

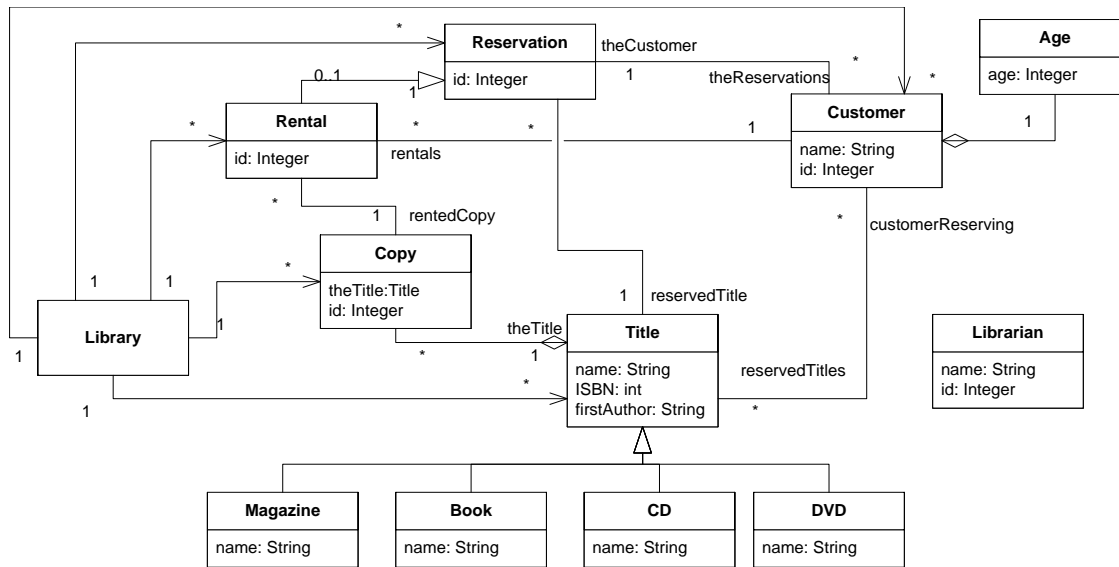
Laboratory 7

Instructions

- This is an individual work.
- To receive credit you have to both show you solution to the TA and submit your work to cuLearn.
- For those who don't finish early, the TA will ask you to show whatever you have completed, starting at about 15 minutes before the end of the lab period.

Problem Summary

Suppose someone in your team has created a class diagram during the early Analysis stage. Someone else in your team argues that the diagram has many mistakes. Everybody in your team knows that you are an expert in class diagrams, so they turn to you for help.



Problem Description

A. You are asked to describe in plain text the different mistakes you find in the class diagram shown above. Some of the questions you might ask yourself are:

- Are the datatypes used in the classes correct?
- Is there any disassociated class?
- Do all the relationships shown in the diagram make sense?
- Is there any duplicity in class attributes?
- Are all the association multiplicities correct?

Find your own questions similar to the ones mentioned above and verify the model.

B. Assume that instead of Generalization, *Rental* has an Association relationship with *Reservation* having multiplicity of both end as 0..1. Now, if you look at the diagram you would find that there are many redundant paths (i.e., two paths representing the same collections of object). Your job is to find the redundant paths of the model, and also the paths that look like redundant but actually they are not. Start by answering the following questions, then add your own questions and answer them:

- Are the paths *Library.Customer* and *Library.Reservation.Customer* redundant?
- Are the paths *Library.Copy* and *Library.Title.Copy* redundant?
- Are the paths *Library.Rental*, *Library.Copy* and *Library.Rental.Copy* redundant?
- Find redundant paths going to the *Customer* class.

Can you find more redundant/redundant-looking paths?