

OOPS OPEN ENDED PROJECT

TOPIC: DVD RENTAL MANAGEMENT

A DVD shop has an Object Oriented program that processes the following information about ten (10) videos in their stock: DVD name, rent date, due date, rental status

A customer (identified by ID) plus his full name can borrow at most 1 video @ Rs. 12.50 per day. A penalty of 10% per day is charged if returned late.

A video should be checked if it is not rented out before borrow transaction is processed. If borrowed out the customer should be requested for a second choice.

At the end of business, a report is generated showing

Which films are rented out and when are they due

To which customers they are rented, rent date and due date of the DVDs.

DVD names are taken through file 'movie.txt'.

Report containing customer name, rent and due dates is stored as a file 'database.txt'.

Code functioning:

2 classes are used- one for customer and one for DVD.

DVD class has the following data members:

Title (film title)

Rent date

Due date

Avail (indicates whether the DVD is available for renting or not)

Member functions:

1. `getttitle()` : To get the DVD title
2. `getrentdate()`: To get rent date
3. `getduedate()`: To get due date
4. `checkavail()`: Checks availability of DVD
5. `rentdvd()`: To rent dvd, decrements the variable avail
6. `returndvd()`: To return dvd, increments the variable avail
7. `int checktitle(char dvdname[50])`: To check if entered title matches with DVD name

Friend functions:

1. getcustomerinfo() : Customer ID, array of DVD objects, array of customer objects are passed as parameters.
2. title(): To get all titles from the file 'movie.txt'
3. getdvd(): Gets entries from file 'database.txt' and prints them to the monitor
4. charges(): calculates charges for renting
5. addcustomerdvd(): to initialise data member 'rentednmae' in class customer
6. removecustomerdvd(): to remove DVD rented status and make dvd available for renting
7. enterdatabaseintofile(): enters data into file 'database.txt'

Class customer has the following members:

Customer name

Rented name

Rented(indicates if that customer has rented anything)

Id(customer id)

Friend functions:

1. getcustomerinfo() : Customer ID, array of DVD objects, array of customer objects are passed as parameters.
2. title(): To get all titles from the file 'movie.txt'
3. getdvd(): Gets entries from file 'database.txt' and prints them to the monitor
4. charges(): calculates charges for renting
5. addcustomerdvd(): to initialise data member 'rentednmae' in class customer
6. removecustomerdvd(): to remove DVD rented status and make dvd available for renting
7. enterdatabaseintofile(): enters data into file 'database.txt'
8. custid(): generates customer id
9. eligibility(): to check if customer is eligible to rent a DVD

Choices available to customer: (using a switch statement)

1. List of all movies
2. Rent a DVD
3. Return a DVD
4. Display information about a customer
5. Rent date and due date entries

1. List of all movies:
A list of all movies is displayed by taking file input from the file 'movie.txt'.
2. Rent a DVD: Customer name is entered. If customer has already rented, he cannot do so again without returning the earlier DVD.
DVD name is entered, if it does not match with the DVDs available, error message is shown.

After entering customer name and DVD name, the rent date and due date are entered.

3. Return DVD:
Customer name, DVD name are entered, return date is entered and the charges are calculated.
4. Display information about a customer: Displays customer name, DVD name, rent date, due date based on the customer ID entered.
5. Rent date and due date entries: Prints the entries from the file 'database.txt'.