**Thiết kế và xây dựng phần mềm**

**AIMS**

**PHYSICAL DATA MODEL**

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

[1. Model details 3](#_Toc149998462)

[2. Tables 3](#_Toc149998463)

[2.1. Table Media 3](#_Toc149998464)

[2.2. Table PhysicalMedia 3](#_Toc149998465)

[2.3. Table Book 3](#_Toc149998466)

[2.4. Table CD 4](#_Toc149998467)

[2.5. Table DVD 4](#_Toc149998468)

[2.6. Table Track 5](#_Toc149998469)

[2.7. Table Subtitle 5](#_Toc149998470)

[2.8. Table Order 5](#_Toc149998471)

[2.9. Table OrderMedia 6](#_Toc149998472)

[2.10. Table DeliveryInfo 6](#_Toc149998473)

[2.11. Table Invoice 6](#_Toc149998474)

[2.12. Table PaymentTransaction 7](#_Toc149998475)

[2.13. Table Card 7](#_Toc149998476)

# 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 |

## 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 |

## 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 |