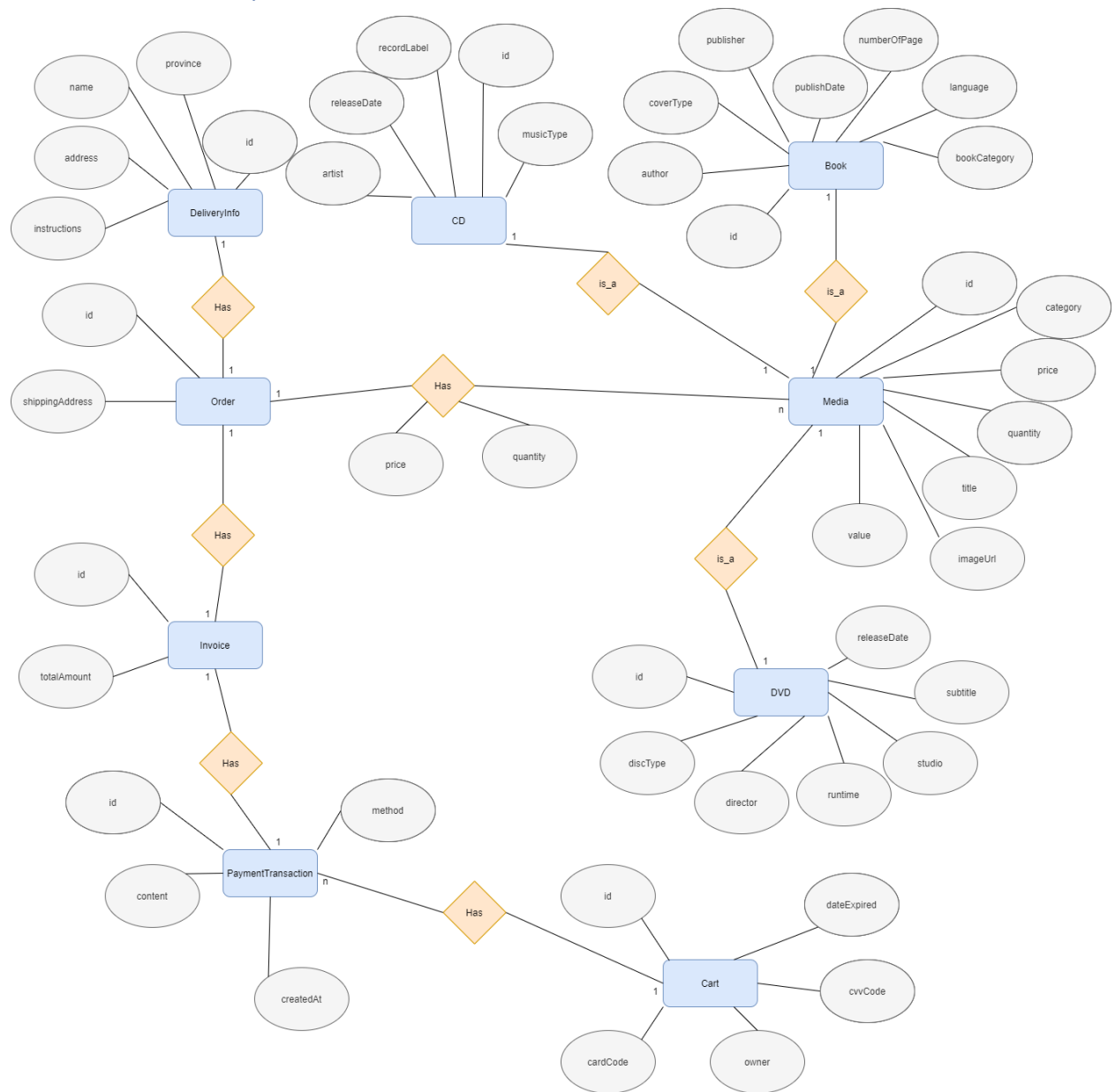
