**Thiết kế chi tiết cơ sở dữ liệu**

* + **Media**

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| --- | --- | --- | --- | --- | --- | --- |
| **#** | **PK** | **FK** | **Column**  **Name** | **Data type** | **Mandatory** | **Description** |
| **1.** | x |  | id | Integer | Yes | ID, auto increment |
| **2.** |  |  | category | VARCHAR(45) | Yes | Media type, e.g., 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 the 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.** |  |  | releasedDate | 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.** |  |  | numOfPages | 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.** |  |  | runtime | Integer | Yes | Duration |
| **5.** |  |  | studio | VARCHAR(45) | Yes | Manufacturer |
| **6.** |  |  | subtitle | VARCHAR(45) | Yes | Subtitles |
| **7.** |  |  | releasedDate | DATETIME | Yes | Release date |
| **8.** |  |  | filmType | VARCHAR(45) | Yes | Genres |

* + **Card**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#** | **PK** | **FK** | **Column**  **Name** | **Data type** | **Mandatory** | **Description** |
| **1.** | x |  | id | Integer | Yes | ID, auto increment |
| **2.** |  |  | cardCode | VARCHAR(45) | Yes | Card code |
| **3.** |  |  | owner | VARCHAR(45) | Yes | Cardholders |
| **4.** |  |  | cvvCode | VARCHAR(3) | Yes | CVV code |
| **5.** |  |  | dateExpired | VARCHAR(4) | Yes | Expiration 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) | No | 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 |

* + **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 | cardId | Integer | Yes | ID of used card |
| **6.** |  | x | invoiceId | Integer | Yes | Invoice ID |