CISP 360: Programming Assignment #13

Write a program which manages a database of movie rentals using objects. Use the code you submitted for Programming Assignment #11 and modify it so it uses objects instead of structs. If you prefer you can modify the sample solution provided in the Structured Data module instead.

Specifically, the program should define a Movie object with the following instance variables for a single movie:

* Name
* Length(in minutes)
* Genre(e.g: Comedy, Horror, Action, Romance, Drama, etc.)
* Rental Price(in dollars and cents, e.g.: 2.99)

The program should also define a separate MovieRentalDatabase object. Its constructor should take a single number named **size** as a parameter and use that to set two instance variables:

* the **size** parameter
* a newly allocated array of Movie objects, where the size of the array is the **size** parameter value.

The program should present a menu and ask the user to select one of the following options:

* Create and initialize a MovieRentalDatabase. The program should prompt the user how many movies they wish to enter, then it should prompt for all the information on each movie.
* Display all movie data currently stored in the MovieRentalDatabase.
* Change the contents of any one Movie element in the array stored in MovieRentalDatabase.
* Sort the MovieRentalDatabase array by movie name in ascending order.
* Sort the MovieRentalDatabase array by movie name in descending order.
* Quit the program.

After handling the menu option, the program should continually prompt the user for another menu selection until they choose to quit the program. If the user does not select one of the above menu options, the program should display an error, display the menu of options again, and prompt them to select one again.

On the next page is an example of output displayed by the program.

Save this program in a file named movieobjects.cpp and submit it.

Welcome to the movies!

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 1

How many movies do want to enter?3

Please enter the data for movie #1

Name: Rocky

Length(in minutes): 119

Genre: Action

Price(in dollars and cents format): 1.99

Please enter the data for movie #2

Name: Fearless

Length(in minutes): 122

Genre: Drama

Price(in dollars and cents format): 0.99

Please enter the data for movie #3

Name: Zootopia

Length(in minutes): 108

Genre: Family

Price(in dollars and cents format): 3.99

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 2

MOVIE #1

Name: Rocky

Length: 119

Genre: Action

Price: 1.99

MOVIE #2

Name: Fearless

Length: 122

Genre: Drama

Price: 0.99

MOVIE #3

Name: Zootopia

Length: 108

Genre: Family

Price: 3.99

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 3

Enter an element number to replace: 3

Please enter the data for movie #3

Name: Evil Dead 2

Length(in minutes): 84

Genre: Horror

Price(in dollars and cents format): 2.99

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 2

MOVIE #1

Name: Rocky

Length: 119

Genre: Action

Price: 1.99

MOVIE #2

Name: Fearless

Length: 122

Genre: Drama

Price: 0.99

MOVIE #3

Name: Evil Dead 2

Length: 84

Genre: Horror

Price: 2.99

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 4

Ascending sort complete.

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 2

MOVIE #1

Name: Evil Dead 2

Length: 84

Genre: Horror

Price: 2.99

MOVIE #2

Name: Fearless

Length: 122

Genre: Drama

Price: 0.99

MOVIE #3

Name: Rocky

Length: 119

Genre: Action

Price: 1.99

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 5

Decending sort complete.

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 2

MOVIE #1

Name: Rocky

Length: 119

Genre: Action

Price: 1.99

MOVIE #2

Name: Fearless

Length: 122

Genre: Drama

Price: 0.99

MOVIE #3

Name: Evil Dead 2

Length: 84

Genre: Horror

Price: 2.99

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 7

Try again.

Please select one:

1) Enter all movie data into the array

2) Display all movie data currently stored in the array

3) Change the contents of any one array element

4) Sort the array by movie name in ascending order

5) Sort the array by movie name in descending order

6) Quit the program

Selection: 6

Exiting...