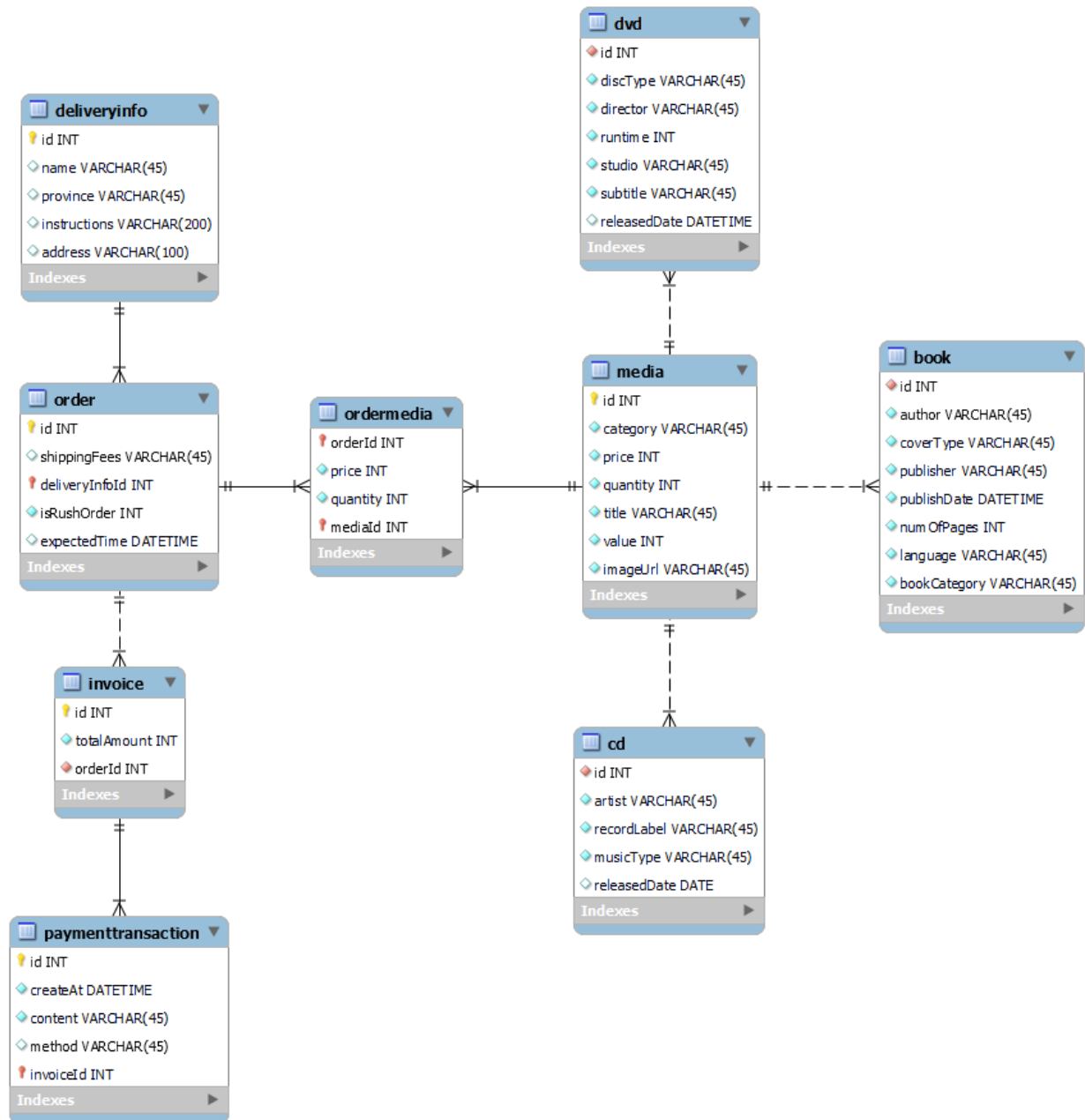


