Case Study

A Book circulation library decides to start cd circulation for its customers.A customer who has or takes membership for the cd can borrow books as well, but some customers opt only for books because of less membership fees.A Database of customer details (memberCode,memberName,address,telephone,membershipType b for book and c for cd) is maintained initially only b was valid, also a database of borrowal , details(bookcode,,memberCode,dateOfBorrowal,dateOfReturn) are maintained,dateof Borrowal will be the system date and date of return will be 15 days from date of borrowal).

The original application had the following operations:

1   createMember(Member newMember) to create a new member
2   borrow(memberCode code,int id) -- a book is issued to the member based on the type of membership,relevant details are updated
3   return(memberCode code,int id) - a book is put back into library after making the transaction.

Enhance the above application ,with necessary updated functionalites and write a client program to test the application.(Sample given below)

Library l=new Library();

//get member details

Member m=l.getMember(memberId);

//borrowal

if memberType is 1

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l=new BookLibrary()

if (borrowal)

l.borrow(m,bookId);

else

l.return(m,bookId);

//set the status of the book

//update Transaction


else if memberType is 2


l=new Cdlibrary()

if (issue)

l.borrow(m,cdId);

else

l.return(m,cdId);

//set the status of the CD

//update transaction
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//get the status of a book

//get the status of the cd