

Lab 6 Lab Exercises

SPOT QUESTION

1. Create an online bookstore system where customers can purchase physical books and eBooks using C++. The program should include:

1. A base class `Product` with attributes `name`, `price`, and `availability`. Implement constructors and destructors for proper initialization and cleanup.
2. Derived classes `Book` and `EBook` inheriting from `Product`. Each should override a `displayDetails()` function to show specific details.
3. Introduce a virtual function `void purchase()` in `Product`, overridden in derived classes for specific purchase actions (e.g., shipping for books, download for eBooks).
4. Create a function `void shop(Product** products, int numProducts)` to display product details and allow purchasing.

Test the program by creating instances of both `Book` and `EBook`, passing them to the `shop()` function. Verify correct details display and purchasing actions, ensuring proper memory management.