Mô hình khái niệm – ERD



Mô hình dữ liệu logic



Mô hình dữ liệu vật lý

Media

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.	X		id	Integer	Yes	ID, auto increment
2.			category	VARCHAR(45)	Yes	Media type ("CD", "DVD")
3.			price	Integer	Yes	Current price
4.			quantity	Integer	Yes	Number of products
5.			title	VARCHAR(45)	Yes	Product name
6.			value	Integer	Yes	Value of product
7.			imageUrl	VARCHAR(45)	Yes	Product image path

CD

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.		X	id	Integer	Yes	ID, same as ID of Media of which type is CD
2.			artist	VARCHAR(45)	Yes	Artist's name
3.			recordLabel	VARCHAR(45)	Yes	Record label
4.			musicType	VARCHAR(45)	Yes	Music genres
5.			releaseDate	DATE	No	Release date

Book

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.		X	id	Integer	Yes	ID, same as ID of Media of which type is Book
2.			author	VARCHAR(45)	Yes	Author
3.			coverType	VARCHAR(45)	Yes	Cover type
4.			publisher	VARCHAR(45)	Yes	Publishing house
5.			publishDate	DATETIME	Yes	Date of publishing
6.			numberOfPages	Integer	Yes	Page number
7.			language	VARCHAR(45)	Yes	Language
8.			bookCategory	VARCHAR(45)	Yes	Book category

DVD

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.		X	id	Integer	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.			Rumtime	Integer	Yes	Duration
5.			Studio	VARCHAR(45)	Yes	Manufacturer
6.			Subtitle	VARCHAR(45)	Yes	Subtitles
7.			releaseDate	DATETIME	Yes	Release date

DeliveryInfo

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.	X		id	Integer	Yes	ID, auto increment
2.			name	VARCHAR(45)	Yes	Receiver name
3.			province	VARCHAR(45)	Yes	Provinces
4.			instructions	VARCHAR(200)	Yes	Delivery instructions
5.			address	VARCHAR(100)	Yes	Delivery address

Order

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.	X		id	Integer	Yes	ID
2.			shippingFees	VARCHAR(45)	Yes	Shipping fee
3.		X	deliveryInfoId	Integer	Yes	Delivery info ID
4.			isRushOrder	Integer	Yes	1 if this order is a rush order, else 0
5.			expectedTime	DATETIME	No	Rush order expected time

OrderMedia

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.		X	mediaId	Integer	Yes	Media ID
2.		X	orderId	Integer	Yes	Order ID
3.			price	Integer	Yes	Selling price
4.			quantity	Integer	Yes	number

Invoice

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.	X		id	Integer	Yes	ID
2.			totalAmount	Integer	Yes	Total
3.		X	orderId	Integer	Yes	Order ID

PaymentTransaction

#	PK	FK	Column Name	Data Type	Mandatory	Description
1.	X		id	Integer	Yes	ID
2.			createAt	DATETIME	Yes	Date of creation
3.			content	VARCHAR(45)	Yes	Transaction contents
4.			method	VARCHAR(45)	Yes	Payment methods
5.		X	invoiceId	Integer	Yes	Invoice ID

