

HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY  
School of Information and Communications Technology

Final Report  
Version 1.1

AIMS: An Internet Media Store  
Software Design and Construction

Group 21  
Phan Đức Thịnh 20204693  
Hoàng Đức Thành 20204689  
Tạ Tiên Thành 20194176  
Mai Văn Tiến 20194183

*Hanoi, 1/2024*

## Contents

1.	Team's members contribution .....	3
2.	Use Case Diagrams.....	3
2.1.	Use Case Diagram .....	3
2.2.	Businesss processes .....	3
2.3.	Case Specification .....	5
2.3.1.	<b><i>UC001: Refund</i></b> .....	<b>5</b>
2.3.2.	<b><i>UC002: Search Products</i></b> .....	<b>6</b>
2.3.3.	<b><i>UC003 Detail Products</i></b> .....	<b>8</b>
2.3.4.	<b><i>UC004 Process Order</i></b> .....	<b>9</b>
2.3.5.	<b><i>UC005 Add media</i></b> .....	<b>11</b>
2.3.6.	<b><i>UC006 Update media</i></b> .....	<b>13</b>
2.3.7.	<b><i>UC007 Delete diagram</i></b> .....	<b>16</b>
3.	Use Case Analysis .....	20
3.1.	Use Case “Refund” .....	20
3.1.1.	<b><i>Sequence Diagram for UC “Refund”</i></b> .....	<b>20</b>
3.1.2.	<b><i>Analysis Class Diagram for UC “Refund”</i></b> .....	<b>20</b>
	<b>20</b>	
3.2.	Use Case “Search Products” .....	21
3.2.1.	<b><i>Sequence Diagram for UC “Search Products”</i></b> .....	<b>21</b>
3.2.2.	<b><i>Analysis Class Diagram for UC "Search Products"</i></b> .....	<b>21</b>
3.3.	Use Case “Detail Products” .....	22
3.3.1.	<b><i>Sequence Diagram for UC “Detail Products”</i></b> .....	<b>22</b>
	<b>22</b>	
3.3.2.	<b><i>Analysis Class Diagram for UC "Detail Products"</i></b> .....	<b>22</b>
3.4	Use Case “Process Order” .....	22
3.4.1	<b><i>Sequence Diagram for UC “Process Order”</i></b> .....	<b>22</b>
3.4.2	<b><i>Analysis Class Diagram for UC "Process Order"</i></b> .....	<b>23</b>
3.5	Use Case “Add meadia” .....	24
3.5.1	<b><i>Sequence Diagram for UC “Add media”</i></b> .....	<b>24</b>
3.5.2	<b><i>Analysis Class Diagram for UC "Add media"</i></b> .....	<b>24</b>
3.6	Use Case “Update Media” .....	25
3.6.1	<b><i>Sequence Diagram for UC “Update Media”</i></b> .....	<b>25</b>

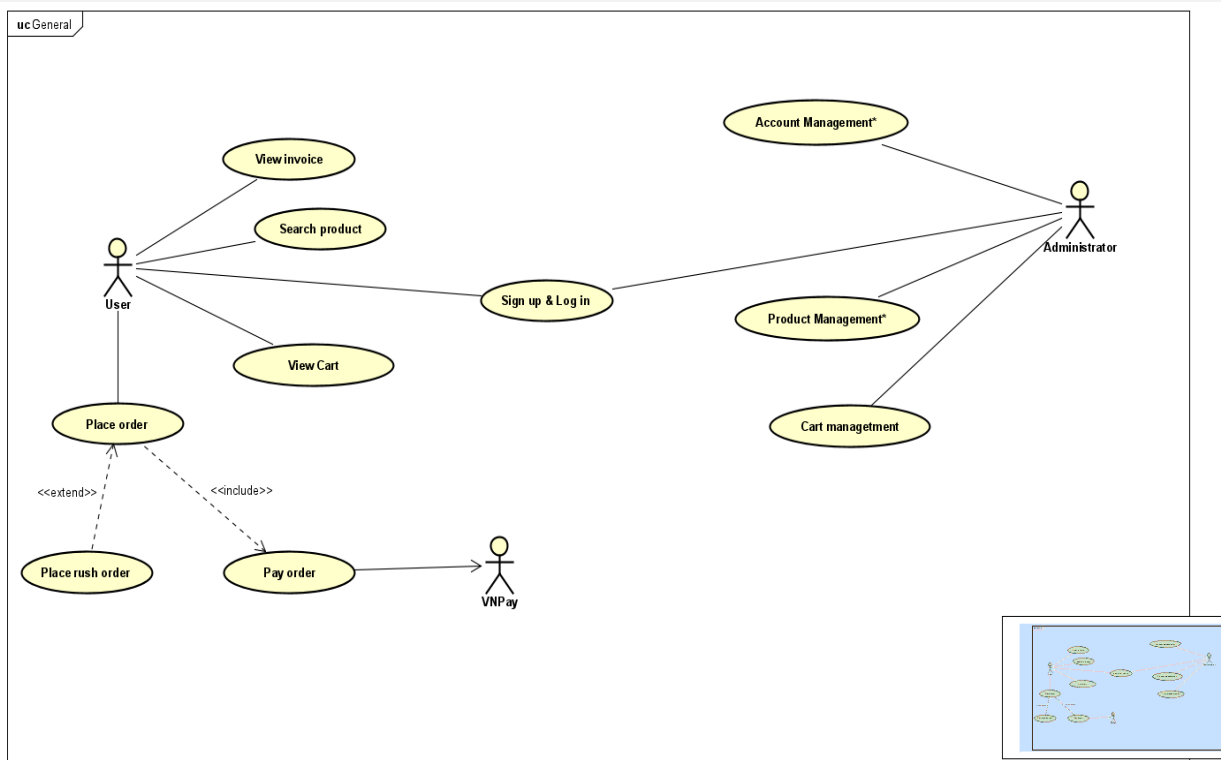
3.6.2	<b><i>Analysis Class Diagram for UC "Update Media"</i></b> .....	<b>26</b>
3.7	Use Case "Delete Media" .....	27
3.7.1	<b><i>Sequence Diagram for UC "Delete Media"</i></b> .....	<b>27</b>
3.7.2	<b><i>Analysis Class Diagram for UC "Process Order"</i></b> .....	<b>28</b>
4	Interface Design .....	30
4.1	User Interface Design .....	30
4.2	System Interface Design .....	36
5	Class Design .....	37
5.1	General Class Diagram .....	37
5.2	Relationship Class Diagram .....	37
5.3	Class Design.....	38
5.3.1	HomeScreenHandler .....	38
5.3.2	MediaDetailHandler .....	38
6	Data Modeling .....	38
6.1	Conceptual Data Model .....	38
6.2	Database Design .....	39
6.2.1.	<b><i>Logical Data Model</i></b> .....	<b>39</b>

## 1. Team's members contribution

Name	Role	Contribution
Phan Đức Thịnh	Team Leader	Process order
Tạ Tiến Thành	Member	Search, filter and pagination products
Hoàng Đức Thành	Member	Product Manager
Mai Văn Tiến	Member	View list invoice, product detail

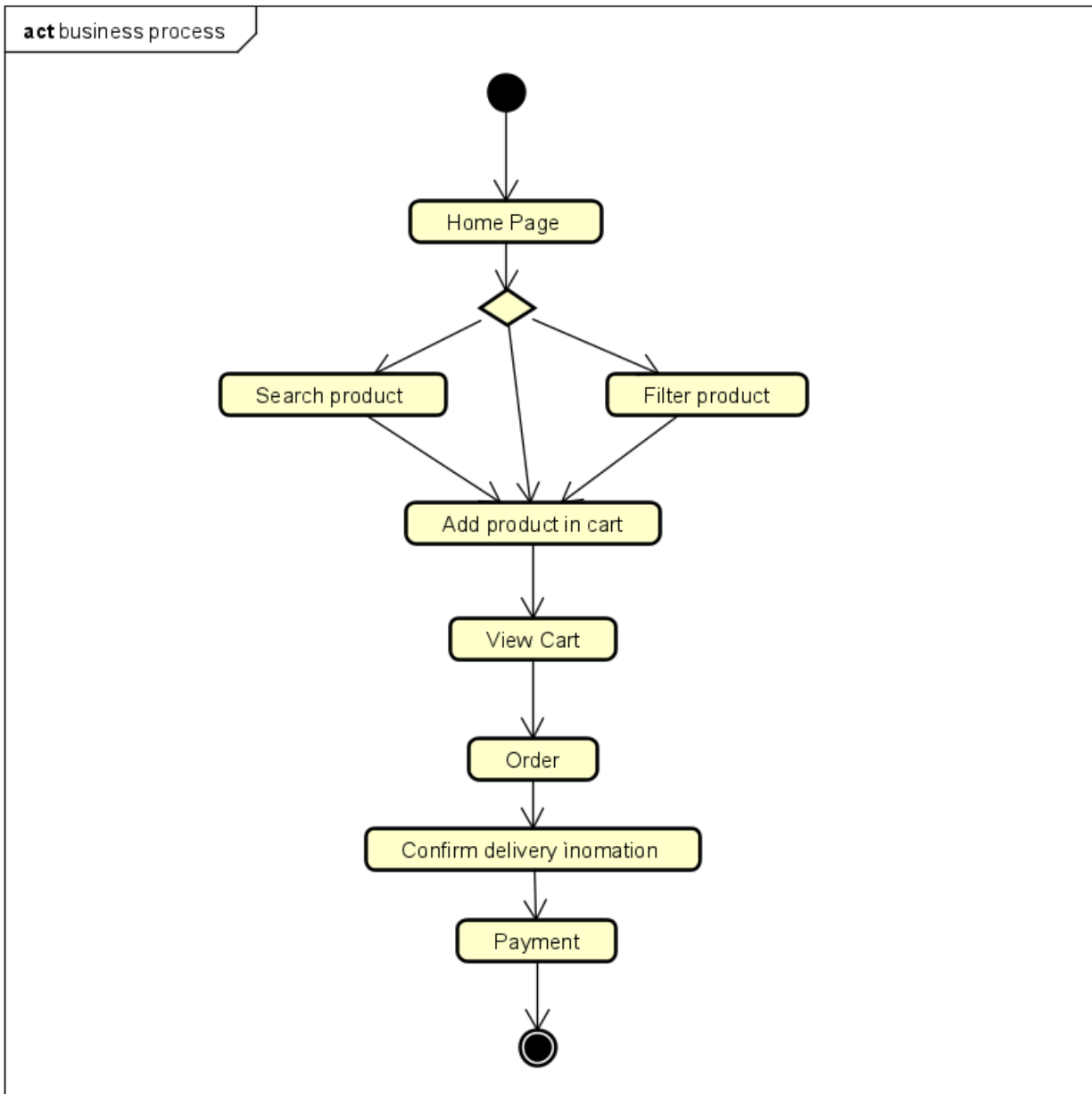
## 2. Use Case Diagrams

### 2.1. Use Case Diagram



**Figure 1: General Use Case Diagram**

### 2.2. Business processes



**Figure 2: Activity Diagram of customer's usage process**

## 2.3. Case Specification

### 2.3.1. UC001: Refund

## Use Case “Refund”

### 1. Use Case code

UC001

### 2. Brief Description

This use case describes the interaction between Customer and system when Customer perform order refund.

### 3. Actors

**Customer**

### 4. Preconditions

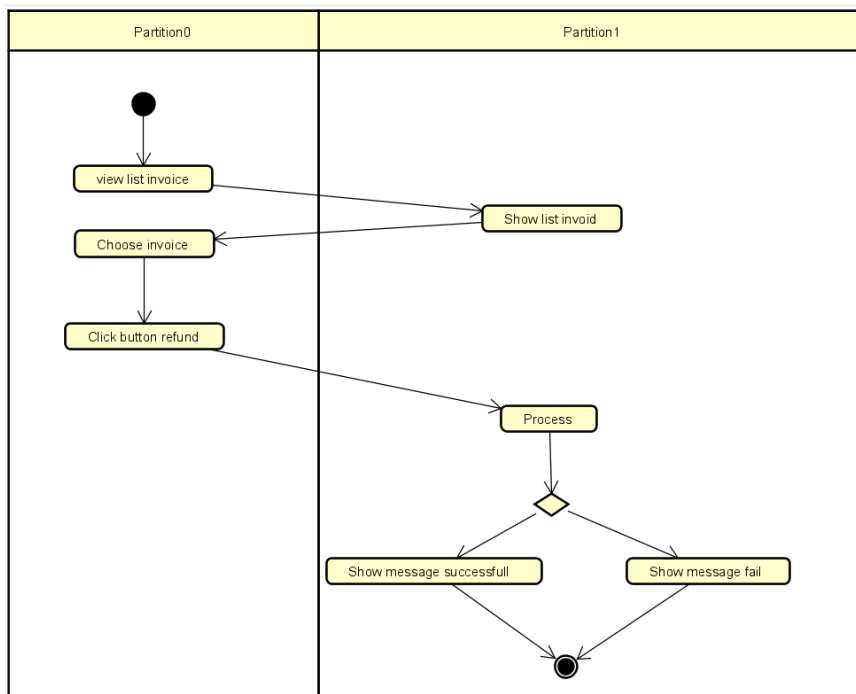
The customer has viewed invoice

### 5. Basic Flow of Events

1. The system displays list invoice information (UC001)
2. The customer selects the invoice that needs a refund
3. The system processing the refund
4. The system displays successful refund results

### 6. Alternative Flows

### 7. Activity Diagram



### **2.3.2. UC002: Search Products**

## **Use Case “Search Products”**

### **1. Use Case code**

UC002

### **2. Brief Description**

This use case describes the interaction between Customer and AIMS system when Customer wishes to search products

### **3. Actors**

**Customer**

### **4. Preconditions**

The customer has viewed the product list

### **5. Basic Flow of Events**

1. Customer enters search keywords in the search box
2. Customer clicks the search button
3. The system gets products suitable for keywords
4. The system checks the number of products matching the keyword
5. The system displays a list of at most 20 products on one page matching the keyword

