

# BÁO CÁO THỰC HÀNH LAB 2

## LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

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## 1. Bài toán đặt ra

- Thiết kế hệ thống cho dự án AIMS (Chỉ có một loại phương tiện DVD).

## 2. Yêu cầu hệ thống

### 2.1. Đối với Customer:

- Duyệt danh sách các DVD có sẵn
- Tìm kiếm DVD theo: Tiêu đề, danh mục, khoảng giá
- Xem thông tin chi tiết một DVD
- Thêm DVD vào giỏ hàng
- Xem giỏ hàng
- Sắp xếp DVD theo tiêu đề hoặc chi phí
- Cập nhật số lượng DVD trong giỏ hàng
- Đặt hàng

### 2.2. Đối với Store Manager:

- Đăng nhập, kiểm tra quyền
- Xem danh sách các đơn hàng đang được xử lý
- Xem chi tiết đơn hàng
- Thêm mới / xóa danh sách sản phẩm

### 3. Use Case Diagram

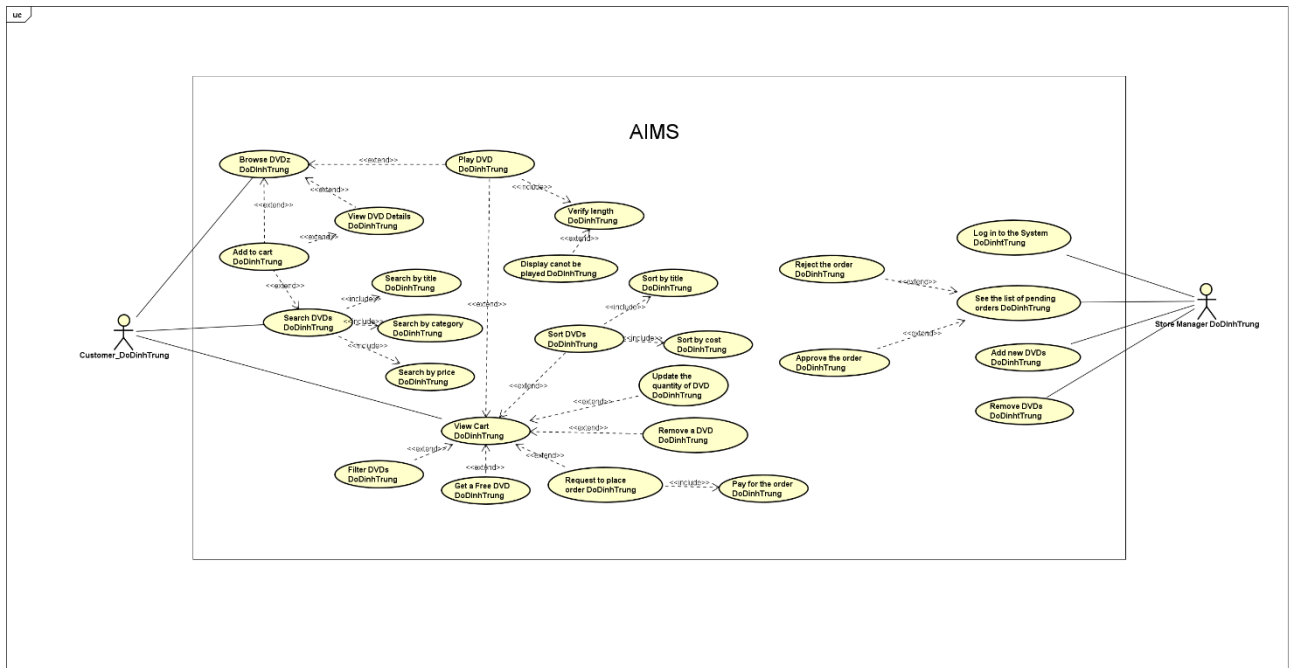


Figure 1: Use Case Diagram

## 4. Class Diagram

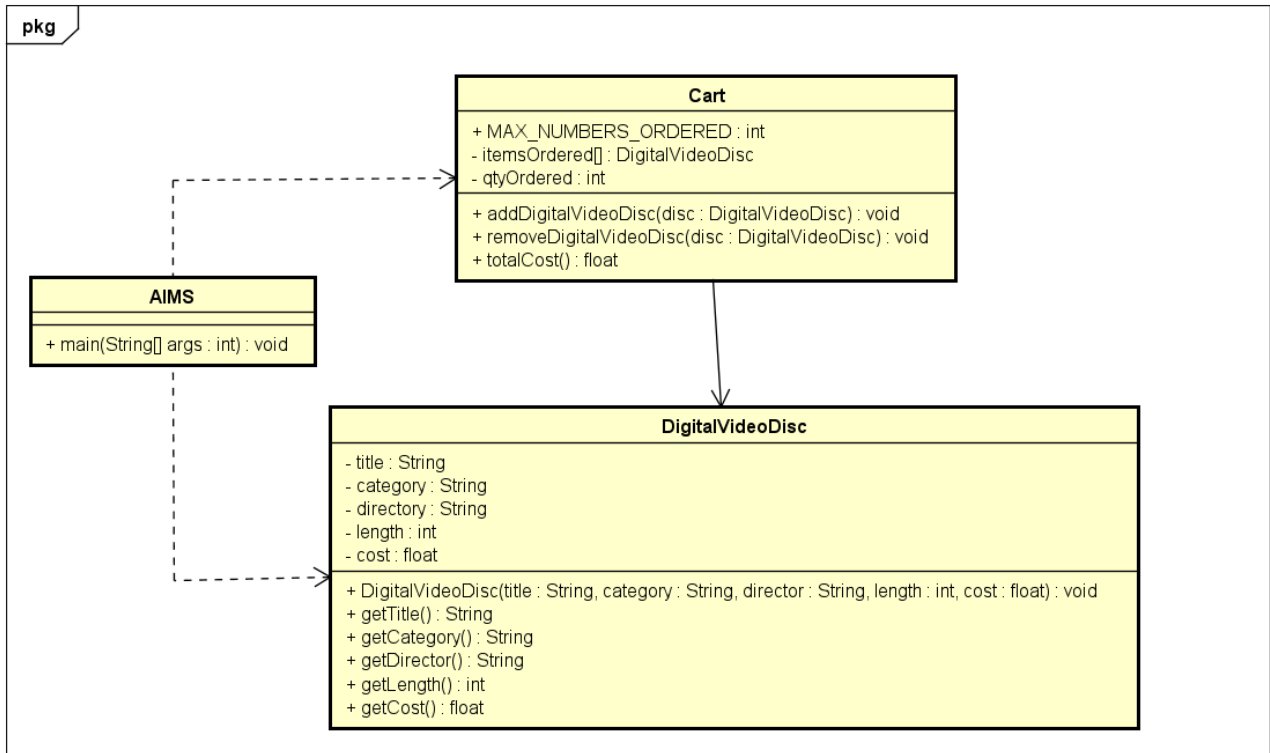


Figure 2: Class Diagram

## 5. Source Code

### 5.1. Aims Class

```
1 public class Aims {
2     //Do Dinh Trung 20226128
3     public static void main(String[] args) {
4         //Create a new cart
5         Cart anOrder = new Cart();
6
7         //Create new dvd objects and add them to the cart
8         DigitalVideoDisc dvd1 = new DigitalVideoDisc("The Lion King", "Animation", "Roger Allers", 87, 19.95f);
9         anOrder.addDigitalVideoDisc(dvd1);
10        DigitalVideoDisc dvd2 = new DigitalVideoDisc("Star Wars", "Science Fiction", "George Lucas", 87, 24.95f);
