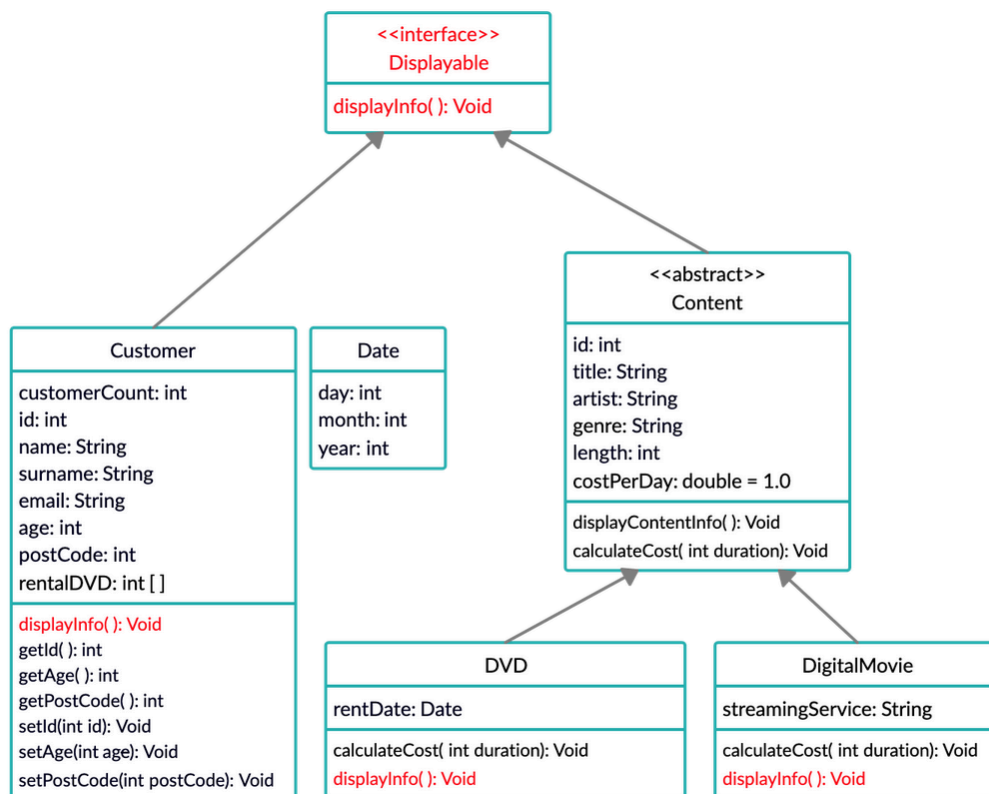CSE212

SOFTWARE DEVELOPMENT METHODOLOGIES

SPRING 2024

LABWORK 7 - SECTION 1 & 2

Below, you can find the description of your labwork for today. You can also find the expected output of this code in the Application Walkthrough section.

You are going to improve your Rental System on top of your previous week's labwork by incorporating Polymorphism.

You should add a new **interface** named `Displayable`. The `Customer` and `Content` classes must implement `Displayable`. For implementing an interface, your classes must override all of its methods. Thus, you should have only one *ArrayList* which means that `Customer` and `Content` objects will be stored in a single *ArrayList* in the main class. Also, you need to modify some of your existing classes as shown below.

`displayInfo()` method will be overridden in the `Customer` class as well as in the `Content` class. It will display information according to the object. You need to change the necessary code so that your existing program works without any errors. For further information, you can check the application walkthrough part.

Application Walkthrough

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
1

Enter id
1000
Enter name
John
Enter surname
Blake
Enter age
34
Enter postal code
34724
Enter email
johnblake@gmail.com

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
1

Enter id
1001
Enter name
Mary
Enter surname
Jane
Enter age
20
Enter postal code
34555
Enter email
mary_jane@yahoo.com

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
2

Enter id
10
Enter title

The Lord of the Rings: The Fellowship of the Ring
Enter artist
Elijah Wood
Enter length
178

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
3

Enter genre
Thriller
Enter id
11
Enter title
Parasite
Enter artist
Song Kang-ho
Enter length
132

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
4

Enter id
12
Enter title
Spenser Confidential
Enter artist
Mark Wahlberg
Enter length
111
Enter streaming service:
Netflix

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
5

Enter customer id
1000

Enter DVD id
10
Enter day
7
Enter month
2
Enter year
2020

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
6

Enter customer id
1000
id:1000
name:John
surname:Blake
age:34
postal code:34724
email:johnblake@gmail.com

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
7

Enter Content id
12

id:12
title:Spenser Confidential
artist:Mark Wahlberg
genre:Other
length(in minutes):111

Streaming Service:Netflix
How long would you like to rent that Digital Movie?
20
The rental cost for 20 days is $10.0

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
7

Enter Content id
11
id:11
title:Parasite
artist:Song Kang-ho
genre:Thriller
length(in minutes):132

How long would you like to rent that DVD?
11
The rental cost for 11 days is $13.2

1. Create a new Customer
2. Create a new DVD
3. Create a new DVD with genre
4. Create a new Digital Movie
5. Rent a DVD
6. Display Customer Information
7. Display Content Information
8. Display number of customers.
0. Exit
0