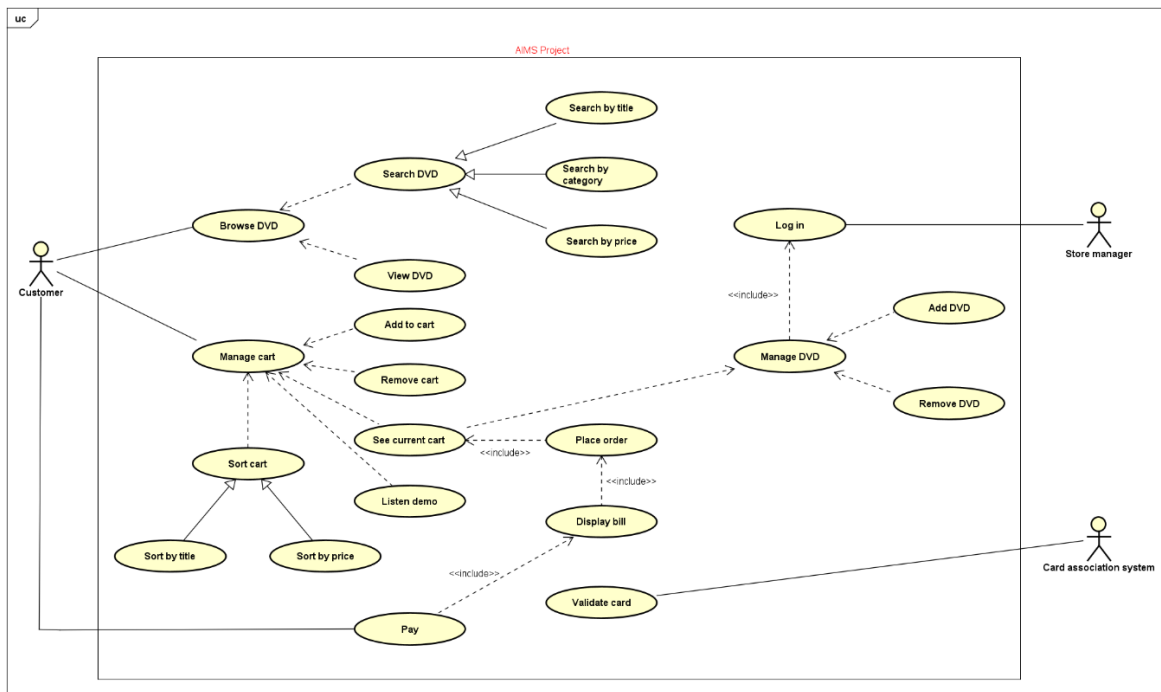


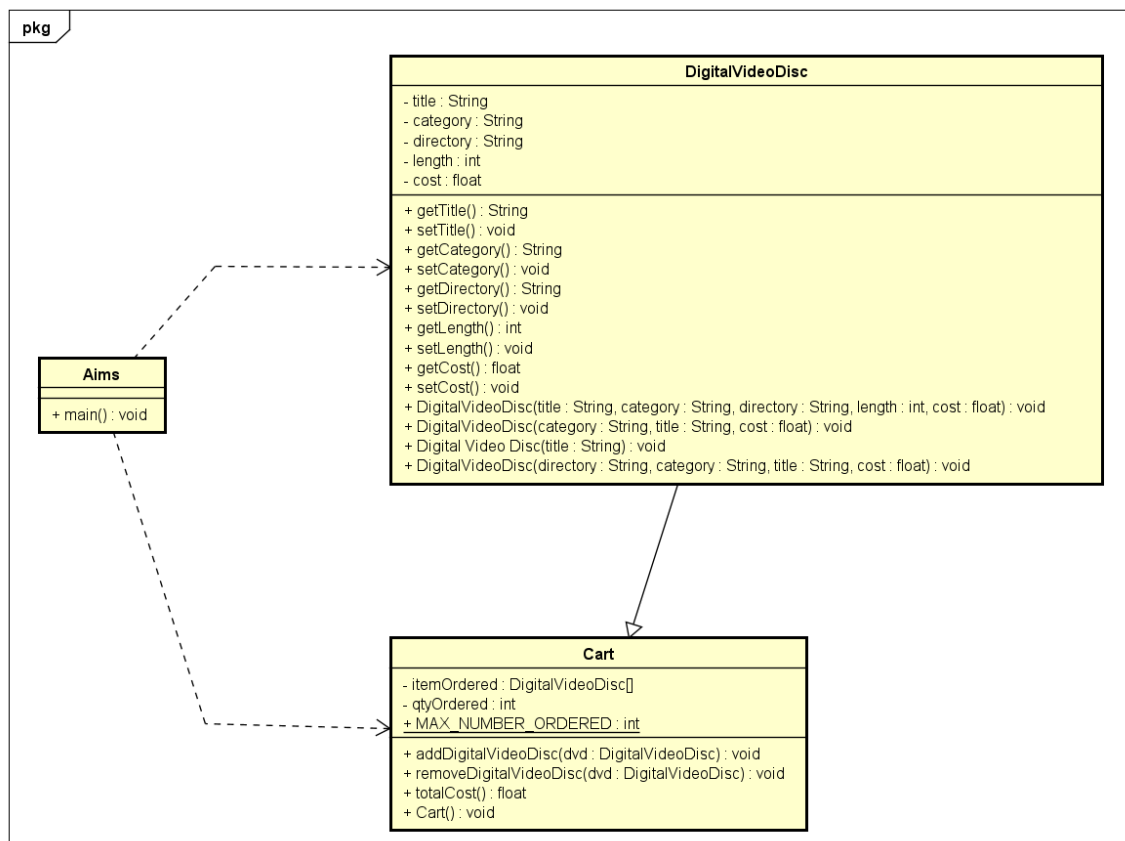
Lab 02 Report

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1. Use case diagram



2. Class diagram



3. AIMS class

Source code:

```
package lab2;

class Aims {
    Run | Debug
    public static void main(String[] args) {
        Cart anOrder = new Cart();

        DigitalVideoDisc dvd1 = new DigitalVideoDisc(title:"The Lion King", category:"Animation", directory:"Roger Allers", length:87, cost:42.99f);
