

COSC 236 Lab 5

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Grasp Principles :

Book Class :

The book class has the grasp principle of information expert as it manages its own availability with methods of check/set available. The method checkavail shows that the is responsible for deciding whether it can be borrowed and then updating its own state depending on that.

Member Class :

Th member class is the information expert as is knows everything about the status of the books, whether adding to a list of borrowed books, removing a book from its list, or checking to see if we have that specific book, having these methods avoids pushing logic into other classes like library or library control which would violate encapsulation. Member class follows the low coupling as members do not need to know how Book tracker availability, it just calls the method.

Library Class :

The library class shows the creator principle by combining both book and member objects via book list and memberlist, it also creates and manages objects through methods like , addBook, and registerMember. It displays the controller principle by making queries such as findBookByTitle and findMembersByName , it also delegates responsibility to the objects when needed.

Library Controller Class :

This class displays the Controller principle by handling the higher level action like borrowing, returning books, and adding members and displaying any data that is necessary, it also delegates by having the other classes do work, like library, member and book which as the information experts.



