

**Thiết kế và xây dựng phần mềm**

**AIMS**

**PHYSICAL DATA MODEL**

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**Công nghệ thông tin Việt Pháp – 01 K65**

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## 1. Model details

**Model name:** AIMS

**Database:** MySQL

## 2. Tables

### 2.1. Table Media

#### 2.1.1. Columns

Column name	Type	Properties	Description
MediaId	int	PK	ID, auto increment
Price	int	NOT NULL	Price of a Media
Value	int	NOT NULL	Value of Product
Title	varchar(64)	NOT NULL	Title of Media
Category	varchar(64)	NOT NULL	Category of Media
Description	varchar(256)	NOT NULL	Description of Media

### 2.2. Table PhysicalMedia

#### 2.2.1. Columns

Column name	Type	Properties	Description
MediaId	int	PK, FK	ID, foreign key references the ID of Media
Barcode	char(12)	NOT NULL	Barcode used for physical media
ImportDate	date	NOT NULL	Date the media is imported in storage
Quantity	int	NOT NULL	Number in stock
Dimension	int	NOT NULL	Size of media

### 2.3. Table Book

#### 2.3.1. Columns

Column name	Type	Properties	Description
MediaId	int	PK, FK	ID, foreign key references the ID of Physical Media
Author	varchar(32)	NOT NULL	Author of the book
PageNumber	int	NOT NULL	Number of pages in the book
Publisher	varchar(32)	NOT NULL	The publisher
PublishDate	date	NOT NULL	The publish date
Language	varchar(32)	NOT NULL	The language of the book
Category	varchar(32)	NOT NULL	The category of the book

## 2.4. Table CD

### 2.4.1. Columns

Column name	Type	Properties	Description
MediaId	int	PK, FK	ID, foreign key references the ID of Physical Media
Artist	varchar(32)	NOT NULL	Artist of CD
Label	varchar(32)	NOT NULL	Label of CD
Genre	varchar(32)	NOT NULL	Genre of CD
ReleaseDate	date	NOT NULL	Release date of CD

## 2.5. Table DVD

### 2.5.1. Columns

Column name	Type	Properties	Description
MediaId	int	PK	ID, foreign key references the ID of Physical Media
Director	varchar(32)	NOT NULL	Name of the director
Studio	varchar(32)	NOT NULL	Name of the studio
Runtime	int	NOT NULL	Total length of DVD

ReleaseDate	date	NOT NULL	Release date of DVD
Language	varchar(32)	NOT NULL	Language for the audio of DVD
Genre	varchar(32)	NOT NULL	Genre of DVD

## 2.6. Table Track

### 2.6.1. Columns

Column name	Type	Properties	Description
TrackId	int	PK	ID
Title	varchar(32)	NOT NULL	Title of the track
CDId	int	FK, NOT NULL	Foreign key, references the CD the track belongs to

## 2.7. Table Subtitle

### 2.7.1. Columns

Column name	Type	Properties	Description
SubtitleId	int	PK	ID
Language	varchar(32)	NOT NULL	Language of subtitle
DVDId	int	FK, NOT NULL	Foreign Key, references the DVD the subtitle belongs to

## 2.8. Table Order

### 2.8.1. Columns

Column name	Type	Properties	Description
OrderId	int	PK	ID
ShippingFee	int	NOT NULL	Shipping Fee for the Order
DeliveryInfoId	int	FK, NOT NULL	Foreign Key, references the DeliveryInfo for the order

InvoiceId	int	FK, NOT NULL	Foreign key, references the Invoice for the order
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## 2.9. Table OrderMedia

### 2.9.1. Columns

Column name	Type	Properties	Description
Price	int	NOT NULL	The price of item in the order
Quantity	int	NOT NULL	The quantity of item in the order
OrderId	int	PK, FK	ID, Foreign key references the order
MediaId	int	PK, FK	ID, Foreign key references the media

## 2.10. Table DeliveryInfo

### 2.10.1. Columns

Column name	Type	Properties	Description
DeliveryInfoId	int	PK	ID
Name	int	NOT NULL	Name of customer
Instruction	varchar(128)	NOT NULL	Shipping instruction
Address	varchar(32)	NOT NULL	Address of customer

## 2.11. Table Invoice

### 2.11.1. Columns

Column name	Type	Properties	Description
InvoiceId	int	PK	ID
Total	int	NOT NULL	Total money
Subtotal	int	NOT NULL	Subtotal money (before vat)

Vat	int	NOT NULL	Vat for invoice
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## 2.12. Table PaymentTransaction

### 2.12.1. Columns

Column name	Type	Properties	Description
PaymentTransactionId	int	PK	ID
CreatedAt	int	NOT NULL	Created date
Content	int	NOT NULL	Content
Method	int	NOT NULL	Method of transaction
InvoiceId	int	FK, NOT NULL	Foreign Key, references Invoice
CardId	int	FK, NOT NULL	Foreign Key, references Card

## 2.13. Table Card

### 2.13.1. Columns

Column name	Type	Properties	Description
CardId	int	PK	ID
CardNumber	varchar(32)	NOT NULL	Card Number
CardHolder	varchar(32)	NOT NULL	Card Holder Name
CVV	varchar(8)	NOT NULL	Card verification value