

THE UNIVERSITY OF MELBOURNE
School of Computing and Information Systems
COMP90041
Programming and Software Development
Second Semester, 2018

Lab 9 — Programming Practice (Week 10)
Abstract Classes

Workshop and Homework Exercises

These are just for practice, and will not be assessed.

1. Create classes to represent items that can be borrowed from a library, in particular, books and DVDs. Both kinds of items have a circulation code (the code by which the library refers to the item and the patron finds it on the shelves) and a title. Books also have an author, and DVDs also have a year of release. Books can be borrowed for 21 days at a time, and DVDs for 7 days. Then write a testing (main) method that creates a single array containing both some DVDs and some books and then iterates over the array printing out an appropriate description for each item showing all the information we have about the item, including how long it can be borrowed for.

Hint: You'll need to create an abstract class. This class should hold as much information as is common among all kinds of items the library circulates, and should have abstract methods for all methods that all kinds of library items should have, but need to be implemented differently for different kinds of items.

You will probably need to start this in the workshop and complete it as homework.