

COMP210 — Lab 3

Spring 2017

In the third lab and homework you'll be *refactoring*¹ your design from homework 2 to include the use of abstract classes and class extension. You can use your solution to homework 2 or the one given by the instructor² to complete this assignment.

¹ https://en.wikipedia.org/wiki/Code_refactoring

² see /home/comp210/sp17/

Lab3

Your goal for the lab is to redraw the UML diagram³ for a new class hierarchy design that lifts all of the shared media file implementation into an abstract class called *AbstractMediaFile*. For the sake of clarity, restate all Media interface methods in the class in which it can/will be implemented. Anything implemented in *AbstractMediaFile* doesn't need to be restated in the concrete Media types. Put another way, you should propagate interface methods down the hierarchy until it's implemented.

³ the pdf is also on the server

If by the end of lab you haven't shown the instructor your updated diagram, then do so to get lab credit⁴.

⁴ You should probably be checking your progress as you go though...

Hwk3

Submit as *hwk3* via handin no later than 1pm on 2/8

Now refactor the the code to meet the new design. Do not modify your lab 2 code directly, but instead work off a copy of the project. To copy an existing project in Eclipse you can highlight the project, hit Ctrl-C to copy, then hit Ctrl-V to "paste" the project. You'll be given the option to rename the project at this point.⁵ In theory, you should not need to modify any of the concrete Media type tests as the change that we're making is to the implementation and not the overall interface.⁶ If and when tests need to be rewritten, then you should think about whether or not you're re-factoring isn't also re-designing the overall interface. The example code from lecture notes 5 should act as a good guide for this exercise.

⁵ You might still want to rename packages

⁶ we're changing *How* not *What*