Database Scripts

```
CREATE DATABASE `aims`;
```

```
USE `aims`;
```

```
CREATE TABLE `Media` (
```

```
    `id`      INTEGER AUTO_INCREMENT NOT NULL,
```

```
    `category`  VARCHAR(45) NOT NULL,
```

```
    `price`    INT(11) NOT NULL,
```

```
    `quantity`  INT(11) NOT NULL,
```

```
    `title`    VARCHAR(45) NOT NULL,
```

```
    `value`    INT NOT NULL,
```

```
    `imageUrl`  VARCHAR(45) NOT NULL,
```

```
    PRIMARY KEY(`id`)
```

```
);
```

```
CREATE TABLE `CD` (
```

```
    `id`      INT(11) NOT NULL,
```

```
    `artist`  VARCHAR(45) NOT NULL,
```

```
    `recordLabel`  VARCHAR(45) NOT NULL,
```

```
    `musicType`  VARCHAR(45) NOT NULL,
```

```
    `releasedDate`  DATE,
```

```
    CONSTRAINT `fk_CD_Media1` FOREIGN KEY(`id`) REFERENCES `Media`(`id`)
```

```
);
```

```
CREATE TABLE `Book` (
```

```
    `id`      INT(11) NOT NULL,
```

```
    `author`   VARCHAR(45) NOT NULL,
```

```
    `coverType`  VARCHAR(45) NOT NULL,
```

```
    `publisher`  VARCHAR(45) NOT NULL,
```

```
    `publishDate`  DATETIME NOT NULL,
```

```
    `numOfPages`  INT(11) NOT NULL,
```

```
    `language`   VARCHAR(45) NOT NULL,
```

```
        `bookCategory` VARCHAR(45) NOT NULL,  
        CONSTRAINT `fk_Book_Media1` FOREIGN KEY(`id`) REFERENCES `Media`(`id`)  
);
```

```
CREATE TABLE `DeliveryInfo` (  
    `id`      INTEGER AUTO_INCREMENT NOT NULL,  
    `name`    VARCHAR(45),  
    `province` VARCHAR(45),  
    `instructions` VARCHAR(200),  
    `address` VARCHAR(100),  
    PRIMARY KEY(`id`)  
);
```

```
CREATE TABLE `DVD` (  
    `id`      INT(11) NOT NULL,  
    `discType` VARCHAR(45) NOT NULL,  
    `director` VARCHAR(45) NOT NULL,  
    `runtime` INT(11) NOT NULL,  
    `studio` VARCHAR(45) NOT NULL,  
    `subtitle` VARCHAR(45) NOT NULL,  
    `releasedDate` DATETIME,  
    CONSTRAINT `fk_DVD_Media1` FOREIGN KEY(`id`) REFERENCES `Media`(`id`)  
);
```

```
CREATE TABLE `Order` (  
    `id`      INT(11) NOT NULL,  
    `shippingFees` VARCHAR(45),  
    `deliveryInfoId` INT NOT NULL,  
    `isRushOrder` INT NOT NULL,  
    `expectedTime` DATETIME,  
    PRIMARY KEY(`id`,`deliveryInfoId`),
```

```

        CONSTRAINT `fk_Order_DeliveryInfo1` FOREIGN KEY(`deliveryInfoId`) REFERENCES
`DeliveryInfo`(`id`)
);

CREATE INDEX `Order.fk_Order_DeeliveryInfo1_idx` ON `Order` (
    `deliveryInfoId`
);

CREATE TABLE `OrderMedia` (
    `orderId`      INT(11) NOT NULL,
    `price`      INT NOT NULL,
    `quantity`    INT NOT NULL,
    `mediaId`     INT(11) NOT NULL,
    CONSTRAINT `fk_orderMedia_order` FOREIGN KEY(`orderId`) REFERENCES `Order`(`id`),
    CONSTRAINT `fk_OrderMedia_Media1` FOREIGN KEY(`mediaId`) REFERENCES `Media`(`id`),
    PRIMARY KEY(`orderId`,`mediaId`)
);

CREATE INDEX `OrderMedia.fk_ordermedia_order_idx` ON `OrderMedia` (
    `orderId`
);

CREATE INDEX `OrderMedia.fk_OrderMedia_Media1_idx` ON `OrderMedia` (
    `mediaId`
);

CREATE TABLE `Invoice` (
    `id`      INT NOT NULL,
    `totalAmount`  INT NOT NULL,
    `orderId`     INT(11) NOT NULL,
    CONSTRAINT `fk_Invoice_Order1` FOREIGN KEY(`orderId`) REFERENCES `Order`(`id`),
    PRIMARY KEY(`id`)
);

```

```
CREATE INDEX `Invoice.fk_Invoice_Order1_idx` ON `Invoice` (  
    `orderId`  
);
```

```
CREATE TABLE `PaymentTransaction` (  
    `id`      INT(11) NOT NULL,  
    `createAt`  DATETIME NOT NULL,  
    `content`   VARCHAR(45) NOT NULL,  
    `method`    VARCHAR(45),  
    `invoiceId` INT NOT NULL,  
    PRIMARY KEY(`id`,`invoiceId`),  
    CONSTRAINT `fk_PaymentTransaction_Invoice1` FOREIGN KEY(`invoiceId`) REFERENCES  
`Invoice`(`id`)  
);
```

```
CREATE INDEX `PaymentTransaction.fk_PaymentTransaction_Invoice1_idx` ON `PaymentTransaction` (  
    `invoiceId`  
);
```