*—The first name of the artist who painted the painting.
3. *Artist last name*—The first name of the artist who painted the painting.
4. *Height*—The height of the painting.
5. *Width*—The width of the painting.

In addition, portraits will have two additional variables indicating (1) the number of people in the portrait, and (2) a list of names of the people in the painting (if known). Landscapes will have an additional variable indicating the country in which the landscape was taken. Still lifes will add an indication of weather the painting used an oil-based medium or water colors.

Your interface will have several fields. The first field will display a list of all the paintings in the system. All the information for each painting will be displayed on a single line. By pressing two different buttons, the user can sort the list by artist last name, or by the title of the painting. A second set of fields allows an interactive user to enter information about paintings. So these field will have widgets for the first and last name, the title of the painting, and so on. In addition, the interface will have widgets to support creating new paintings and deleting paintings.

You are responsible for choosing appropriate widgets from the set available in Cincom Smalltalk and to set appropriately the attributes of the chosen widgets (e.g., whether the widget is read only or not, whether it has scroll bars, and so on).

Hints: Start the project by painting the interface by using the built-in automatic GUI builder of Cincom Smalltalk. Once you are satisfied with the looks of your interface, proceed to coding each of the widgets in the interface. Use Smalltalk's class *SortedCollection* to sort paintings in the list.

You must work alone on this project. Your project code should be in a special package called CS474. Save all your code by filing out that package in the file `xxx.st`, where `xxx` denotes your last name. Submit a zip archive with a (short) readme file containing instructions on how to use your Painting Manager. Submit the archive by clicking on the link provided with this assignment. No late submissions will be accepted.