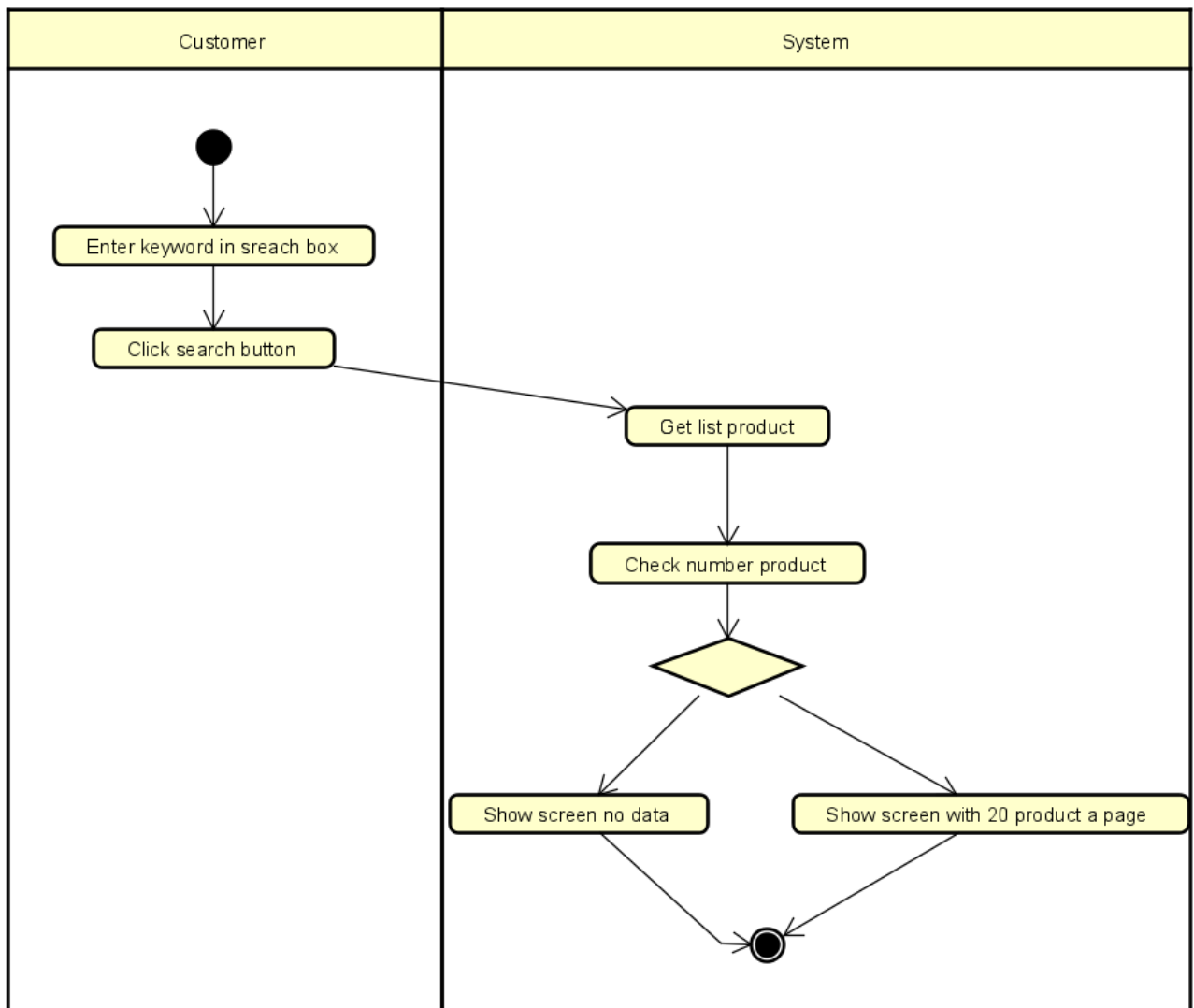
## 6. Alternative Flows

**Table 4 -Alternative Flow of Use case "Search Products"**

No	Location	Condition	Action	Resume Location
1.	5	If there are no products matching the keyword	<ul style="list-style-type: none"> <li>The system displays the message: There are no data</li> </ul>	
2.		If there are more than 20 products matching the keyword	<ul style="list-style-type: none"> <li>Customer clicks the next or pre button to see the full product list</li> </ul>	5

## 7. Activity Diagram

actActivity Diagramz





### **2.3.3. UC003 Detail Products**

## **Use Case “Detail Products”**

### **1. Use Case code**

UC003

### **2. Brief Description**

This use case describes viewing product details

### **3. Actors**

**Customer**

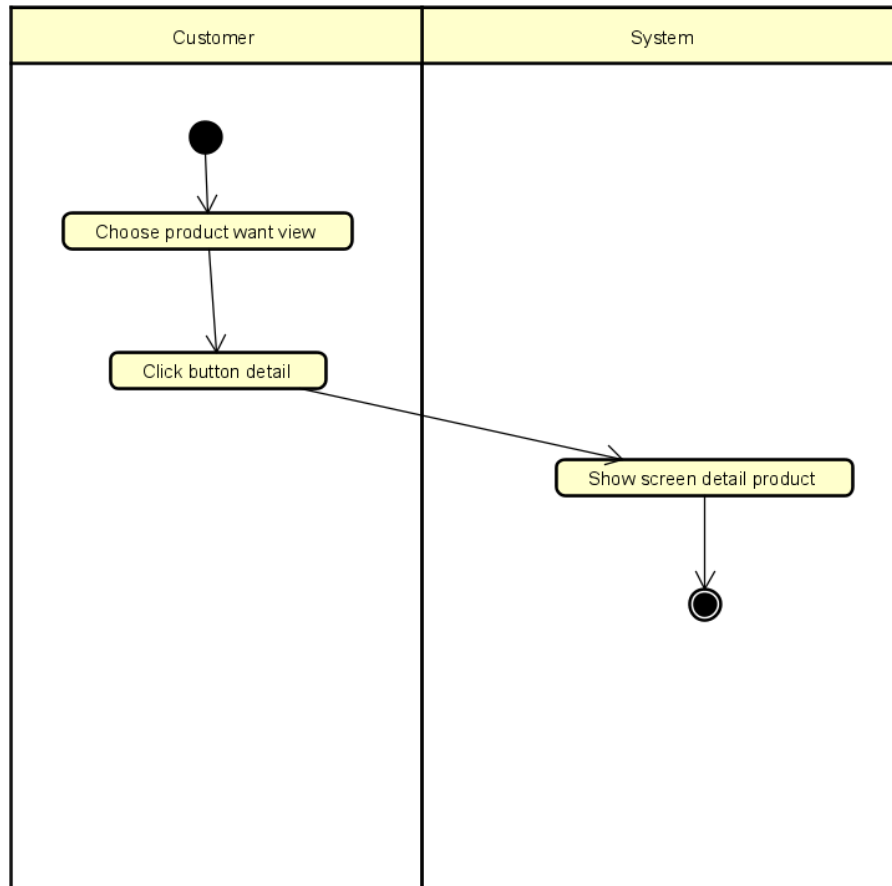
### **4. Preconditions**

The customer has viewed detail product

### **5. Basic Flow of Events**

## 6. Alternative Flows

## 7. Activity Diagram



### 2.3.4. UC004 Process Order

## Use Case “Process Order”

### 1. Use Case code

UC004

### 2. Brief Description

This use case describes admin process order of customer

### 3. Actors

**Admin**

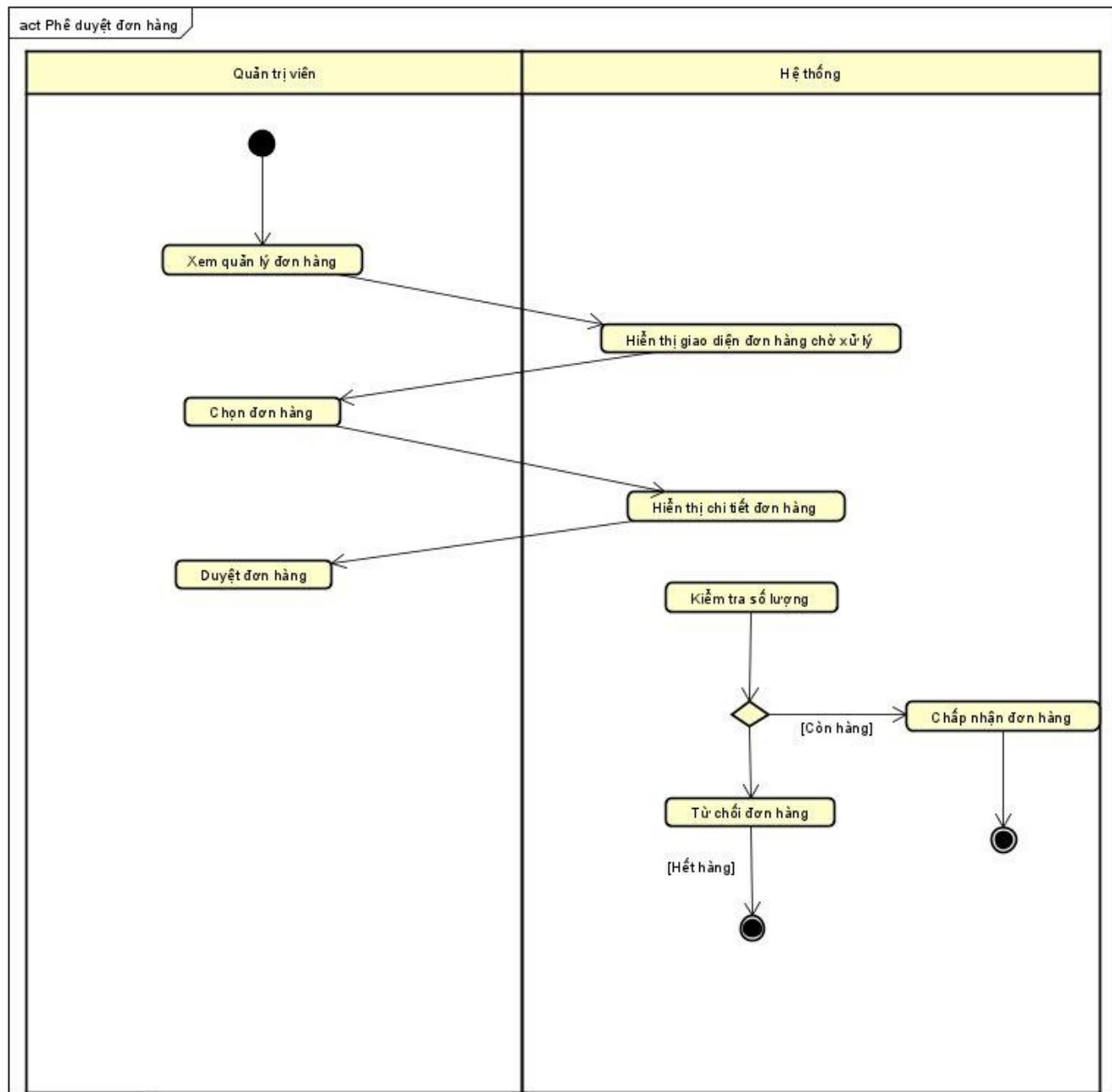
### 4. Preconditions

The customer has created order, the uses login with role admin

### 5. Basic Flow of Events

## 6. Alternative Flows

## 7. Activity Diagram



### 2.3.5. UC005 Add media

## 1. Use case code

UC005

## 2. Brief Description

This use case describes the interaction between admin and system when the admin wishes to Add New Media

## 3. Actors

Admin

## 4. Preconditions

## 5. Basic Flow of Events

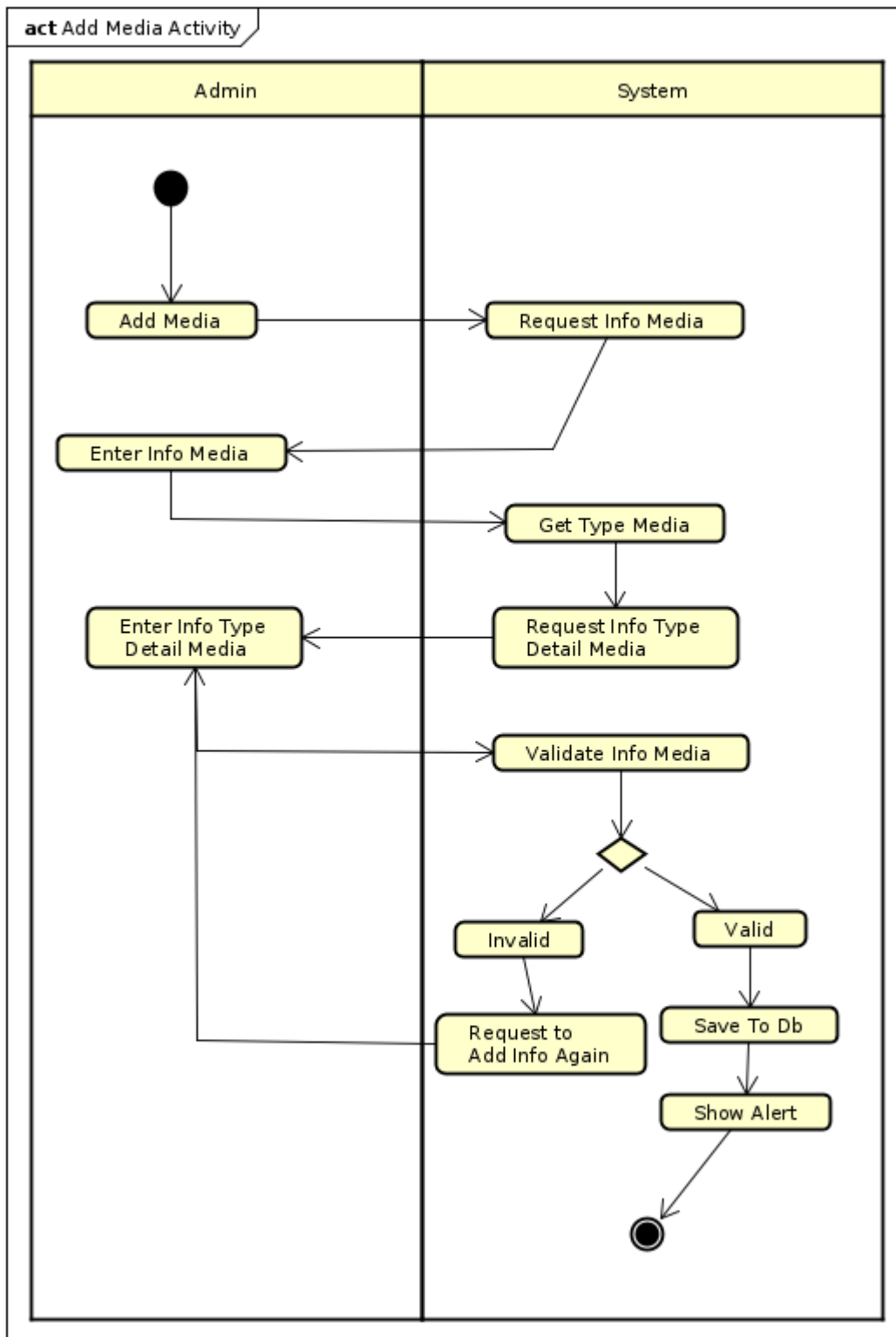
- 1.Admin select Add Media function
- 2.System display form to input Info Media
- 3.Admin Input Info Media
- 4.System get type and show type detail form
- 5.Admin Input type detail Info Media
- 6.System save Info Media to Db

