

Create a Java program to model a simple library system. Implement a base class called `LibraryItem` with private attributes like `title`, `author`, and `itemID`. Include encapsulation methods for setting and getting these attributes. Derive two classes `Book` and `DVD` from `LibraryItem`, adding additional attributes like `pageNumber` for `Book` and `duration` for `DVD`. Implement methods to display information about each item.

Handle exceptions in the program:

- When setting the `pageNumber` for a `Book`, ensure it's a positive integer. If not, throw a custom exception `InvalidPageNumberException`.
- When setting the `duration` for a `DVD`, ensure it's a positive integer. If not, throw a custom exception `InvalidDurationException`.
- When trying to get information about an item that doesn't exist in the library, throw a `LibraryItemNotFoundException`.

Demonstrate inheritance by using a common method in the base class and overridden methods in the derived classes. Test the exception handling by trying to set invalid page numbers and durations, and accessing a non-existent item, catching and handling the exceptions appropriately.