

CS 125 Extra Credit - PinkBox

(up to 50% points extra-credit on a quiz - any quiz can get up to 50% extra credit - this quiz can then be worth up to 150% out of 100%)

You are creating a text-based dvd-rental store. Each dvd will contain information for the DVD title (String), genre (comedy, drama, documentary, horror, romance, musical), original rental price (double), sale price (double), onSale (boolean), numberOfTimesRented(integer) and isCurrentlyRented (boolean). While the dvd rental store program is running, the interface should look like this:

```
Welcome to the DVD Store!  Select an option below:
```

- ```
1) add an DVD
2) remove an DVD
3) display inventory
4) on sale / off sale
5) display genre
6) rent DVD
7) quit
```

```
Select an option above:
```

You will maintain a sorted linked list data structure to hold the store's information.

For extra credit points, your app will be demonstrated and the code reviewed by two peers and one course assistant at one of the last lab/sections of the semester. Partial credit will be given for non-working code. **Important:** For maximum credit, in addition to a fully-functioning app, reviewers will be looking for good coding style such as proper indentation, liberal use of constructors, data encapsulation, a short 'main' method and extensive use of subprograms. Use recursive methods whenever possible. Your code must also be checked into your subversion archive.

The following app behaviors will be expected for each option:

- 1) **add** - The user will be prompted for a title of a new DVD and a price (original price). The store will add the DVD in the appropriate location in the alphabetically sorted (by title) inventory, provided the DVD name does not already exist in the list. If it exists, the user will be prompted for an alternate DVD title.
- 2) **remove** - the user will be prompted for a title. The DVD with that title will be removed from the inventory.
- 3) **display inventory** - the current inventory of the store will be displayed in alphabetical order - DVD title, current rental price and number of times the DVD was rented. Display information about the DVD only if it is currently NOT rented. Price displayed is the original rental price unless the DVD is currently on sale, then display the sale price. As a promotional tool, if the price is 0.00,

display “Currently Free!” next to the DVD listing. If it is on sale, display “On Sale!” next to the DVD.

- 4) **on sale / off sale** - the user will be prompted for a title. The ‘on sale’ status of the DVD will be toggled. If the ‘on sale’ status of the DVD is now true the user will be prompted for a sale price. The sale price will be displayed instead of the original price whenever a DVD is on sale (see 3, above).
- 5) **display genre** - the user will be prompted for the genre of movie they are interested in. The current inventory of the store for the selected genre will be displayed in alphabetical order - DVD title, current price, and number of times rented. Price displayed is the original price unless the DVD is currently on sale, then display the sale price. As a promotional tool, if the price is 0.00, display “Currently Free!” next to the DVD. If it is on sale, display “On Sale!” next to the DVD.
- 6) **rent DVD** - the current store inventory will be displayed in alphabetical order. Then, the user will be prompted for which DVD he/she would like to rent. A warning message will be displayed: “Are you sure you would like us to deduct \$X from your credit card?” The user can answer yes, or no. A count of the number of times each DVD is rented is maintained as part of the store inventory.
- 7) **quit** - the user will receive a prompt (“Are you sure you want to quit? - all your data will be lost.”) If the user replies yes, the app quits.