

# DVD.java

```

1 package project4;
2
3 import java.io.Serializable;
4 import java.text.DateFormat;
5 import java.text.SimpleDateFormat;
6 import java.util.GregorianCalendar;
7 import java.util.concurrent.TimeUnit;
8
9 /*****
10 * DVD class for the Rental Store, is extended by game and
11 * blue ray classes and contains all relevant information for
12 * its use in the store
13 * @author Gregory Huizenga
14 * @version 7/25/2017
15 *****/
16 public class DVD implements Serializable{
17
18
19     private static final long serialVersionUID = 1L;
20
21     /** The date the DVD was rented */
22     protected GregorianCalendar bought;
23
24     /** The date the DVD is due back */
25     protected GregorianCalendar dueBack;
26
27     /** The title of the DVD */
28     protected String title;
29
30     /** The name of the person renting the DVD*/
31     protected String nameOfRenter;
32
33     /*****
34     * Parameterized constructor for DVD
35     * @param bought date bought
36     * @param dueBack date due
37     * @param title title of dvd
38     * @param nameOfRenter name of dvd renter
39     *****/
40     public DVD(GregorianCalendar bought, GregorianCalendar dueBack,
41         String title, String nameOfRenter) {
42
43         this.bought = bought;
44         this.dueBack = dueBack;
45         this.title = title;
46         this.nameOfRenter = nameOfRenter;
47     }
48
49     /*****
50     * getter for date dvd was rented
51     * @return bought date dvd was rented
52     *****/
53     public GregorianCalendar getBought() {
54         return bought;
55     }
56
57     /*****

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58     * setter for date dvd was rented
59     * @param bought date dvd was rented
60     *****/
61     public void setBought(GregorianCalendar bought) {
62         this.bought = bought;
63     }
64
65     /**
66     * getter for due date
67     * @return dueBack due date for dvd
68     *****/
69     public GregorianCalendar getDueBack() {
70         return dueBack;
71     }
72
73     /**
74     * setter for due date
75     * @param dueBack due date for dvd
76     *****/
77     public void setDueBack(GregorianCalendar dueBack) {
78         this.dueBack = dueBack;
79     }
80
81     /**
82     * getter for dvd title
83     * @return title dvd title
84     *****/
85     public String getTitle() {
86         return title;
87     }
88
89     /**
90     * setter for dvd title
91     * @param title dvd title
92     *****/
93     public void setTitle(String title) {
94         this.title = title;
95     }
96
97     /**
98     * getter for dvd renter
99     * @return nameOfRenter name of renter
100    *****/
101    public String getNameOfRenter() {
102        return nameOfRenter;
103    }
104
105    /**
106    * setter for dvd renter
107    * @param nameOfRenter
108    *****/
109    public void setNameOfRenter(String nameOfRenter) {
110        this.nameOfRenter = nameOfRenter;
111    }
112
113    /**
114    * returns a string detailing the total cost of a rental

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115     * @param returnDate the date the rental was returned
116     * @return costDialog the string detailing all the information
117     *****/
118     public String getCost(GregorianCalendar returnDate){
119         int daysLate = 0;
120         try{
121             daysLate = (int) TimeUnit.MILLISECONDS.toDays
122                 (returnDate.getTimeInMillis() - dueBack.getTimeInMillis());
123         }catch(IllegalArgumentException e){
124
125         }
126
127         int cost = 1;
128
129         String costDialog = "Base Cost = $1.00" + "\n";
130
131         // appends string with extra details if it's late
132         if (daysLate > 0){
133             cost += 1 + daysLate;
134             costDialog += "Late fee: $1.00 + $1.00 per day late" + "\n";
135             costDialog += "Days late: " + daysLate + "\n";
136         }
137
138         costDialog += "Total cost: $" + cost + ".00";
139
140         return costDialog;
141     }
142
143     /**
144     * converts DVD's information into a string
145     *****/
146     public String toString(){
147         String description = "";
148         SimpleDateFormat sdf = new SimpleDateFormat("MM/dd/yy");
149         String rentedOn = sdf.format(bought.getTime());
150         String dueOn = sdf.format(dueBack.getTime());
151
152         description = "Name: " + nameOfRenter + " , Title: " + title +
153             ", Rented On: " + rentedOn + ", Due Back On: " + dueOn;
154
155         return description;
156     }
157 }
158
159
160
161
162

```