11        anOrder.addDigitalVideoDisc(dvd2);
12        DigitalVideoDisc dvd3 = new DigitalVideoDisc("Aladin", "Animation", 18.99f);
13        anOrder.addDigitalVideoDisc(dvd3);
14
15        //print total cost of the items in the cart
16        System.out.println("DoDinhTrung-20226128-Total Cost is: ");
17        System.out.println(anOrder.totalCost());
18    }
19 }
20
```

Figure 3: Aims Class

## 5.2. DigitalVideoDisc Class

```
1 public class DigitalVideoDisc {
2     //Do Dinh Trung 20226128
3     private String title;
4     private String category;
5     private String director;
6     private int length;
7     private float cost;
8
9
10    public String getTitle() {
11        return this.title;
12    }
13
14    public String getCategory() {
15        return this.category;
16    }
17
18    public String getDirector() {
19        return this.director;
20    }
21
22    public int getLength() {
23        return this.length;
24    }
25
26    public float getCost() {
27        return this.cost;
28    }
29 }
```

Figure 4: DigitalVideoDisc Class 1

```
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 director, String category, String title, float cost) {
    director = director;
    this.category = category;
    this.title = title;
    this.cost = cost;
}

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

Figure 5: DigitalVideoDisc Class 2

### 5.3. Cart Class

