

COM2044 LAB 6

Question1:

In a library system, different types of materials such as books (**Book**) and DVDs (**DVD**) are available. All materials share common information: a title (**title**), publication year (**year**), a unique item number (**itemNumber**), and the number of available copies (**copies**).

Following the instructions below, design the classes in Java:

1. Create a base class called **Item**.
 - It should have the properties: title, year, itemNumber, and copies.
 - It should include a method printDetails() that prints all the item's information.
2. Create a subclass called **Book**.
 - Add two new properties: author and publisher.
 - Override the printDetails() method to print both the base information and the additional book-specific details.
3. Create a subclass called **DVD**.
 - Add two new properties: director and duration (duration in minutes).
 - Override the printDetails() method to print both the base information and the additional DVD-specific details.
4. In a main class (**Main**), create the following objects and print their details:
 - A book titled "Java Programming", published in 2020, with 5 copies (author: John Smith, publisher: ABC Publications).
 - A DVD titled "Inception", published in 2010, with 3 copies (director: Christopher Nolan, duration: 148 minutes).
 - A book titled "Data Structures", published in 2019, with 7 copies (author: Alice Johnson, publisher: XYZ Books).
 - A DVD titled "The Shawshank Redemption", published in 1994, with 2 copies (director: Frank Darabont, duration: 142 minutes).

Book 1 Details:

Title: Java Programming
Year: 2020
Item Number: 1001
Copies: 5
Author: John Smith
Publisher: ABC Publications

DVD 1 Details:

Title: Inception
Year: 2010
Item Number: 2001
Copies: 3
Director: Christopher Nolan
Duration: 148 minutes

Book 2 Details:

Title: Data Structures
Year: 2019
Item Number: 1002
Copies: 7
Author: Alice Johnson
Publisher: XYZ Books

DVD 2 Details:

Title: The Shawshank Redemption
Year: 1994
Item Number: 2002
Copies: 2
Director: Frank Darabont
Duration: 142 minutes

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