## 6. Alternative flows

**Table 2 flows of events for UC Add Media**

No	Location	Condition	Action	Resume location
1.	After step 3	If Admin input invalid info	System Notify warning	Use case ends
2.	Before step 6	If Admin want cancel process	Revert data maybe save to database	Use case ends

## 7. Activity diagram



## 8. Input data

**Table 3 Input of Media**

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Info Media	Info of Media	Yes	-Have all require Info -price isn't over 150% or less than 30% of value	-type:Book -category:story -price:32 -quantity:12 -title:Harry Potter value:30 -image:Image
	Info Book	Info of Book Media		-cover type is hardcover or paperback	-author:CircleRow cover type:Hard Cover -publisher:Kim Dong -publish Date:14/11/2010 -nums of Page:130 -language:English -book category:comic
	Info CD	Info of CD Media			-Artist:CircleRow -Record Label:kingtop -Music Type:Pop -Released Date: 14/11/2020
	Info DVD	Info Of DVD Media			-Disc Type:Blu-ray -Director:CircleRow -Runtime:2h -Studio:Subpile -Subtitle:English -Released Date:14/11/2002 -Film Type:Single Film
No	Data fields	Description	Display format	Example	
1.	Status	Status of result add Media	String	SUCCESS	

9. 0  
output data  
Table 4  
Output of Add Media

### 2.3.6. UC006 Update media

## Use Case “Update media”

### 1. Use case code.

UC006

### 2. Brief Description

This use case describes the interaction between admin and system when the admin wishes to Add New Media

### 3. Actors

Admin

### 4. Preconditions

## 5. Basic Flow of Events

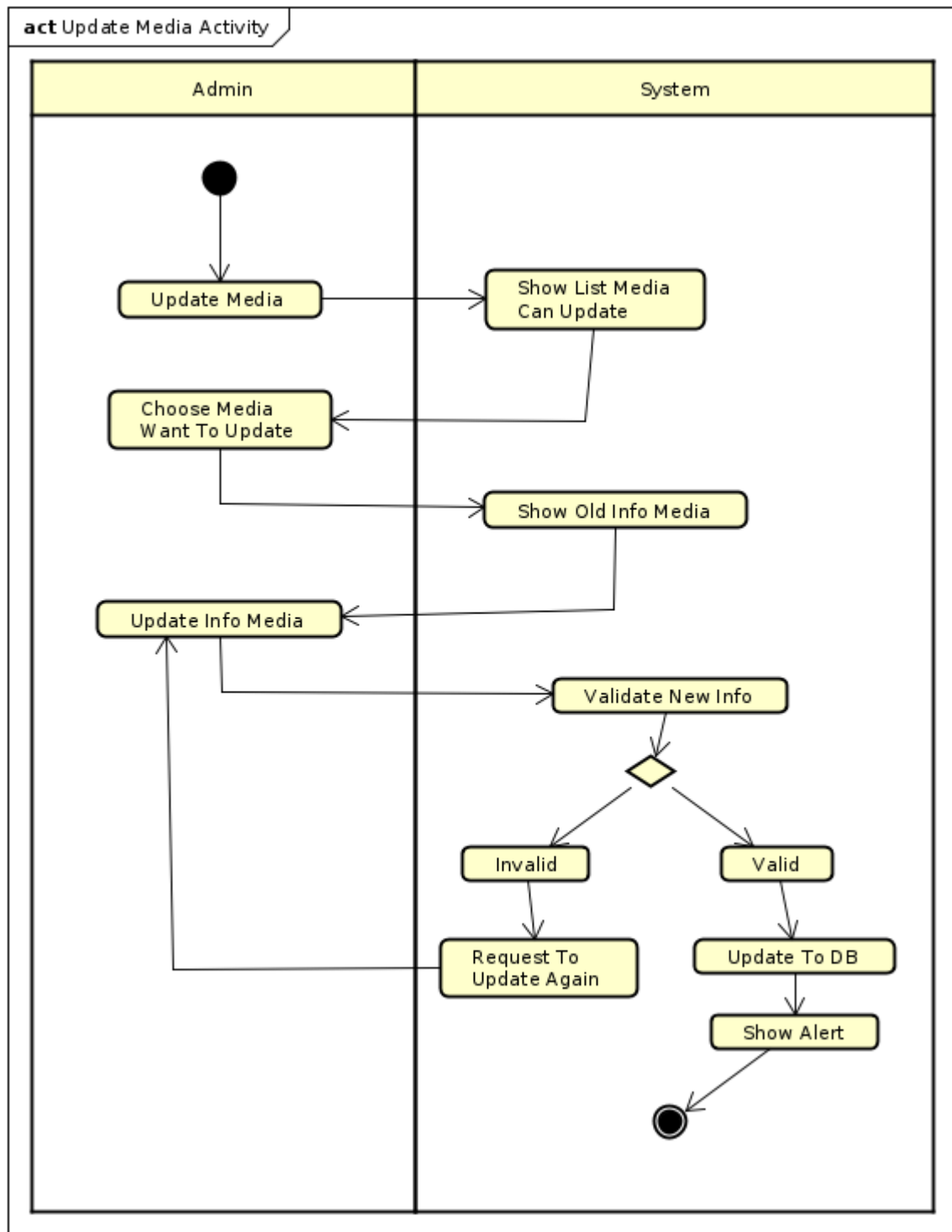
1. Admin request to update media product
2. The system displays list media product
3. The customer chooses media want to update
4. The system display old media info and access to update media
5. The customer add new info to update
6. The system validate and notify

## 6. Alternative flows

Table 5 flows of events for UC Update Media

No	Location	Condition	Action	Resume location
1.	At Step 3	If admin reach to limit media in day	System denied request	Use case ends
2.	At Step 5	New Info is Invalid	System notify to admin	Continue step 5

## 7. Activity diagram



## 8. Input data

Table 6 Input data of “Update Media”

No	Data fields	Description	Mandatory	Valid condition	Example
----	-------------	-------------	-----------	-----------------	---------



2.	Info Media	Info of Media	Yes	-Have all require Info -price isn't over 150% or less than 30% of value	-type:Book -category:story -price:32 -quantity:12 -title:Harry Potter value:30 -image:Image
	Info Book	Info of Book Media		-cover type is hardcover or paperback	-author:CircleRow cover type:Hard Cover -publisher:Kim Dong -publish Date:14/11/2010 -nums of Page:130 -language:English -book category:comic
	Info CD	Info of CD Media			-Artist:CircleRow -Record Label:kingtop -Music Type:Pop -Released Date: 14/11/2020
	Info DVD	Info Of DVD Media			-Disc Type:Blu-ray -Director:CircleRow -Runtime:2h -Studio:Subpile -Subtitle:English -Released Date:14/11/2002 -Film Type:Single Film

9. O

utput data

No	Data fields	Description	Display format	Example
1.	Status	Status of result update Media	String	SUCCESS

### 2.3.7. UC007 Delete diagram

## Use Case “Delete digram”

### 1. Use case code

UC007

### 2. Brief Description

The admin choose list media to delete

### 3. Actors

Admin

### 4. Preconditions

### 5. Basic Flow of Events

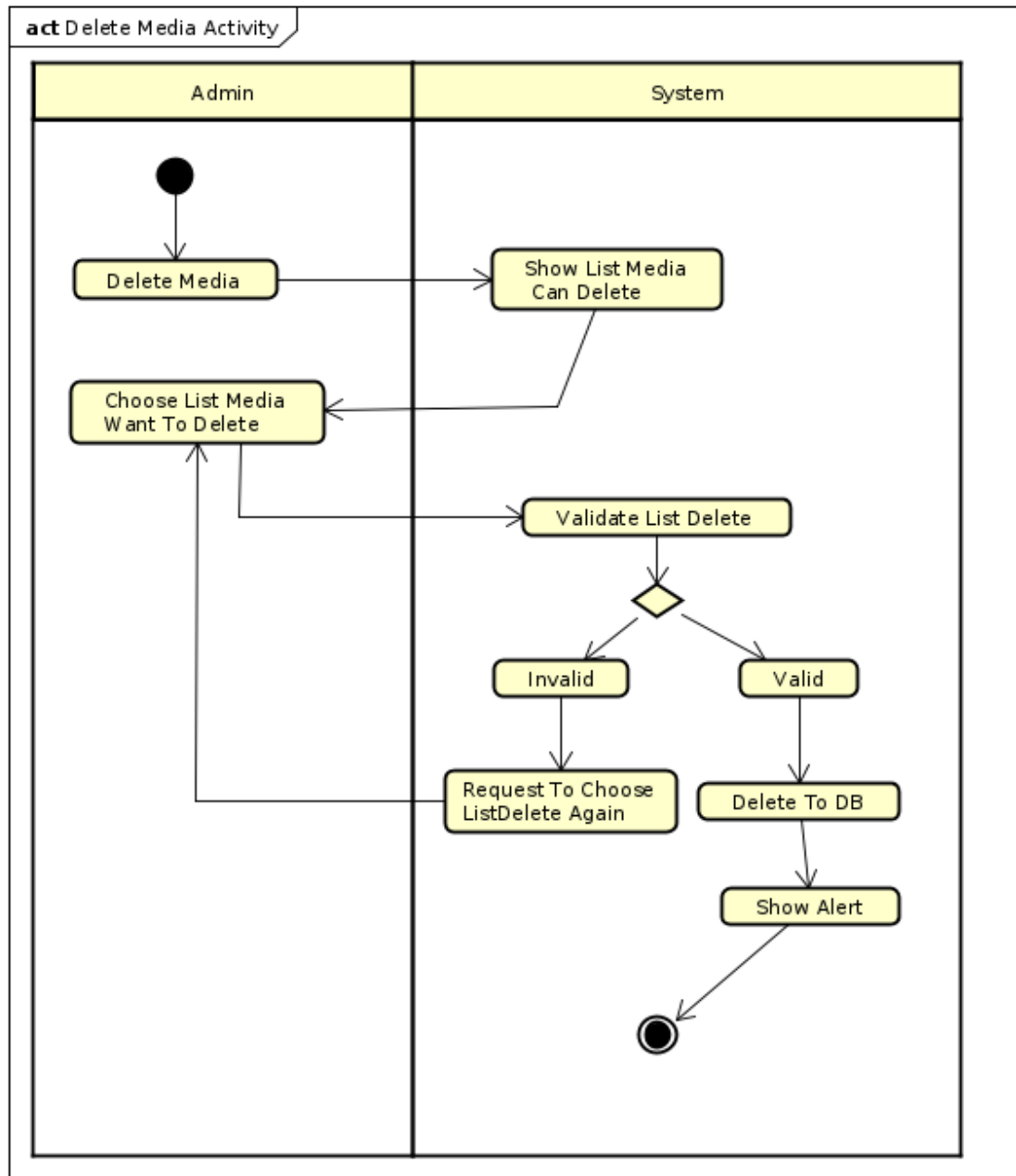
1. Admin request to delete media
2. The system shows list media can be delete
3. Admin choose list media to delete
4. The system delete media

## 6. Alternative flows

**Table N-Alternative flows of events for UC Place order**

No	Location	Condition	Action	Resume location
1	After step 3	If quality of list delete media over limit of session or day	Warning to admin adjust list delete media	Resumes at Step 3

## 7. Activity diagram



## 8. Input data

**Table 7 Input data of "Delete Media"**

No	Data fields	Description	Manda tory	Valid condition	Example
1	List Media	List Media Need To delete	Yes	list size <=10	[Media1,Media2]

## 9. Output data

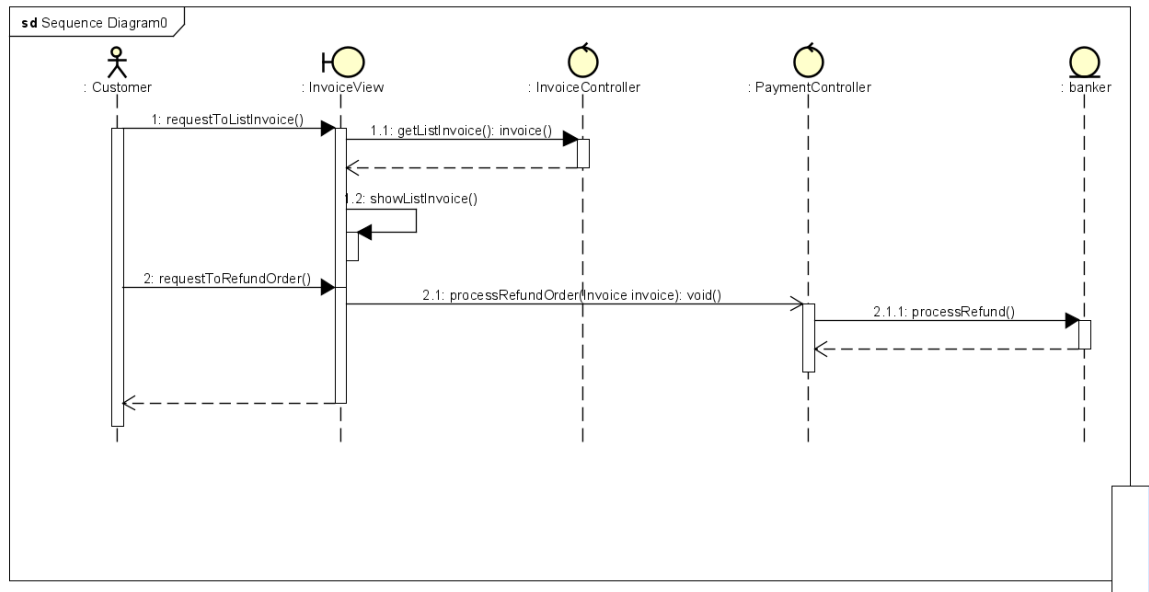
**Table 8 Output data of “Delete Media”**

No	Data fields	Description	Display format	Example
1.	Status	Status of result update Media	String	SUCCESS

