

# Java Object-Oriented Concepts Unit

## Lesson 7 Lab 2: DVD Library

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The Learning House

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## Lesson 7 Lab 2: DVD Library

### Objective:

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The objective of this lab is to continue practice designing programs that consist of more than one class and to practice using Java Collections and Maps.

Before coding, you must create a flowchart and class diagram (in Dia) for your program.

Please show the diagrams to the instructor before coding.

### Requirements:

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In this lab, you will create a program that stores a DVD collection. The program must:

1. Allow the user to add a DVD to the collection
2. Allow the user to remove a DVD from the collection
3. Allow the user to list the DVDs in the collection
4. Allow the user to display the information for a particular DVD
5. Allow the user to search for a DVD by title
6. Load the DVD library from a file
7. Save the DVD library back to the file when the program completes
8. Allows the user to add/edit/delete many DVDs in one session

### Process:

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1. Design a DVD class to hold all the information about a DVD. It must contain at least the following:
  - a. Title
  - b. Release date
  - c. MPAA rating
  - d. Director's name
  - e. Studio
  - f. User rating or note (allows user to enter additional information about the DVD, e.g. "Good family movie")
2. Design a DVDLibrary class to hold all the DVDs in the library. You can use either a Collection or a Map to hold the DVD objects. This class must have methods to do the following:
  - a. Add a DVD
  - b. Remove a DVD
  - c. Retrieve a DVD by Title
  - d. Retrieve all DVDs in the library

3. Use your ConsoleIO class from previous labs to handle all interaction with the console.
4. Design a DVDLibraryController class that is the brains of the program.

### Extra Challenge:

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Add the ability for the user to put more than one note on each DVD entry.