**Physical Data Model**

**DeliveryInfo**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x |  | id | int | x | ID |
| 2 |  |  | name | varchar(45) | x | Name of customer |
| 3 |  |  | phoneNumber | varchar(11) | x | Phone number of customer |
| 4 |  |  | address | varchar(100) | x | Address of customer |
| 5 |  |  | province | varchar(45) | x | Province of customer |
| 6 |  |  | instructions | varchar(200) |  | Delivery instructions |

**Order**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x |  | id | int | x | ID of the order |
| 2 |  | x | deliveryInfoId | int | x | ID of delivery infomation |
| 3 |  |  | shippingFees | float | x | Shipping fees of the order |
| 4 |  |  | isRush | boolean | x | 1 for rushed order, 0 otherwise |

**Credit card**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x |  | id | int | x | ID |
| 2 |  |  | owner | varchar(45) | x | Name of the cardholder |
| 3 |  |  | cardCode | varchar(45) | x | Card code |
| 4 |  |  | cvvCode | varchar(3) | x | CVV code |
| 5 |  |  | expirationDate | Date | x | Expriration |

**Media**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x |  | id | int | x | ID |
| 2 |  |  | title | varchar(45) | x | Name of the media item |
| 3 |  |  | price | int | x | Price of the media item |
| 4 |  |  | category | varchar(45) | x | Media type, e.g., CD, DVD |
| 5 |  |  | value | int | x | Value of the product |
| 6 |  |  | imageURL | varchar(45) | x | Product image path |
| 7 |  |  | quantity | int | x | Number of products |
| 8 |  |  | rushSupport | boolean | x | 1 if the media support rush order, 0 otherwise |

**Book**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x | x | id | int | x | Id of the book. |
| 2 |  |  | author | varchar(45) | x | Author of book |
| 3 |  |  | coverType | varchar(45) | x | Cover type |
| 4 |  |  | publisher | varchar(45) | x | Publishing house |
| 5 |  |  | publishDate | date | x | Date of publishing |
| 6 |  |  | language | varchar(45) | x | Page number |
| 7 |  |  | noPages | int | x | Language |
| 8 |  |  | bookCategory | varchar(45) | x | Book category |

**CD**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x | x | id | int | x | Id of the CD |
| 2 |  |  | artist | varchar(45) | x | Artist of CD |
| 3 |  |  | musicType | varchar(45) | x | Music genres |
| 4 |  |  | recordLabel | varchar(45) | x | Record label |
| 5 |  |  | releaseDate | date |  | Release date |

**DVD**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x | x | id | int | x | Id of dvd |
| 2 |  |  | discType | varchar(45) | x | Type |
| 3 |  |  | director | varchar(45) | x | Director |
| 4 |  |  | runTime | int | x | Duration |
| 5 |  |  | studio | varchar(45) | x | Manufacturer |
| 6 |  |  | subtitle | varchar(45) | x | Subtitles |
| 7 |  |  | releaseDate | date | x | Release date |
| 8 |  |  | filmType | varchar(45) | x | Genres |

**OrderMedia**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 |  |  | price | int | x | Selling price |
| 2 |  |  | quantity | int | x | Number of media |
| 3 |  | x | mediaId | int | x | Media ID |
| 4 |  | x | orderId | int | x | Order ID |

**PaymentTransaction**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x |  | id | int | x | Id |
| 2 |  |  | method | varchar(45) | x | Payment method |
| 3 |  |  | content | varchar(45) | x | Transaction contents |
| 4 |  |  | createTime | date | x | Date of creation |
| 5 |  | x | creditCardId | int | x | ID of used card |
| 6 |  | x | invoiceId | int | x | Invoice ID |

**Invoice**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **PK** | **FK** | **Name** | **Data type** | **Mandatory** | **Description** |
| 1 | x |  | id | int | x | ID |
| 2 |  |  | totalAmount | int | x | Total amount |
| 3 |  | x | orderId | int | x | ID of Order |