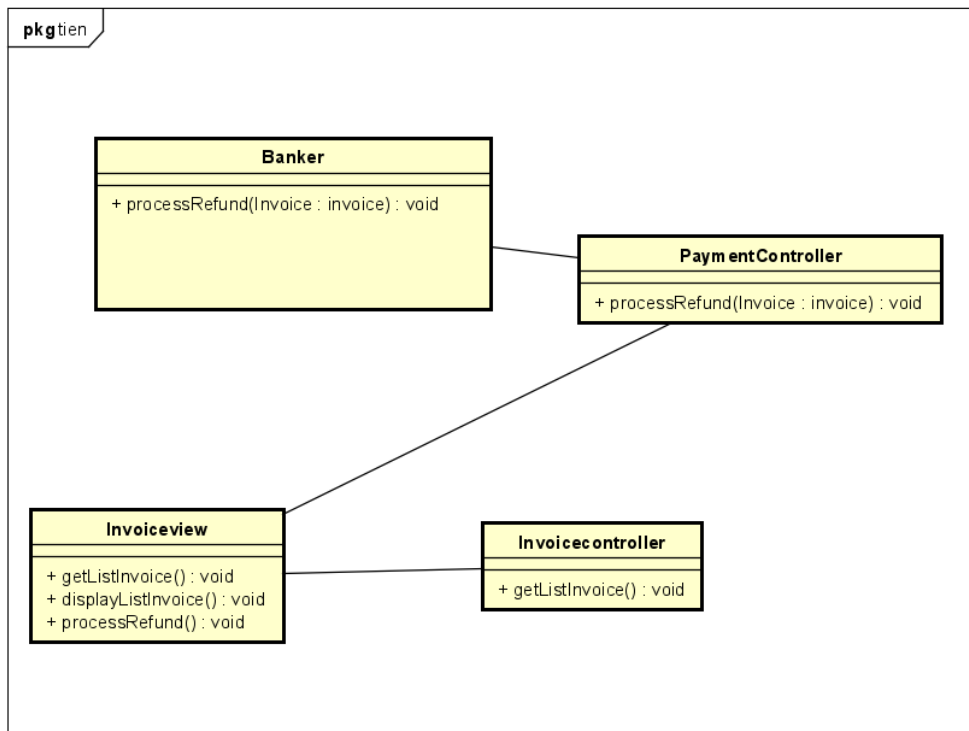
### 3. Use Case Analysis

#### 3.1. Use Case “Refund”

##### 3.1.1. Sequence Diagram for UC “Refund”

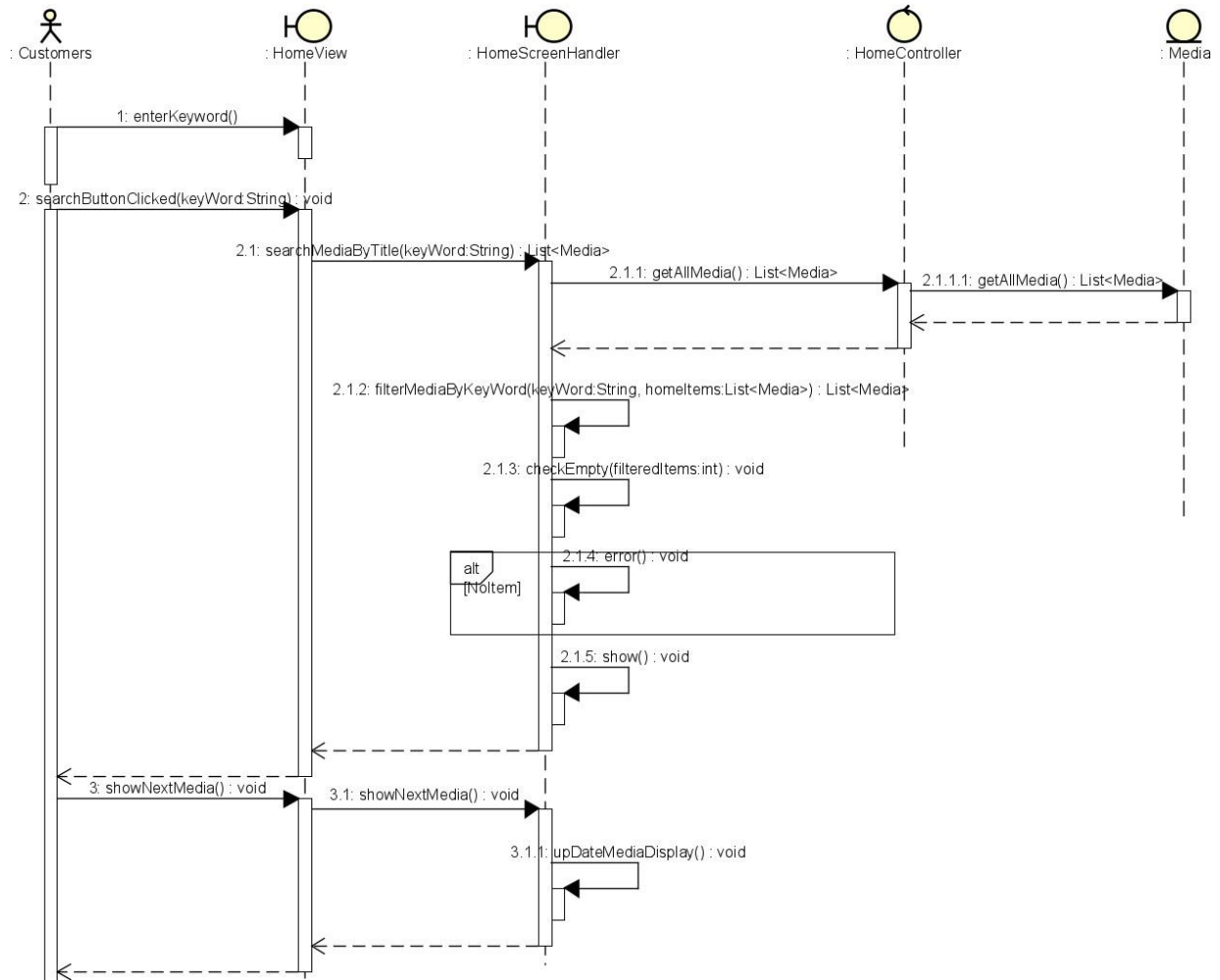


##### 3.1.2. Analysis Class Diagram for UC “Refund”

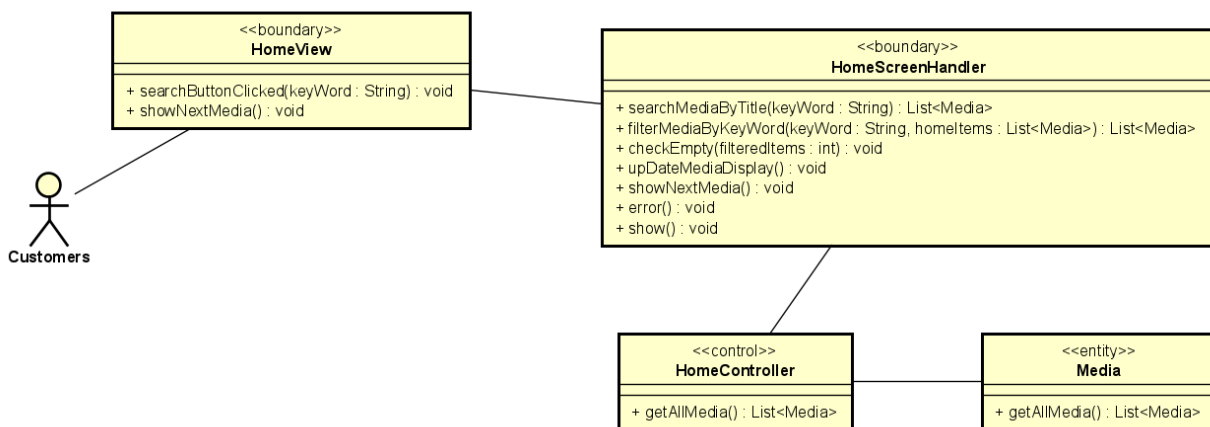


### 3.2. Use Case “Search Products”

#### 3.2.1. Sequence Diagram for UC “Search Products”

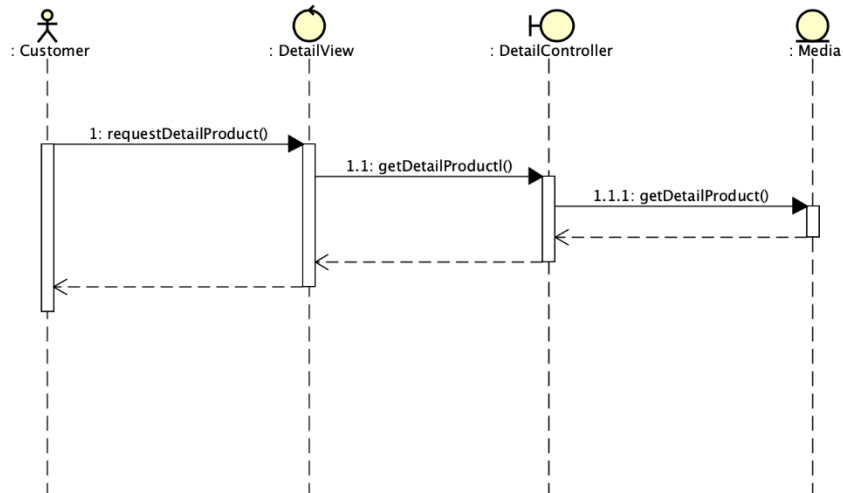


#### 3.2.2. Analysis Class Diagram for UC "Search Products"

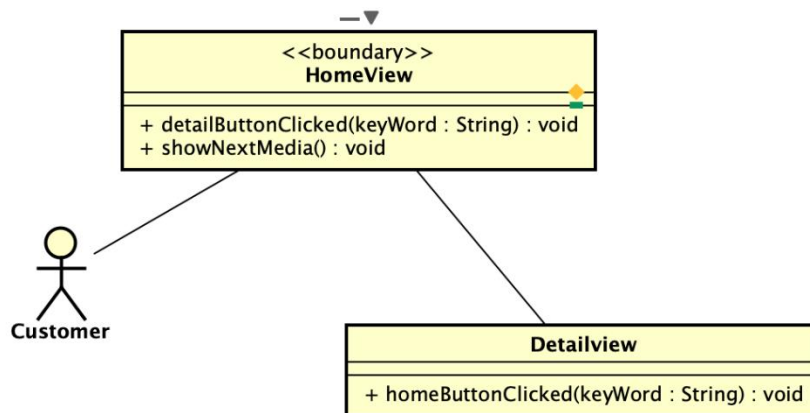


### 3.3. Use Case “Detail Products”

#### 3.3.1. Sequence Diagram for UC “Detail Products”

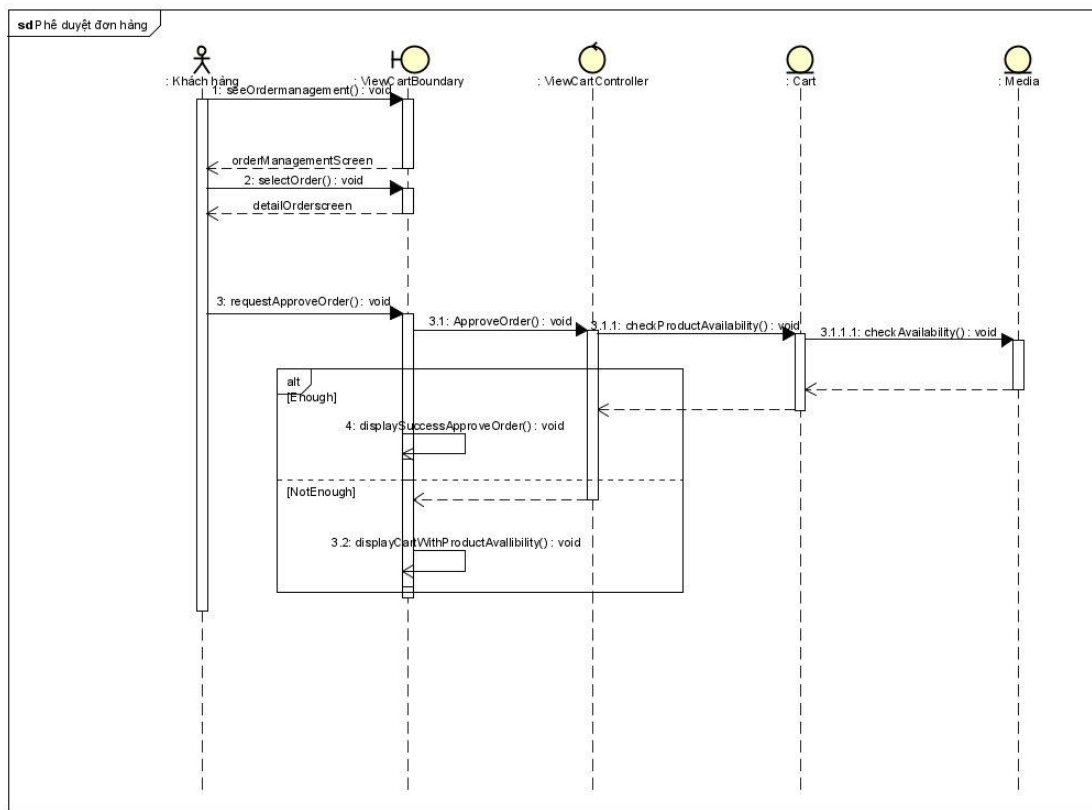


#### 3.3.2. Analysis Class Diagram for UC "Detail Products"

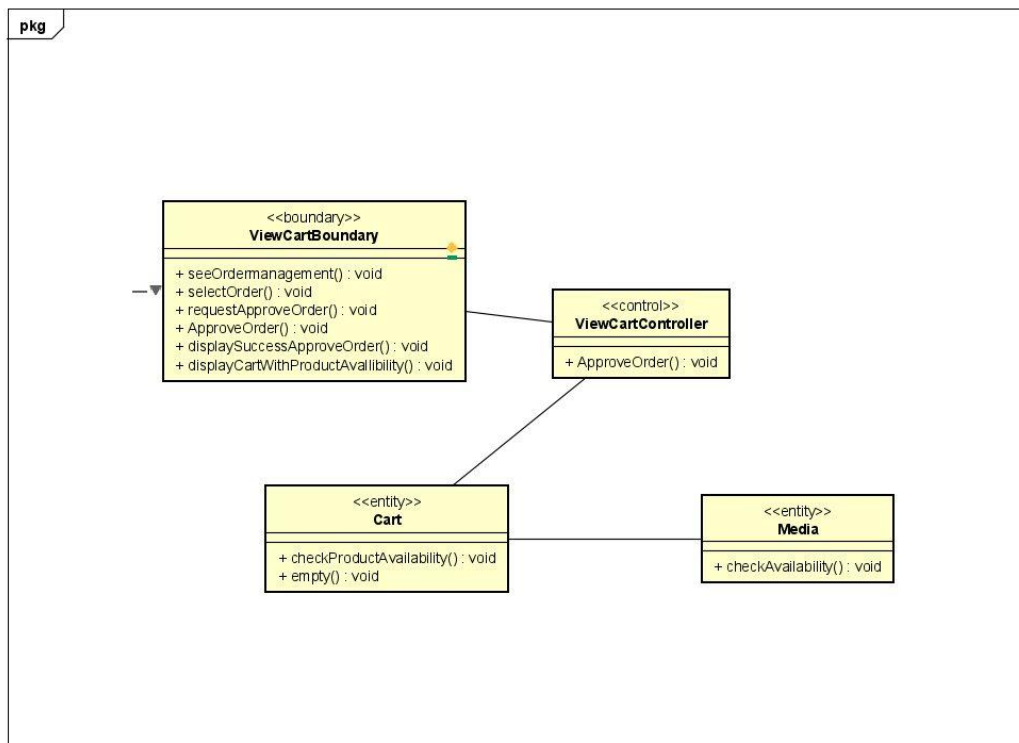


### 3.4 Use Case “Process Order”

#### 3.4.1 Sequence Diagram for UC “Process Order”



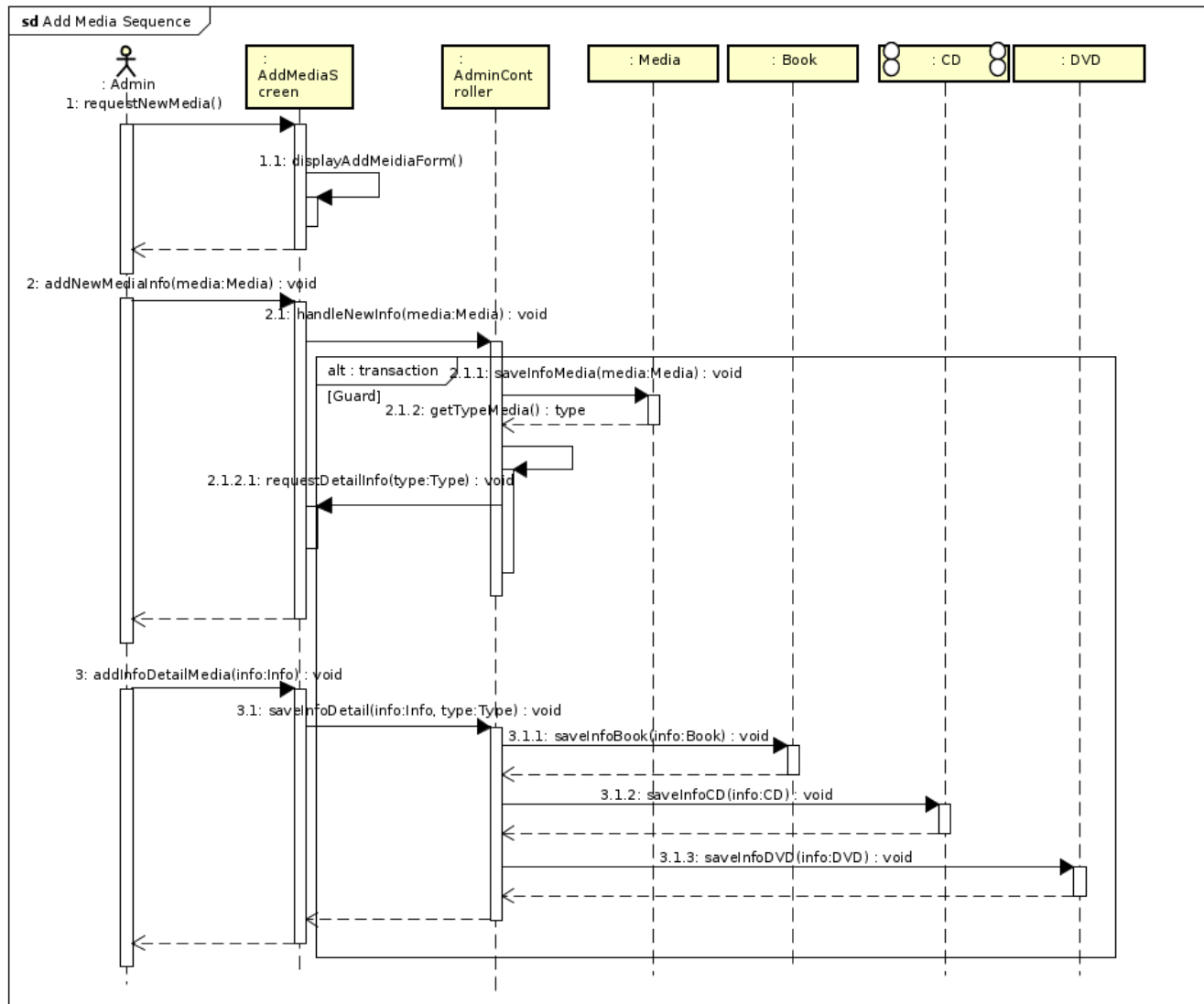
### 3.4.2 Analysis Class Diagram for UC "Process Order"



