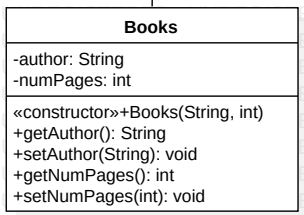
Model::Main

EXERCISE 1

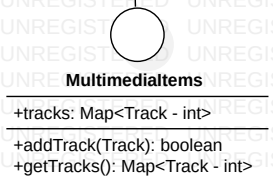
Abstract base class that defines the common properties of all the items that can be borrowed at a library.

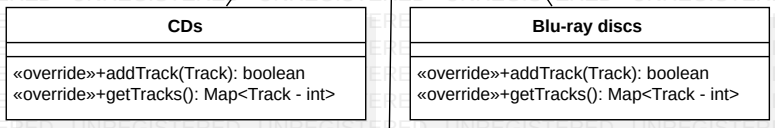
Each class also provides accessor methods to retrieve the values of its properties.

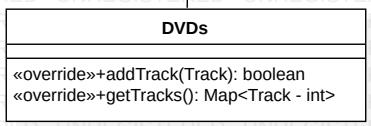
This is another abstract base class that represents a media item, such as a CD, DVD or Blu-ray disc. It derives from "Items" and adds a map of tracks.



This class derives from "Items" and adds the specific properties of a book.







These classes derives from "MultimediaItems" and adds the specific properties of a CD, DVD and Blu-Ray disc.

MAIN CHANGES

The changes introduced in this design are the setter methods that allows the data to be modified. In this case, the only data that does not allow modification is the ISBN since it is a unique identifier of the item and its modification could result in a collision with an existing identifier.

Another significant change is the modeling of the tracks as a map with a key-value pair where the key is the name of the track and the value is the duration of the track (e.g. {Track1: 20})

Finally, a change is introduced in the type returned by the "addTrack()" method which returns a boolean depending on whether the input track exists or not.