

3 A lending library stocks two types of item for loan: books and CDs.

All stock items have a title, the date the item was acquired and whether the item is currently out on loan.

Books have an author and ISBN. CDs have an artist and play time in minutes.

The library needs a program to process data about the stock items. The program will use an object-oriented programming language.

(a) Complete the class diagram showing the appropriate properties and methods.

StockItem
Title: STRING
.....
.....
.....
ShowTitle()
.....
.....
.....

Book
Author: STRING
.....
.....
.....
Constructor()
ShowAuthor()
.....
.....

CD
.....
.....
.....
.....
.....
.....
.....

(b) Write program code

- (i) for the class definition for the superclass `StockItem`.

Programming language [3]

- (ii) for the class definition for the subclass `Book`.

Programming language [3]

(iii) to create a new instance of `Book` with:

- identifier `NewBook`
- title "Computers"
- author A.Nyone
- ISBN 099111
- acquired on 12/11/2001
- not out on loan

Programming language

.....

.....

.....

.....

.....

.....

.....

.....[3]