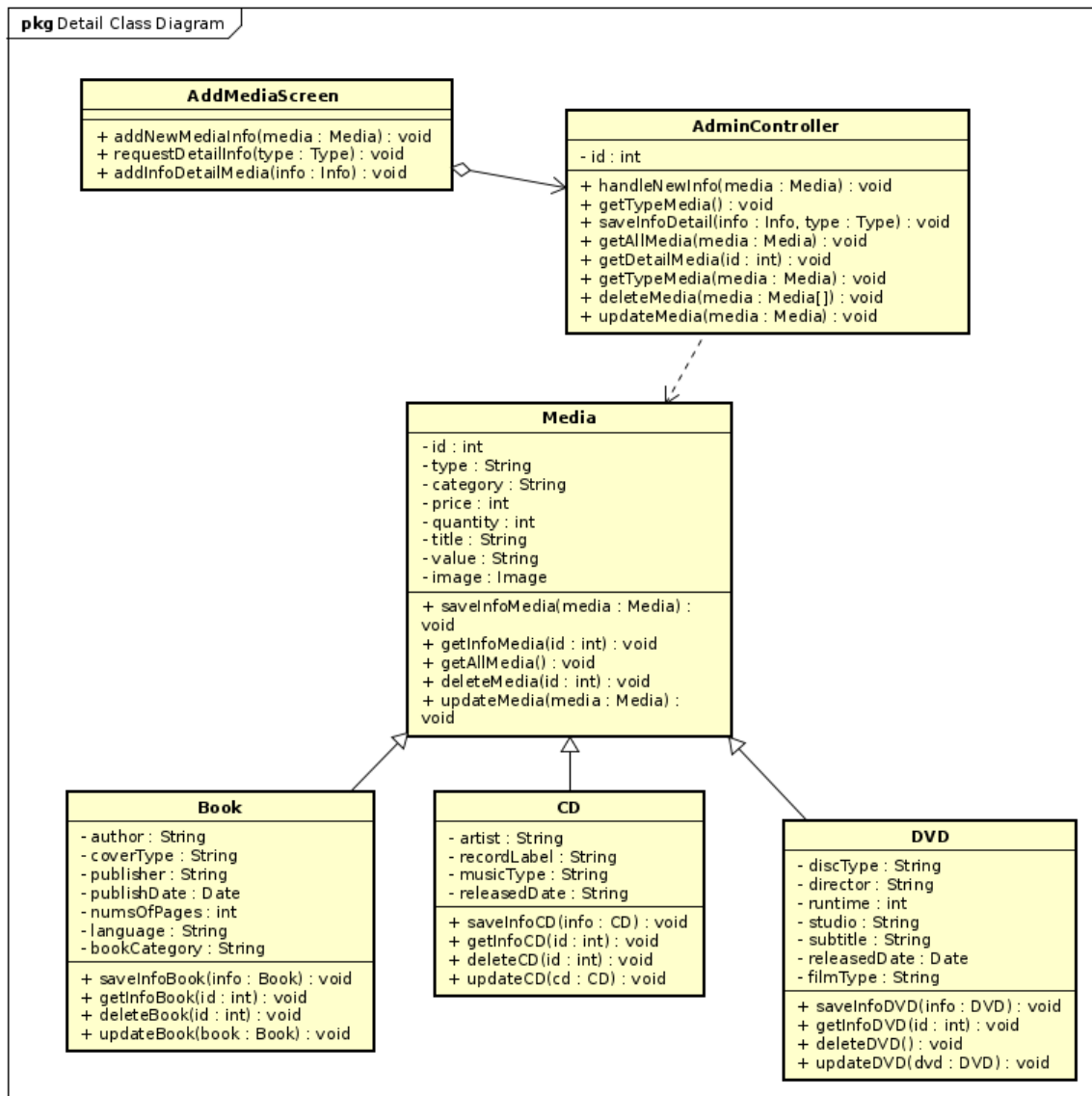


### 3.5 Use Case “Add meadia”

#### 3.5.1 Sequence Diagram for UC “Add media”

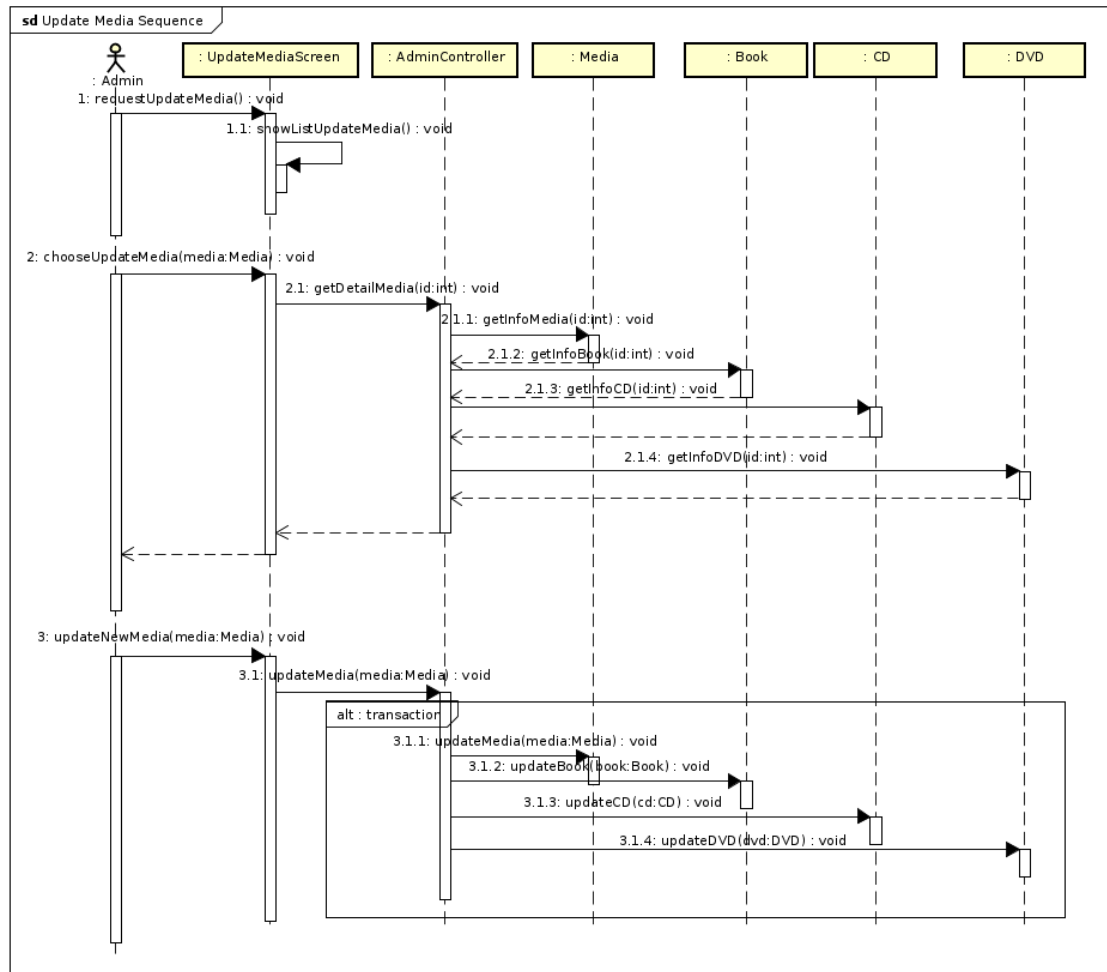


#### 3.5.2 Analysis Class Diagram for UC "Add media"

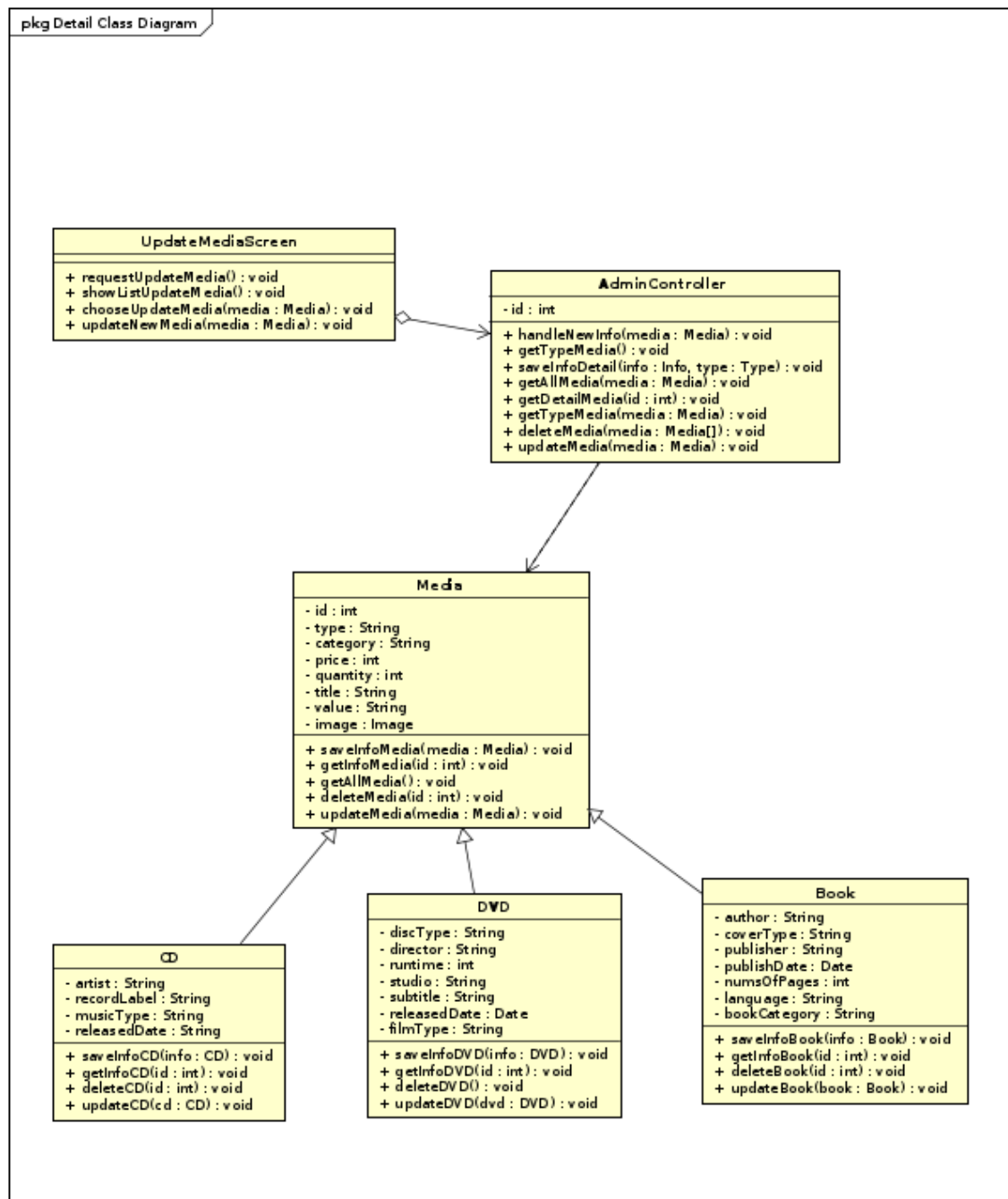


### 3.6 Use Case “Update Media”

#### 3.6.1 Sequence Diagram for UC “Update Media”

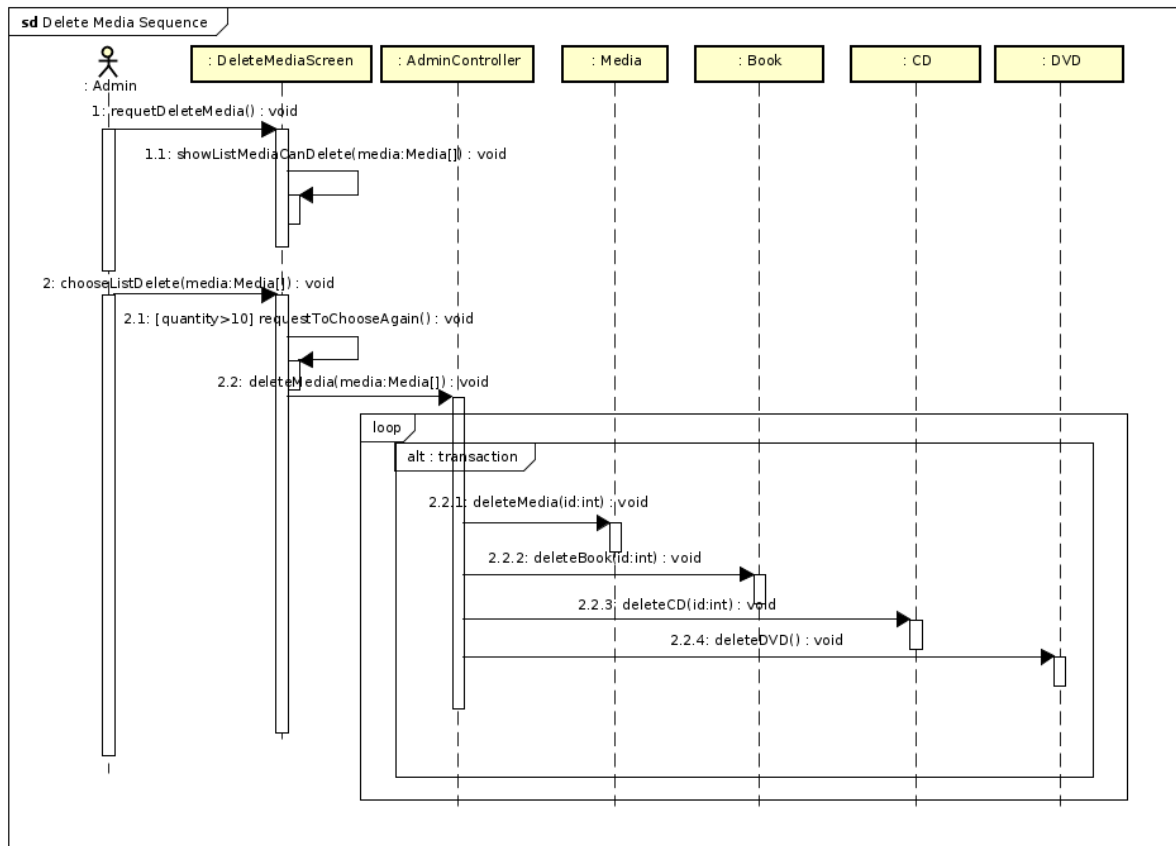


### 3.6.2 Analysis Class Diagram for UC "Update Media"

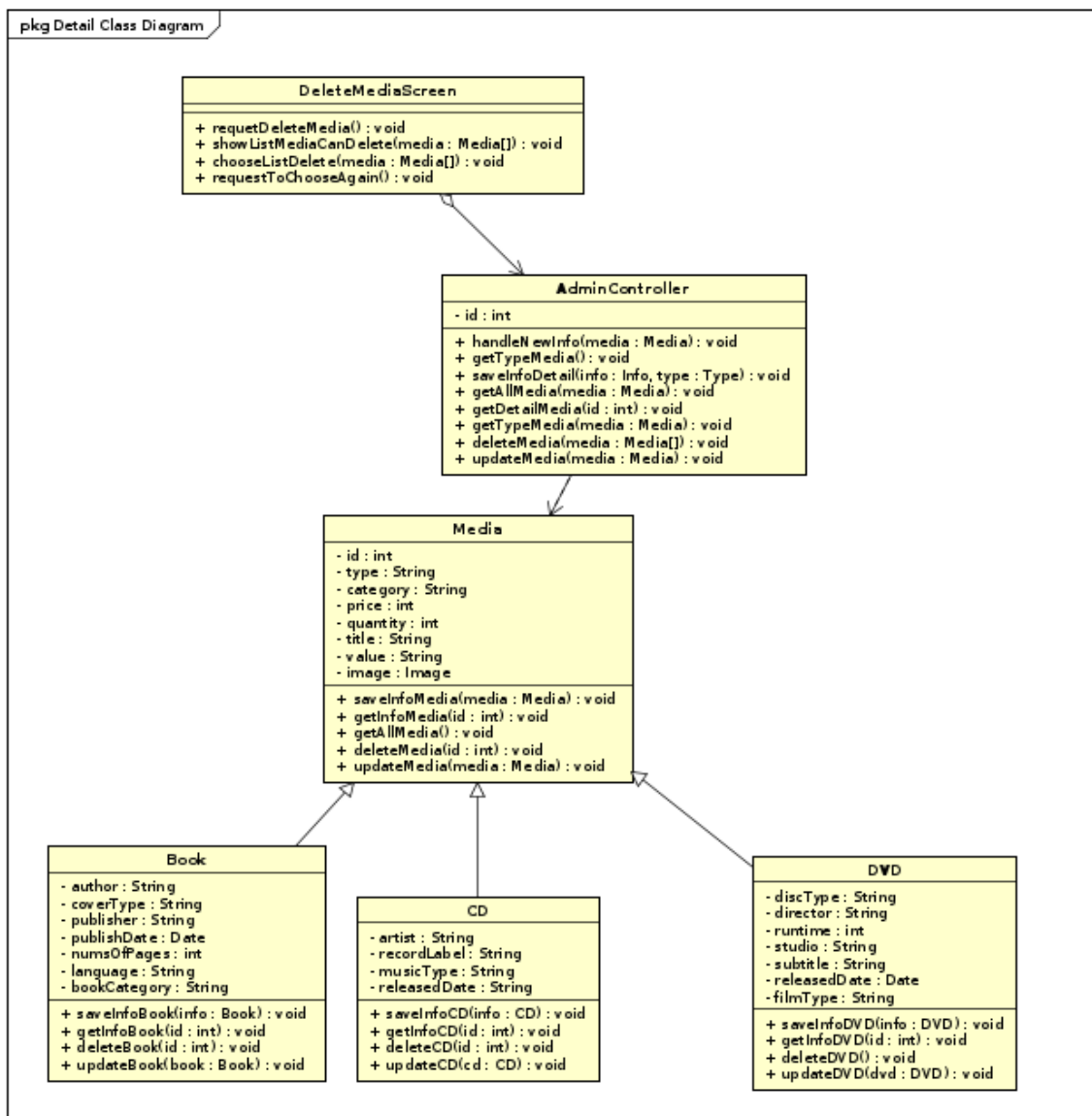


### 3.7 Use Case “Delete Media”

#### 3.7.1 Sequence Diagram for UC “Delete Media”

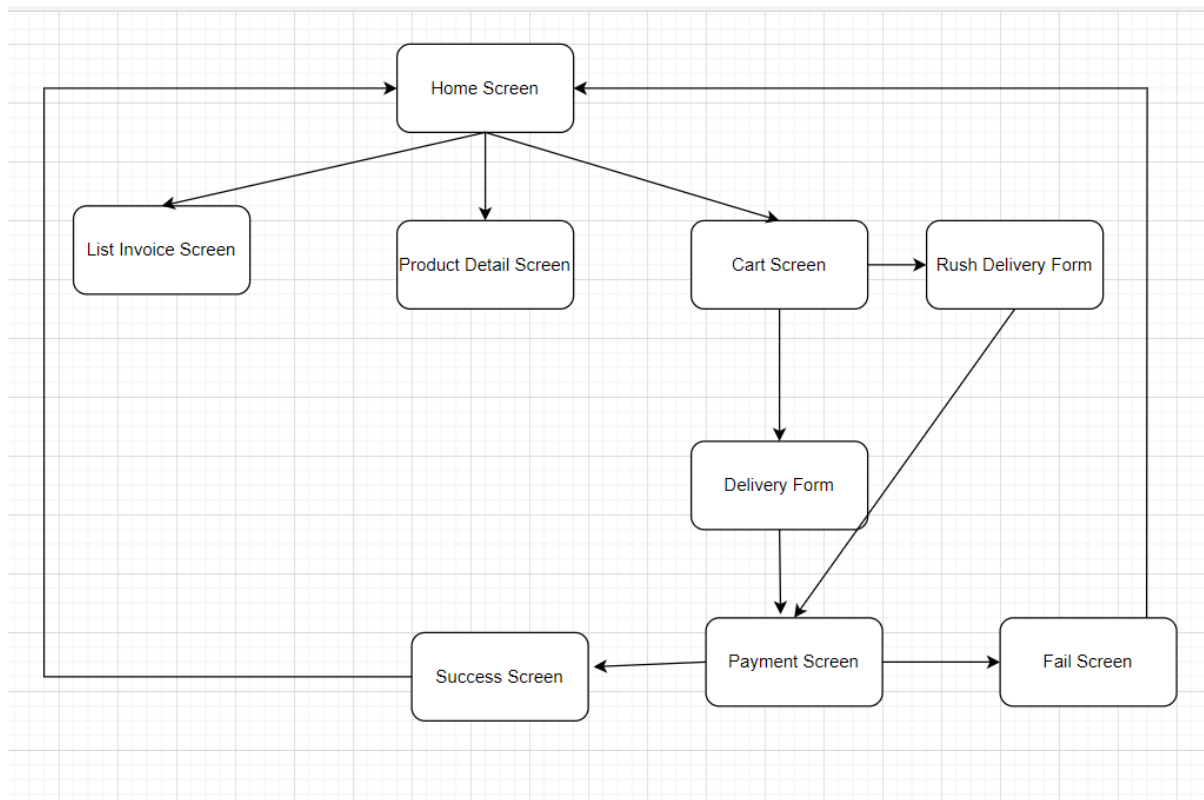


### 3.7.2 Analysis Class Diagram for UC "Process Order"




## 4 Interface Design


### 4.1 User Interface Design


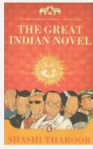












#### Screen transition flow


## Home Page





Tìm kiếm
Sắp xếp
ADMIN
0 media


 <p><b>book2</b></p> <p>Giá tiền 3.200 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>book6</b></p> <p>Giá tiền 6.600 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>book4</b></p> <p>Giá tiền 5.700 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>dvd12</b></p> <p>Giá tiền 8.200 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>
 <p><b>book9</b></p> <p>Giá tiền 2.100 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>cd7</b></p> <p>Giá tiền 2.400 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>cd3</b></p> <p>Giá tiền 6.600 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>book3</b></p> <p>Giá tiền 2.500 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>
 <p><b>book10</b></p> <p>Giá tiền 7.300 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>book12</b></p> <p>Giá tiền 5.000 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>book1</b></p> <p>Giá tiền 7.900 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>	 <p><b>dvd10</b></p> <p>Giá tiền 7.500 đ</p> <p>Có sẵn 12</p> <p>1</p> <p>Thêm vào giỏ</p>

