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/* Chapter No. 08 - Project No. 03
   File Name:      Chapter08Project03.java
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   Date Last Modified: Jan. 30, 2014

   Problem Statement:
       Use polymorphism in a program

   Overall Plan
       initialize rentalArray with movieArray
       calculate and print out the total rental fees

   Classes needed and Purpose
   main class - Chapter08Project03
   Rental - rental movie model
   Movie - movie model
       Action - movie model subclass
       Drama - movie model subclass
       Comedy - movie model subclass
       AJTTMoney - money container
       BigDecimal - good precision
       System - streams
       String - arrays of chars

*/

import java.math.BigDecimal;

public class Chapter08Project03 {
    public static int CUS_ID = 254;
    public static void main(String[] args) {
        Movie[] lotr = {new Action("The Fellowship of the Ring", Movie.Rating.G,2)
            , new Comedy("The Two Towers", Movie.Rating.PG,5)
            , new Drama("The Return of the King", Movie.Rating.PG_13,4)};

        Rental[] rentals = new Rental[3];

        for (int i = 0; i < rentals.length; i++)
            rentals[i] = new Rental(CUS_ID,lotr[i],2*i);
        System.out.format("Customer %d owes %s",CUS_ID,lateFeesOwed(rentals));

    }
    public static AJTTMoney lateFeesOwed(Rental[] rentals) {
        BigDecimal lateFeesOwed = new BigDecimal(0);

        for (Rental r : rentals) {
            lateFeesOwed = lateFeesOwed.add(r.lateFees().amount());
        }

        return new AJTTMoney(lateFeesOwed);
    }
}

```

```

import java.math.BigDecimal;

public class Rental {
    private int _daysLate;
    private Movie _movie;
    private int _idNumber;

    Rental() {
        this(0,null,0);
    }
    Rental(int idNumber, Movie movie, int daysLate) {
        setIdNumber(idNumber);
        setMovie(movie);
        setDaysLate(daysLate);
    }

    // ?
    public AJTTMoney lateFees() {
        return this.movie().calcLateFees(this.daysLate());
    }

    // setters
    public void setIdNumber(int idNumber) {
        if (idNumber < 0)
            throw new IllegalArgumentException("ID number must be greater than zero.");
        _idNumber = idNumber;
    }
    public void setMovie(Movie movie) {
        _movie = movie;
    }
    public void setDaysLate(int daysLate) {
        if (daysLate < 0)
            throw new IllegalArgumentException("Number of days late be greater than zero."
);
        _daysLate = daysLate;
    }

    // getters
    public int idNumber() {
        return _idNumber;
    }
    public Movie movie() {
        return _movie;
    }
    public int daysLate() {
        return _daysLate;
    }

    // Object
    @Override
    public String toString() {
        return this.getClass().getName() + ":" + idNumber() + ",<" + movie() + ">," + daysLate();
    }
}

```

```
fish /Users/ajcaldwell/Dropbox/School/14/Spring2014/CS112/Week...  
$ ./build.fish run 01/30/14  
Running  
Customer 254 owes $13.00  
$ 01/30/14
```

Test