COMP 1451 Lab 9-a (2 points)

Download the project 1451Lab9-a from the dropbox.

The project you have been given models a library that contains books (both print and audio) and music. Your task is to refactor this project to take advantage of inheritance and polymorphism and to reduce code duplication.

Required: use an <u>interface called Playable</u> to specify playing time. Printed books must not have a playing time.

Your refactored Library class will have a single arraylist. When you have refactored, include this method in the Library class:

```
/** Calculates and returns the average playing time of all items
in the library that have a playing time*/
public double averagePlayingTimes()
```

HINT: use the instanceof operator to test whether an object is an instance of a particular type. If it is, then you can cast it as that type and then invoke an appropriate method.

E.g.
```
if (animal instanceof Bird) {
    System.out.println(((Bird)animal).getSongRhythm());
}
```

Demonstrate your completed project to your instructor or TA before leaving the lab. A suggested solution will be given during the next class and labs that have not been checked off will not receive any points.