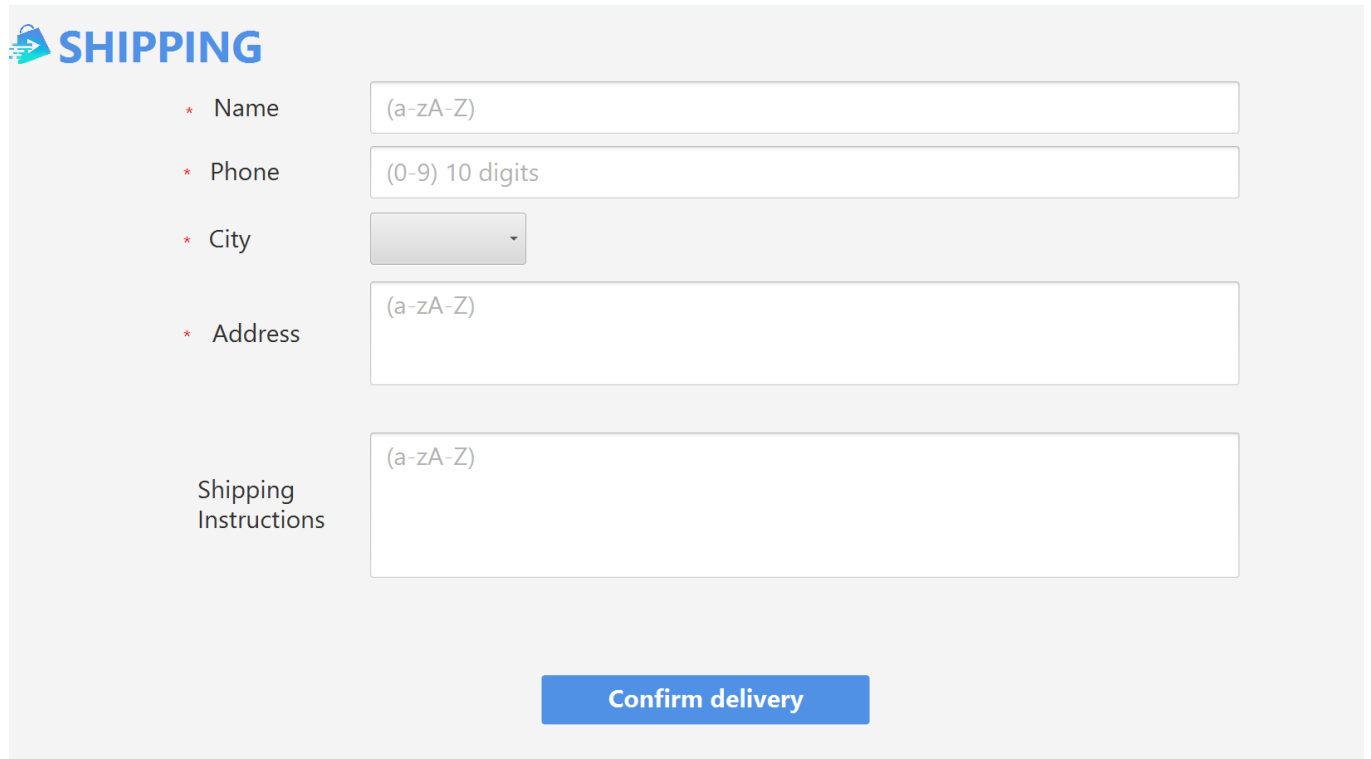
## Cart Page








 <p>cd3</p> <p>Delete</p> <p>66 đ VND</p> <p>2</p>	<p><b>Subtotal:</b> 246 đ</p> <p><b>VAT (10%):</b> 24 đ</p> <p><b>Amount:</b> 270 đ</p> <p><b>Place order</b></p> <p><b>Place rush order</b></p>
 <p>book4</p> <p>Delete</p> <p>57 đ VND</p> <p>2</p>	

## Delivery Information Form Page



[illegible]

## 32

STT	Title	Type	Category	Quant...	Price	Value	Image	
38	book2	book	story	12	32	29		<a href="#">View</a> <a href="#">Edit</a>
39	book9	book	adventure	2	21	20		<a href="#">View</a> <a href="#">Edit</a>
40	book10	book	adventure	11	73	69		<a href="#">View</a> <a href="#">Edit</a>
41	book6	book	story	2	66	62		<a href="#">View</a> <a href="#">Edit</a>
42	cd7	cd	pop	6	24	20		<a href="#">View</a> <a href="#">Edit</a>

[Thêm sản phẩm](#)
[Xóa sản phẩm](#)

## Add media

## Thêm sản phẩm

Title:

Type:

Category:

Price:

Quantity:

Value:

Image: [Choose Image](#)

[Submit](#)

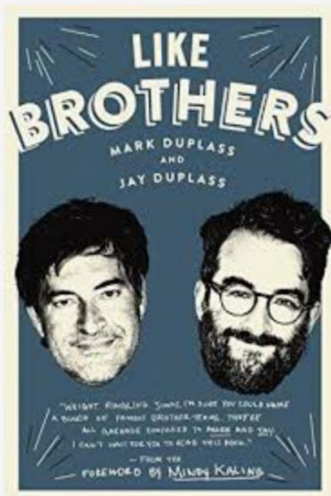
## Delete Media

## DELETE MEDIA

STT	Title	Type	Category	Quantity	Price	Value	Image	
38	book2	book	story	12	32	29		<input type="checkbox"/>
39	book9	book	adventure	2	21	20		<input type="checkbox"/>
40	book10	book	adventure	11	73	69		<input type="checkbox"/>
41	book6	book	story	2	66	62		<input type="checkbox"/>
42	cd7	cd	pop	6	24	20		<input type="checkbox"/>

Xóa sản phẩm

## Product detail



<b>Title</b>	book9
<b>Type</b>	book
<b>Category</b>	adventure
<b>Price</b>	21
<b>Quantity</b>	12

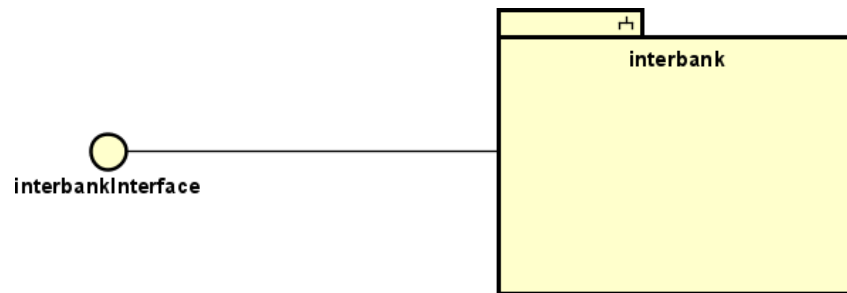
## List invoice

## LIST INVOICE

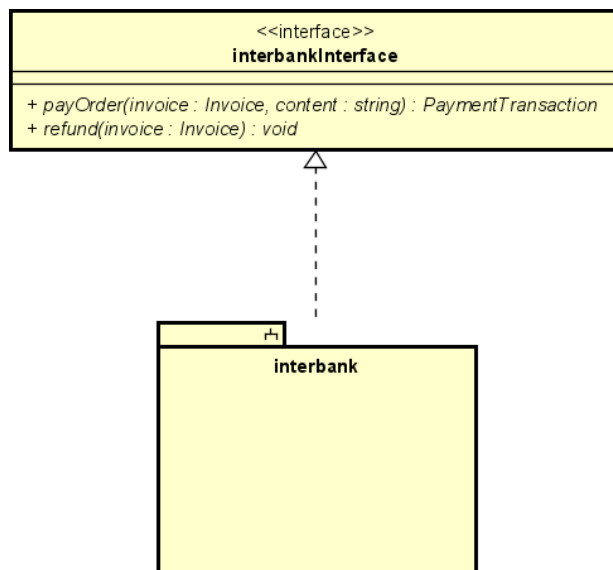
STT	Invoice ID	Amount	Status	
21	08U847582R311951J	58	REFUND	Delete
22	5XJ52192F61819729	58	PAYMENT COMPLETED	Refund
23	2D230126LJ414743T	74	REFUND	Delete
24	5K909474AL4549459	141	REFUND	Delete
25	2BP640027Y649824X	107	REFUND	Delete
26	4EY50538W4331723U	62	CREATED	Payment
27	55X72480G50755721	127	CREATED	Payment
28	9D767589YS259345C	93	REFUND	Delete

## 4.2 System Interface Design

### 3.2.1. Identify subsystems

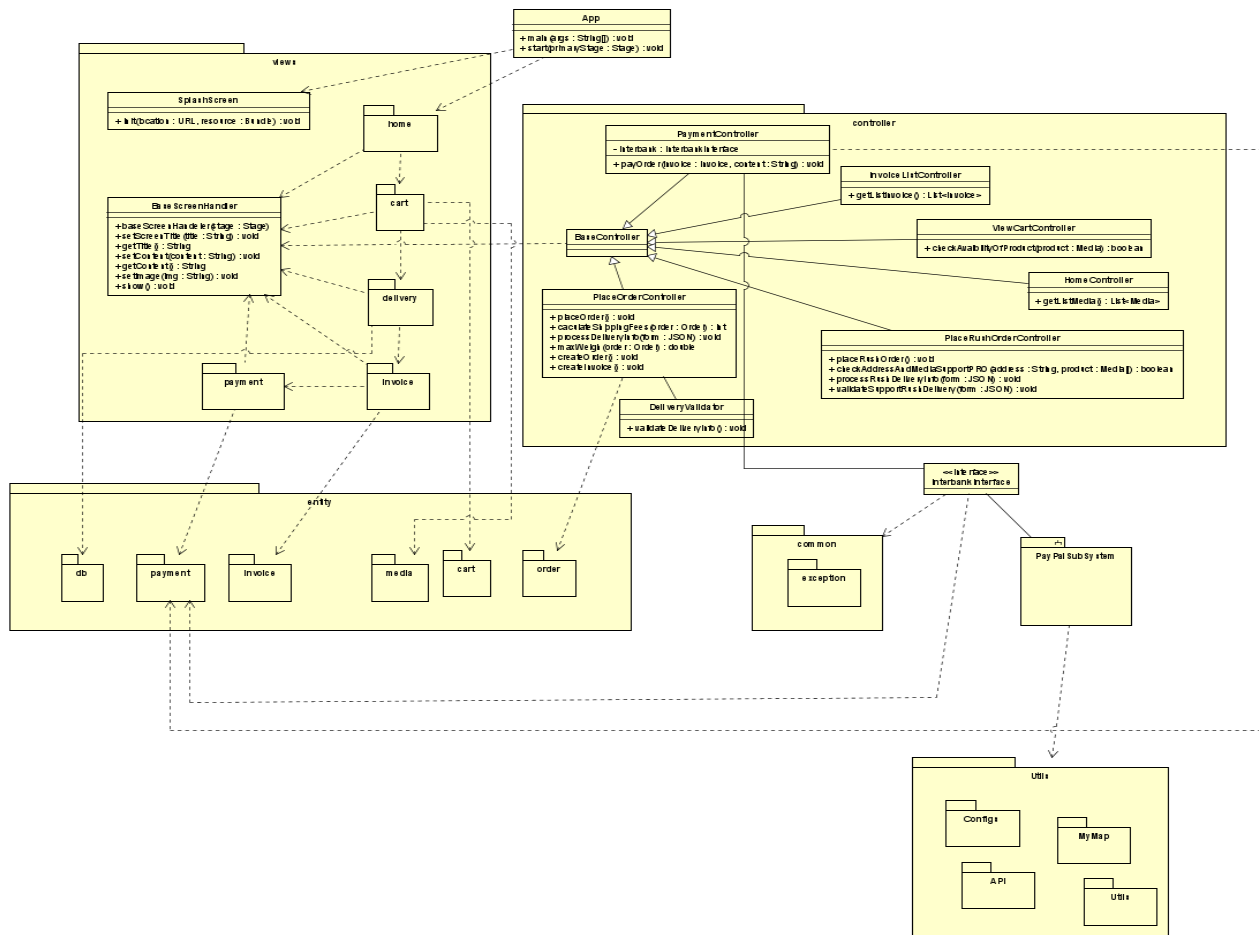


### 3.2.2. Identify subsystem interface

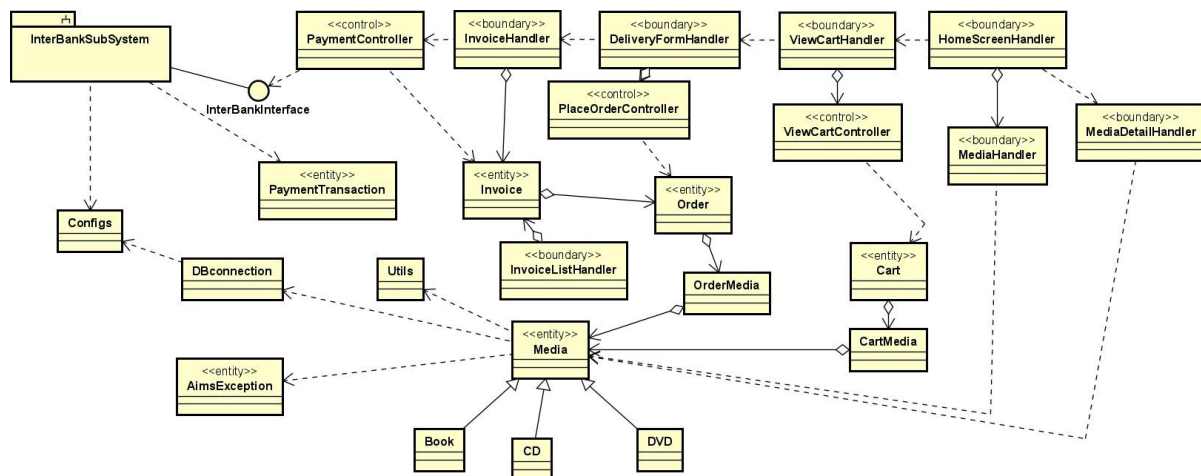


## 5 Class Design

### 5.1 General Class Diagram



### 5.2 Relationship Class Diagram



## 5.3 Class Design

### 5.3.1 HomeScreenHandler

HomeScreenHandler
<ul style="list-style-type: none"><li>- homeItem : List</li><li>- displayItems : List</li><li>- curentPage : int</li><li>- itemsPerPage : int</li></ul>
<ul style="list-style-type: none"><li>+ filterMediaByKeyWord(keyWord : String, homeItems : List&lt;Media&gt;) : List&lt;Media&gt;</li><li>+ checkEmpty(filteredItems : int) : void</li><li>+ upDateMediaDisplay() : void</li><li>+ showNextMedia() : void</li><li>+ show() : void</li><li>+ showPreviousMedia() : void</li><li>+ addMediaHome() : void</li><li>+ addMenuItem() : void</li></ul>