        anOrder.addDigitalVideoDisc(dvd1);

        DigitalVideoDisc dvd2 = new DigitalVideoDisc(title:"Star Wars", category:"Science Fiction", directory:"George Lucas", length:87, cost:24.99f);
        anOrder.addDigitalVideoDisc(dvd2);

        DigitalVideoDisc dvd3 = new DigitalVideoDisc(category:"Animation", title:"Aladin", cost:18.99f);
        anOrder.addDigitalVideoDisc(dvd3);

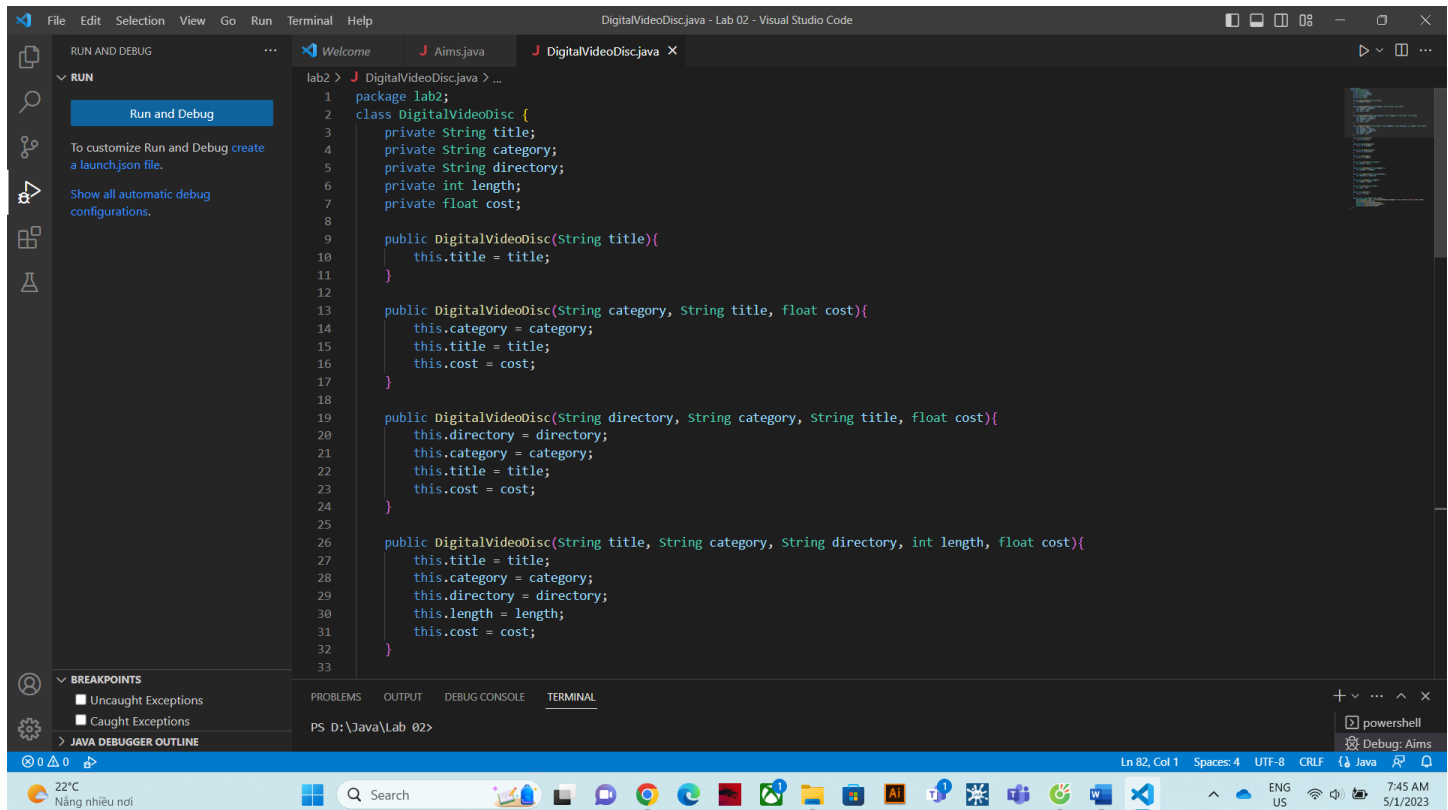
        System.out.println("Total cost is:");
        System.out.printf("Total cost is: %.3f", anOrder.totalCost());
    }
}
```

Running:

```
PS D:\Java\Lab 02> & 'C:\Program Files\Java\jdk-20\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:53796' '-enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\PC\AppData\Roaming\Code\User\workspaceStorage\81da2d076535a535d211ef1f73948d1b\redhat.java\jdt_ws\Lab 02_fd7c39e9\bin' 'lab2.Aims'
An cart has been created
The disc has been added
The disc has been added
The disc has been added
Total cost is:
63.890
PS D:\Java\Lab 02>
```

