

Worksheet (Chapter 27)

KeyFocus: Classes and Object, Inheritance

Q.1

A sports club stores data about its members. A program is to be written using an object-oriented programming language.

A `Member` class is designed. Two subclasses have been identified:

- `FullMember`
- `JuniorMember`

(a) Draw an inheritance diagram for these classes.

[3]

(b) The design for the `Member` class consists of

- **properties**
 - `MemberName`
 - `MemberID`
 - `SubscriptionPaid`
- **methods**
 - `SetMemberName`
 - `SetMemberID`
 - `SetSubscriptionPaid`

Q2

Write code to define a Borrower class as shown in the class diagram in Figure 27.05.

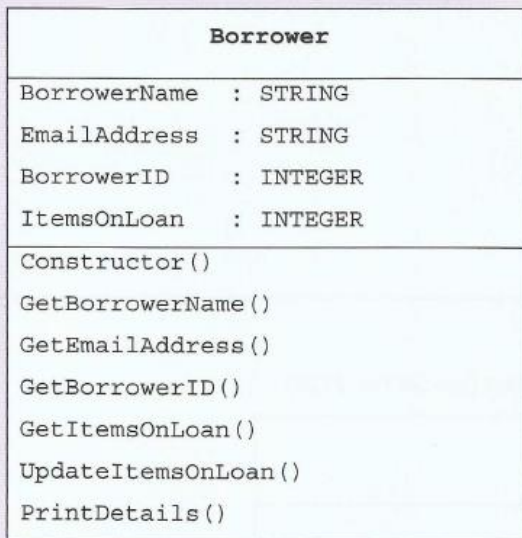


Figure 27.05 Borrower class diagram

The constructor should initialise `ItemsOnLoan` to 0. `UpdateItemsOnLoan()` should increment `ItemsOnLoan` by an integer passed as parameter.

Write a simple program to test the methods.