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Create a program to model a basic library system to implement a base class called the LibraryItem with properties Title and number of copies. Create to derived classes Book and DVD implement method to checkout and return item and display information about the library item.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Inheritance
{
    class LibraryItem
    {
        public string Title { get; set; }
        public int NumberOfCopies { get; set; }

        public LibraryItem(string title, int numberOfCopies)
        {
            Title = title;
            NumberOfCopies = numberOfCopies;
        }

        public void CheckOut()
        {
            if (NumberOfCopies > 0)
            {
                NumberOfCopies--;
                Console.WriteLine("Checked out " + Title + "and the remaining
copies are : " + NumberOfCopies);
            }
            else
            {
                Console.WriteLine("Sorry," + Title + " is out of stock.");
            }
        }

        public void Return()
        {
            NumberOfCopies++;
            Console.WriteLine("Returned " + Title + "and the remaining copies are
: " + NumberOfCopies);
        }
    }
}
```

```

}

// Derived class 1
class Book : LibraryItem
{
    public string Author { get; set; }

    public Book(string title, int numberOfCopies, string author)
        : base(title, numberOfCopies)
    {
        Author = author;
    }
}

// Derived class 2
class DVD : LibraryItem
{
    public string Director { get; set; }

    public DVD(string title, int numberOfCopies, string director)
        : base(title, numberOfCopies)
    {
        Director = director;
    }
}

class Program
{
    static void Main(string[] args)
    {
        // Get user input for book
        Console.WriteLine("*-*-*-Enter book information:*-*-*-");
        Console.Write("\nTitle: ");
        string bookTitle = Console.ReadLine();
        Console.Write("Number of Copies: ");
        int bookCopies = int.Parse(Console.ReadLine());
        Console.Write("Author: ");
        string bookAuthor = Console.ReadLine();

        // Get user input for DVD
        Console.WriteLine("\n\n*-*-*-Enter DVD information:*-*-*-");
        Console.Write("\nTitle: ");
        string dvdTitle = Console.ReadLine();
    }
}

```

```

        Console.WriteLine("Number of Copies: ");
        int dvdCopies = int.Parse(Console.ReadLine());
        Console.WriteLine("Director: ");
        string dvdDirector = Console.ReadLine();

        // Create objects and demonstrate polymorphism
        LibraryItem book = new Book(bookTitle, bookCopies, bookAuthor);
        LibraryItem dvd = new DVD(dvdTitle, dvdCopies, dvdDirector);

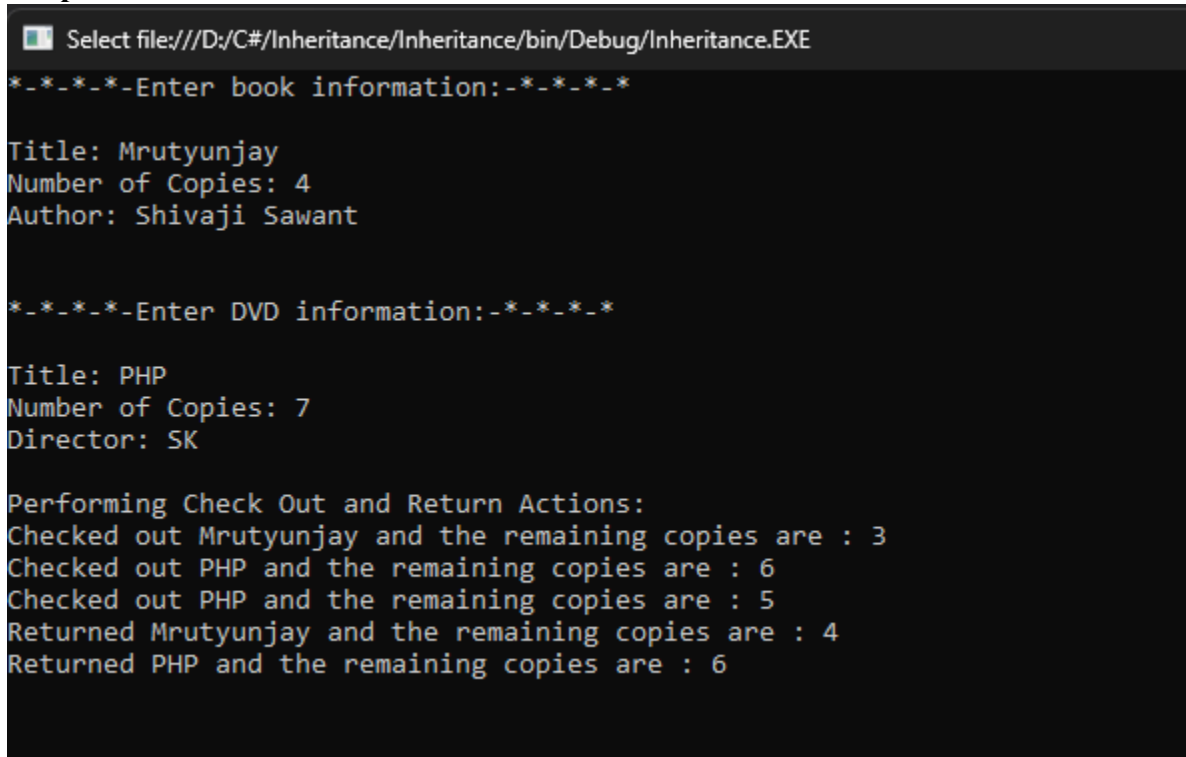
        // Perform check out and return actions
        Console.WriteLine("\nPerforming Check Out and Return Actions:");
        book.CheckOut();
        dvd.CheckOut();
        dvd.CheckOut();
        book.Return();
        dvd.Return();
        Console.ReadKey();
    }

}

}

```

Output:



```

Select file:///D:/C#/Inheritance/Inheritance/bin/Debug/Inheritance.EXE
*-*-*-Enter book information:-*-*-*-
Title: Mrutyunjay
Number of Copies: 4
Author: Shivaji Sawant

*-*-*-Enter DVD information:-*-*-*-
Title: PHP
Number of Copies: 7
Director: SK

Performing Check Out and Return Actions:
Checked out Mrutyunjay and the remaining copies are : 3
Checked out PHP and the remaining copies are : 6
Checked out PHP and the remaining copies are : 5
Returned Mrutyunjay and the remaining copies are : 4
Returned PHP and the remaining copies are : 6

```