4. DigitalVideoDisc class

Source code:



```
package lab2;

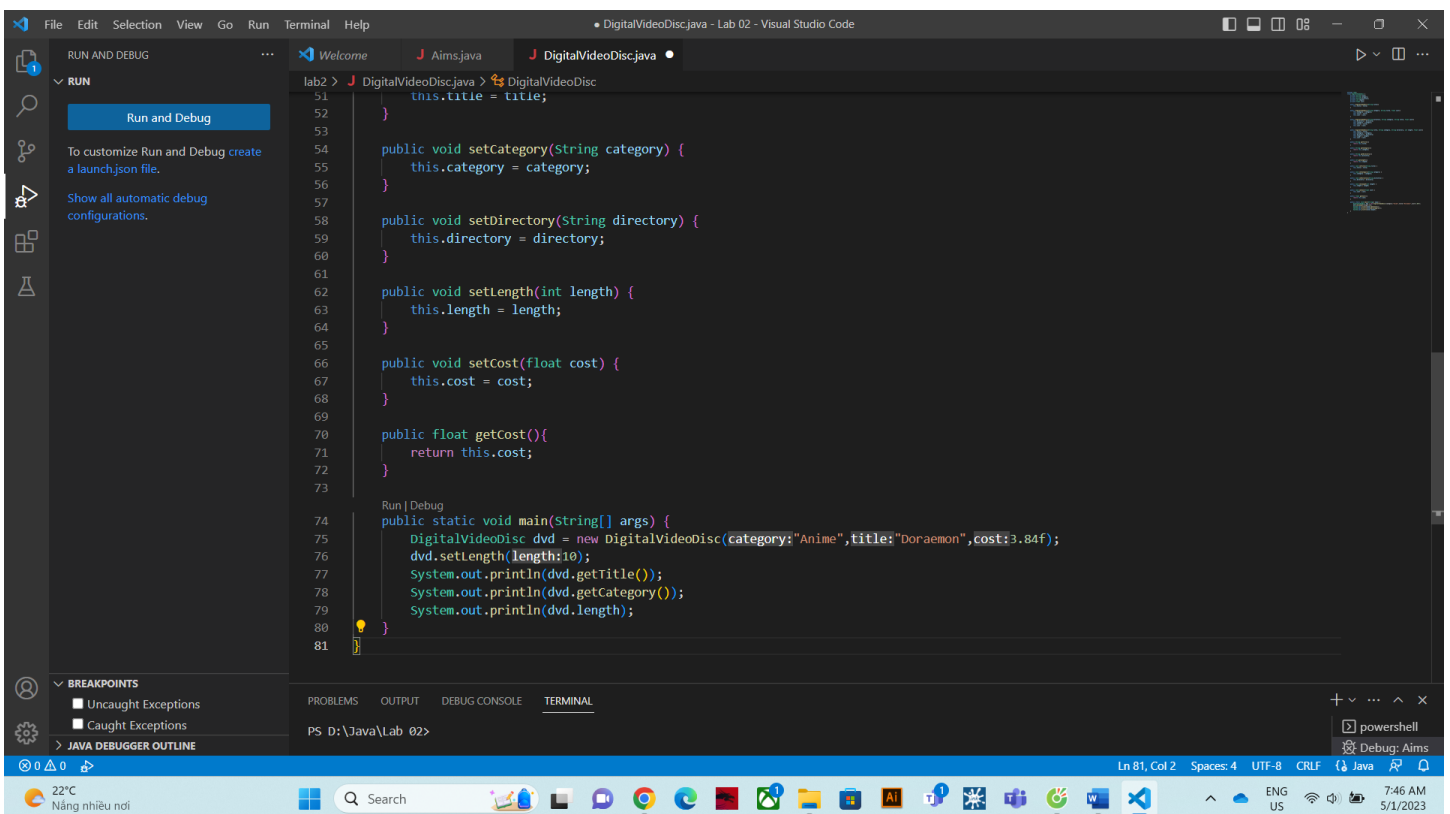
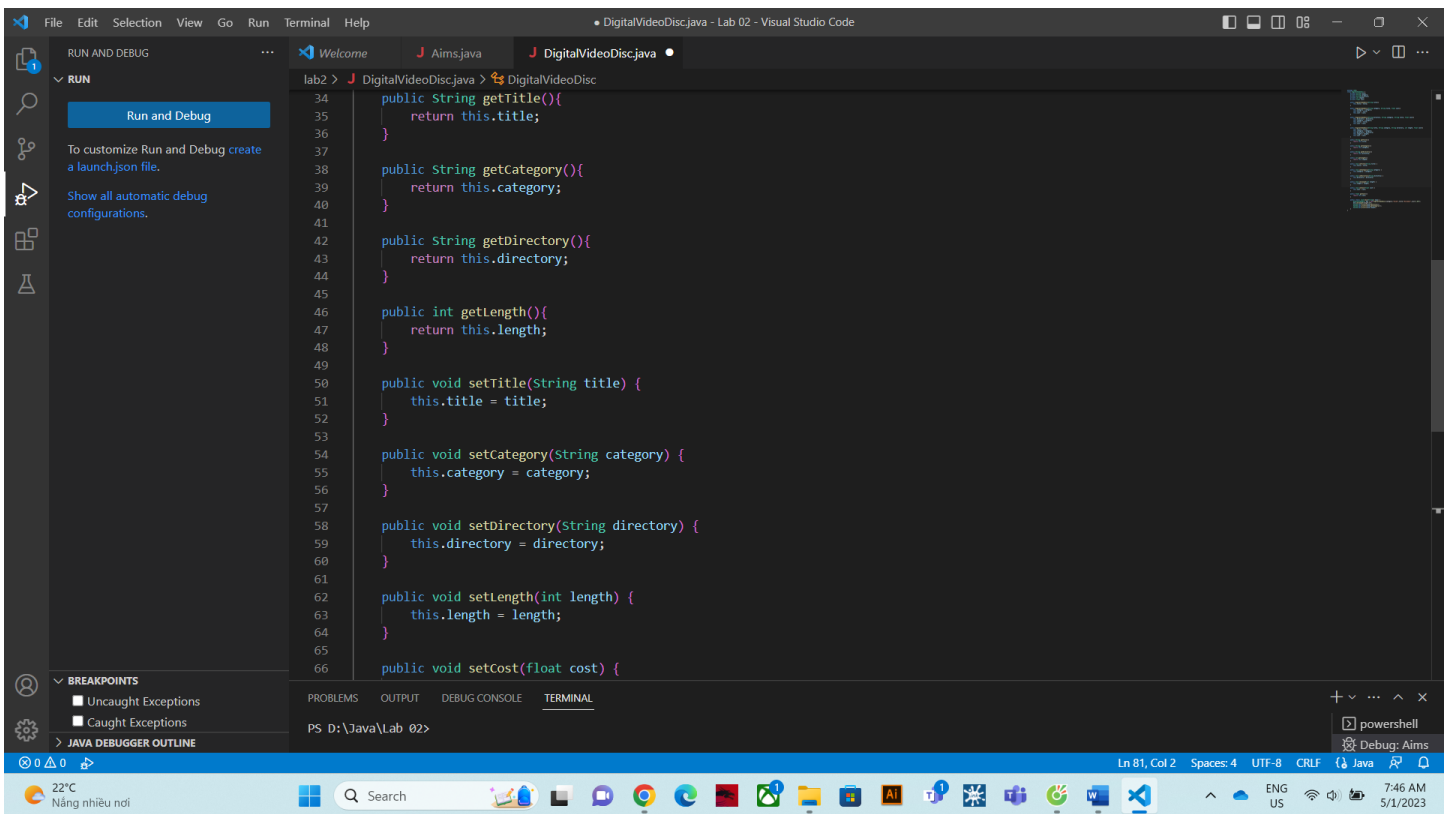
class DigitalVideoDisc {
    private String title;
    private String category;
    private String directory;
    private int length;
    private float cost;

    public DigitalVideoDisc(String title){
        this.title = title;
    }

    public DigitalVideoDisc(String category, String title, float cost){
        this.category = category;
        this.title = title;
        this.cost = cost;
    }

    public DigitalVideoDisc(String directory, String category, String title, float cost){
        this.directory = directory;
        this.category = category;
        this.title = title;
        this.cost = cost;
    }

    public DigitalVideoDisc(String title, String category, String directory, int length, float cost){
        this.title = title;
        this.category = category;
        this.directory = directory;
        this.length = length;
        this.cost = cost;
    }
}
```