```
1 public class Cart {
2     //Do Dinh Trung 20226128
3     public static final int MAX_NUMBERS_ORDERED = 20;
4     private DigitalVideoDisc itemsOrdered[] = new DigitalVideoDisc[MAX_NUMBERS_ORDERED];
5     private int qtyOrdered = 0;
6
7     public void addDigitalVideoDisc(DigitalVideoDisc disc) {
8         if (qtyOrdered < MAX_NUMBERS_ORDERED) {
9             itemsOrdered[qtyOrdered] = disc;
10            qtyOrdered++;
11            System.out.println("DoDinhTrung-20226128-The disc " + disc.getTitle() + " has been added.");
12        } else {
13            System.out.println("DoDinhTrung-20226128-The cart is full! Cannot add more discs.");
14        }
15    }
16
17    public void removeDigitalVideoDisc(DigitalVideoDisc disc){
18        for (int i = 0; i < qtyOrdered; i++) {
19            if (itemsOrdered[i].equals(disc)) {
20                for (int j = i; j < qtyOrdered - 1; j++) {
21                    itemsOrdered[j] = itemsOrdered[j + 1];
22                }
23                itemsOrdered[qtyOrdered - 1] = null;
24                qtyOrdered--;
25                System.out.println("DoDinhTrung-20226128-The disc " + disc.getTitle() + " has been removed.");
26                return;
27            }
28        }
29        System.out.println("DoDinhTrung-20226128-Disc not found in cart.");
30    }
31 }
```

Figure 6: Cart Class 1



```
public float totalCost(){  
    float result = 0;  
    for(int i = 0; i < qtyOrdered; i++){  
        result += itemsOrdered[i].getCost();  
    }  
    return result;  
}
```

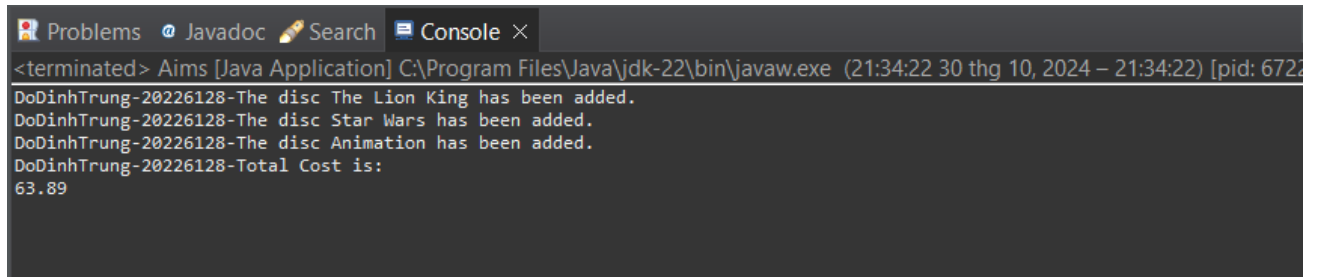
Figure 7: Cart Class 2

## 6. Kết quả demo

```
public class Aims {  
    //Do Dinh Trung 20226128  
    public static void main(String[] args) {  
        //Create a new cart  
        Cart anOrder = new Cart();  
  
        //Create new dvd objects and add them to the cart  
        DigitalVideoDisc dvd1 = new DigitalVideoDisc("The Lion King", "Animation", "Roger Allers", 87, 19.95f);  
        anOrder.addDigitalVideoDisc(dvd1);  
        DigitalVideoDisc dvd2 = new DigitalVideoDisc("Star Wars", "Science Fiction", "George Lucas", 87, 24.95f);  
        anOrder.addDigitalVideoDisc(dvd2);  
        DigitalVideoDisc dvd3 = new DigitalVideoDisc("Aladin", "Animation", 18.99f);  
        anOrder.addDigitalVideoDisc(dvd3);  
  
        //print total cost of the items in the cart  
        System.out.println("DoDinhTrung-20226128-Total Cost is: ");  
        System.out.println(anOrder.totalCost());  
    }  
}
```

Figure 8: Code Demo

Kết quả:



```
Problems Javadoc Search Console X
<terminated> Aims [Java Application] C:\Program Files\Java\jdk-22\bin\javaw.exe (21:34:22 30 thg 10, 2024 – 21:34:22) [pid: 6722]
DoDinhTrung-20226128-The disc The Lion King has been added.
DoDinhTrung-20226128-The disc Star Wars has been added.
DoDinhTrung-20226128-The disc Animation has been added.
DoDinhTrung-20226128-Total Cost is:
63.89
```

Figure 9: Result

