- 1. Principle Violated: Interface Segregation Principle
- 2. Reason: Interface ILibraryItem contains 5 methods. By implementing this interface, class Book had to implement the methods GetPlayTime() and GetCastList() which it doesn't need. Similarly, class DVD had to implement the method GetAuthor() even though it is not required for that class. To fix this violation, I have created three specific interfaces instead of one generic interface. Interface IBookItem contains methods which are specific to the Book type. Interface IDVDItem contains methods which are specific to the DVD type. Interface IItem contains methods which are common to both types. Class Book implements interfaces IBookItem and IItem while class DVD implements interfaces IDVDItem and IItem.
- 3. The following code fixes the violation of Interface Segregation Principle.

IItem.java

IBookItem.java

IDVDItem.java

Book.java

DVD.java