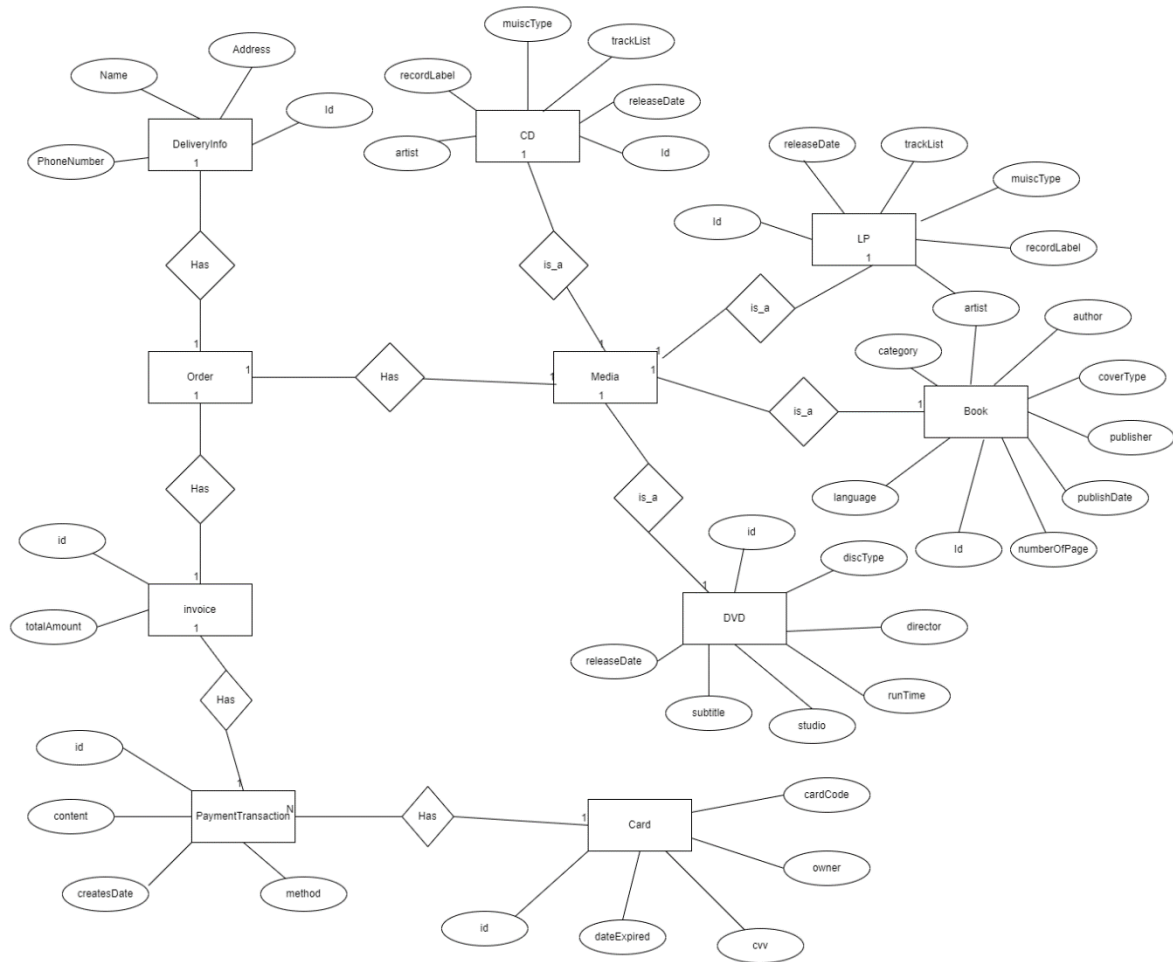
### 5.3.2 MediaDetailHandler

DetailScreenHandle
<ul style="list-style-type: none"><li>- title : String</li><li>- type : String</li><li>- category : String</li><li>- price : int</li><li>- quantity : int</li></ul>
<ul style="list-style-type: none"><li>+ requestToDetail() : void</li></ul>

## 6 Data Modeling

### 6.1 Conceptual Data Model

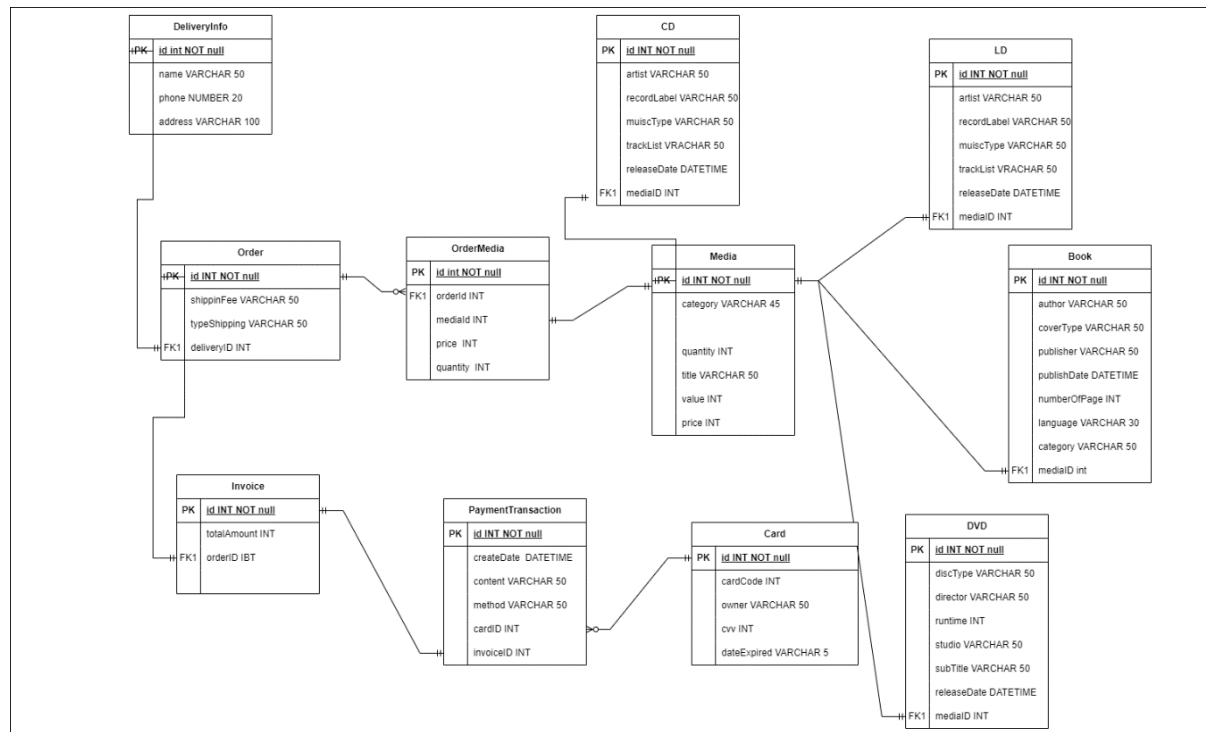
#### AIMS System ERD



## 6.2 Database Design

### 5.2.1. Logical Data Model





## 5.2.2 Physical Data Model

### - Media

#	PK	FK	Column Name	Data type	Mandatory	Description
1.	x		id	int	yes	ID, auto increment
2.			title	Varchar(45)	yes	Product's name
3.			category	Varchar(45)	yes	Media type, eg., cd, DVD
4.			value	int	yes	Value of the product
5.			price	int	yes	Current price
6.			quantity	int	yes	Number of products
7.			productDimensions	Varchar(45)	yes	horizontal, length, width dimensions
8.			description	Varchar(45)	yes	Product description
9.			imageURL	Varchar(45)	yes	Product image path
10.			createAt	timestamp	yes	The time the product is added to the system
11.			updateAt	timestamp	no	The time the product is updated to the system

### - CD

#	PK	FK	Column Name	Data type	Mandatory	Description
---	----	----	-------------	-----------	-----------	-------------

1.		x	id	int	yes	ID, same as ID of Media of twch type is CD
2.			type	Varchar(45)	yes	Music genres
3.			artist	Varchar(45)	yes	Artist's name
4.			dateRelease	datetime	No	Release date
5.			recordLabel	Varchar(45)	yes	Record label

- LD

#	PK	FK	Column Name	Data type	Mandatory	Description
1.		x	id	int	yes	ID, same as ID of Media of twch type is CD
2.			type	Varchar(45)	yes	Music genres
3.			artist	Varchar(45)	yes	Artist's name
4.			dateRelease	datetime	No	Release date
5.			recordLabel	Varchar(45)	yes	Record label

- **Book**

#	PK	FK	Column Name	Data type	Mandatory	Description
1.		x	id	int	yes	ID, same as ID of Media of which type is Book
2.			authors	Varchar(45)	yes	Authors of the book
3.			publisher	Varchar(45)	yes	Publishing house
4.			language	Varchar(45)	yes	Language
5.			type	Varchar(45)	yes	Cover type
6.			cover	Varchar(45)	yes	Book cover
7.			page	int	yes	Page number
8.			publishDate	datetime	yes	Date of publishing

- **dvd**

#	PK	FK	Column Name	Data type	Mandatory	Description
1.		x	id	int	yes	ID, same as ID of Media of which type is DVD
2.			discType	VARCHAR(45)	yes	Disc type
3.			director	VARCHAR(45)	Yes	Director
4.			runtime	int	Yes	Duration
5.			subtitles	VARCHAR(45)	Yes	Subtitles
6.			studio	VARCHAR(45)	yes	Manufacturer
7.			releaseDate	Datetime	Yes	Release date
8.			filmType	VARCHAR(45)	yes	Genres

- **deliveryinfo**

#	PK	FK	Column Name	Data type	Mandatory	Description
1.	x		id	int	yes	ID, auto increment
2.			receiverName	Varchar(45)	yes	Receiver name
3.			number	Varchar(10)	yes	Receiver phone number
4.			province	Varchar(45)	yes	Provinces
5.			address	Varchar(45)	yes	Delivery address
6.			instruction	Varchar(100)	yes	Delivery instructions
7.			isRushOrder	tinyint(1)	yes	Is Place Rush Order

8.			shippingTimeRush	datetime	no	Delivery Time for RO
9.			createAt	timestamp	yes	
10.			updateAt	timestamp	yes	

- **order**

#	PK	FK	Column Name	Data type	Mandatory	Description
1.	x		id	int	yes	Id, auto increment
2.			shippingFee	int	yes	Shipping Fee
3.			price	int	yes	Selling price
4.			totalPrice	int	yes	Selling price + VAT
5.		x	deliveryId	int	yes	Delivery Info ID
6.			createAt	timestamp		
7.			updateAt	timestamp		

- **order\_media**

#	PK	FK	Column Name	Data type	Mandatory	Description
1.		x	orderId	int	yes	Order ID
2.		x	mediaId	int	yes	Media ID
3.			quantity	int	yes	Number
4.			price	int	yes	Selling price

- **invoice**

#	PK	FK	Column Name	Data type	Mandatory	Description
1.	x		id	int	yes	ID
2.			amount	int	yes	Total
3.		x	orderId	int	yes	Order ID
4.			staus	Varchar(45)	yes	Order status

- **paymenttransaction**

#	PK	FK	Column Name	Data type	Mandatory	Description
5.	x		id	int	yes	ID
6.			createAt	timestamp	yes	Date of creation

7.			refundId	Varchar(45)	yes	Transaction contents
8.		x	invoiceId	int	yes	Invoice ID

### SQL:

```

BEGIN TRANSACTION;
CREATE TABLE IF NOT EXISTS "Media" (
  "id"    INTEGER NOT NULL,
  "type"  VARCHAR(45) NOT NULL,
  "category"  VARCHAR(45) NOT NULL,
  "price" INTEGER NOT NULL,
  "quantity"  INTEGER NOT NULL,
  "title"  VARCHAR(45) NOT NULL,
  "value"  INTEGER NOT NULL,
  "imageUrl"  VARCHAR(45) NOT NULL,
  PRIMARY KEY("id" AUTOINCREMENT)
);
CREATE TABLE IF NOT EXISTS "CD" (
  "id"    INTEGER NOT NULL,
  "artist" VARCHAR(45) NOT NULL,
  "recordLabel"  VARCHAR(45) NOT NULL,
  "musicType"    VARCHAR(45) NOT NULL,
  "releasedDate" DATE,
  CONSTRAINT "fk_cd_media" FOREIGN KEY("id") REFERENCES "Media"("id"),
  PRIMARY KEY("id")
);
CREATE TABLE IF NOT EXISTS "Book" (
  "id"    INTEGER NOT NULL,
  "author"  VARCHAR(45) NOT NULL,
  "coverType"  VARCHAR(45) NOT NULL,
  "publisher"  VARCHAR(45) NOT NULL,
  "publishDate" DATETIME NOT NULL,
  "numOfPages" INTEGER NOT NULL,
  "language"  VARCHAR(45) NOT NULL,
  "bookCategory" VARCHAR(45) NOT NULL,
  CONSTRAINT "fk_book_media" FOREIGN KEY("id") REFERENCES "Media"("id"),
  PRIMARY KEY("id" AUTOINCREMENT)
);
CREATE TABLE IF NOT EXISTS "DVD" (
  "id"    INTEGER NOT NULL,
  "discType"  VARCHAR(45) NOT NULL,
  "director"  VARCHAR(45) NOT NULL,
  "runtime"  INTEGER NOT NULL,
  "studio" VARCHAR(45) NOT NULL,
  "subtitle"  VARCHAR(45) NOT NULL,
  "releasedDate" DATETIME,
  "filmType"  VARCHAR(45) NOT NULL,
  CONSTRAINT "fk_dvd_media" FOREIGN KEY("id") REFERENCES "Media"("id"),

```

```

PRIMARY KEY("id")
);
CREATE TABLE IF NOT EXISTS "OrderMedia" (
"mediaID"      INTEGER NOT NULL,
"orderId"      INTEGER NOT NULL,
"price"        INTEGER NOT NULL,
"quantity"     INTEGER NOT NULL,
CONSTRAINT "fk_ordermedia_media" FOREIGN KEY("mediaID") REFERENCES "Media"("id"),
CONSTRAINT "fk_ordermedia_order" FOREIGN KEY("orderId") REFERENCES "Order"("id"),
PRIMARY KEY("mediaID","orderId")
);
CREATE TABLE IF NOT EXISTS "Order" (
"id"          INTEGER NOT NULL,
"name"        VARCHAR(45) NOT NULL,
"address"     VARCHAR(45) NOT NULL,
"phone"       VARCHAR(45) NOT NULL,
"shipping_fee" INTEGER NOT NULL,
PRIMARY KEY("id" AUTOINCREMENT)
);
CREATE TABLE IF NOT EXISTS "Transaction" (
"id"          INTEGER NOT NULL,
"invoiceId"   INTEGER NOT NULL,
"createAt"    DATETIME NOT NULL,
"refundId"    VARCHAR(45) NOT NULL,
CONSTRAINT "fk_transaction_invoice" FOREIGN KEY("orderId") REFERENCES "Invoice"("id"),
PRIMARY KEY("id" AUTOINCREMENT)
);
CREATE TABLE IF NOT EXISTS "Invoice" (
"id"          INTEGER NOT NULL,
"orderId"     INTEGER,
"amount"      INTEGER,
"paypalId"    VARCHAR(50),
"status"      VARCHAR(50),
CONSTRAINT "fk_invoice_order" FOREIGN KEY("orderId") REFERENCES "Order"("id"),
PRIMARY KEY("id" AUTOINCREMENT)
);
COMMIT;

```