5. Cart class

File Edit Selection View Go Run Terminal Help

Cart.java - Lab 02 - Visual Studio Code

lab2 > J Cart.java > Cart > main(String[])

```
1 package lab2;
2 class Cart {
3     public static final int MAX_NUMBERS_ORDERED = 20;
4     private int qtyOrdered = 0;
5     private DigitalVideoDisc itemsOrdered[] = new DigitalVideoDisc[MAX_NUMBERS_ORDERED];
6
7     public Cart(){
8         System.out.println("An cart has been created");
9     }
10
11     public void addDigitalVideoDisc(DigitalVideoDisc dvd){
12         if(this.qtyOrdered >= MAX_NUMBERS_ORDERED)
13             System.out.println("The cart is almost full");
14         else{
15             this.itemsOrdered[this.qtyOrdered] = dvd;
16             this.qtyOrdered++;
17             System.out.println("The disc has been added");
18         }
19     }
20
21     public void removeDigitalVideoDisc(DigitalVideoDisc dvd){
22         int pos = -1;
23         for(int i = 0; i < this.qtyOrdered; i++){
24             if(this.itemsOrdered[i] == dvd){
25                 pos = i;
26                 break;
27             }
28         }
29         if(pos < 0) System.out.println("No such disc found!");
30         else{
31             for(int i = pos; i < this.qtyOrdered-1; i++){
32                 this.itemsOrdered[i] = this.itemsOrdered[i+1];
33             }
34             this.qtyOrdered = this.qtyOrdered - 1;
35         }
36     }
37 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS D:\Java\Lab 02>

Ln 63, Col 6 Spaces: 4 UTF-8 CRLF Java Debug: Aims

22°C Năng nhiều nơi

File Edit Selection View Go Run Terminal Help

Cart.java - Lab 02 - Visual Studio Code

lab2 > J Cart.java > Cart > main(String[])

```
34 }
35
36
37 public double totalCost(){
38     double result = 0;
39     for(int i = 0; i < this.qtyOrdered; i++){
40         result = result + this.itemsOrdered[i].getCost();
41     }
42     return result;
43 }
44
45 public int getQtyOrdered() {
46     return this.qtyOrdered;
47 }
48
49 Run | Debug
50 public static void main(String[] args) {
51     Cart cart = new Cart();
52     DigitalVideoDisc dvd1 = new DigitalVideoDisc(category:"Animation", title:"Doraemon", cost:1.80f);
53     DigitalVideoDisc dvd2 = new DigitalVideoDisc(category:"Drama", title:"Mr.Queen", cost:3.81f);
54     DigitalVideoDisc dvd3 = new DigitalVideoDisc(category:"Animation", title:"Aladin", cost:18.99f);
55     cart.addDigitalVideoDisc(dvd1);
56     cart.addDigitalVideoDisc(dvd2);
57     cart.addDigitalVideoDisc(dvd3);
58
59     System.out.printf(format:"%.3f\n", cart.totalCost());
60     System.out.println("The number of disc is: " + cart.getQtyOrdered());
61
62     cart.removeDigitalVideoDisc(dvd3);
63     System.out.printf(format:"%.3f\n", cart.totalCost());
64     System.out.println("The number of disc is: " + cart.getQtyOrdered());
65 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS D:\Java\Lab 02>

Ln 63, Col 6 Spaces: 4 UTF-8 CRLF Java Debug: Aims

22°C Năng nhiều nơi