**Book Store Project**

**Database Design**

This document provides the design of database structure for the new website required by Evergreen Books Co., Ltd.

Note: the field in **bold** is primary key, and the field in *italic* is foreign key.

1. **Customer Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | **Customer ID** | Number |  |  | Yes | Yes |
| 2 | E-mail | Text | 10 | 64 | Yes | Yes |
| 3 | Full name | Text | 8 | 30 | Yes |  |
| 4 | Address | Text | 10 | 128 | Yes |  |
| 5 | City | Text | 3 | 32 | Yes |  |
| 6 | Country | Text | 3 | 64 | Yes |  |
| 7 | Phone Number | Text | 10 | 15 | Yes |  |
| 8 | Zip Code | Text | 3 | 24 | Yes |  |
| 9 | Password | Text | 8 | 16 | Yes |  |
| 10 | Register date | Date and time |  |  | Yes |  |

1. **Category Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | **Category ID** | Number |  |  | Yes | Yes |
| 2 | Category Name | Text | 5 | 30 | Yes | Yes |

1. **Book Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | **Book ID** | Number |  |  | Yes | Yes |
| 2 | Title | Text | 10 | 128 | Yes | Yes |
| 3 | Author | Text | 3 | 64 | Yes |  |
| 4 | Description | Text | 200 | 2000 | Yes |  |
| 5 | ISBN | Text | 10 | 15 | Yes |  |
| 6 | Image | Image |  |  | Yes |  |
| 7 | Price | Float number |  |  | Yes |  |
| 8 | Publish Date | Date |  |  | Yes |  |
| 9 | Last Update Time | Date time |  |  | Yes |  |
| 10 | *Category ID* | Number | *Foreign key to Category table* | | | |

1. **Review Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | **Review ID** | Number |  |  | Yes | Yes |
| 2 | *Book ID* | Number | *Foreign key to Book table* | | | |
| 3 | *Customer ID* | Number | *Foreign key to Customer table* | | | |
| 4 | Rating | Number |  |  |  |  |
| 5 | Headline | Text | 20 | 128 | Yes |  |
| 6 | Comment | Text | 100 | 500 | Yes |  |
| 7 | Review Time | Date time |  |  |  |  |

1. **Order Tables**

This requires two tables: master and detail.

**Book Order Table (master)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | **Order ID** | Number |  |  | Yes | Yes |
| 2 | *Customer ID* | Number | *Foreign key to Customer table* | | | |
| 3 | Order Date | Date time |  |  | Yes |  |
| 4 | Shipping Address | Text | 20 | 256 | Yes |  |
| 5 | Recipient Name | Text | 8 | 30 | Yes |  |
| 6 | Recipient Phone | Text | 10 | 15 | Yes |  |
| 7 | Payment Method | Text | 5 | 20 | Yes |  |
| 8 | Order Total | Float number |  |  |  |  |
| 9 | Order Status | Text | 5 | 20 |  |  |

**Order Detail Table (detail)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | *Order ID* | Number | *Foreign key to Book Order table* | | | |
| 2 | *Book ID* | Number | *Foreign key to Book table* | | | |
| 3 | Quantity | Number |  |  | Yes |  |
| 4 | Sub Total | Float number |  |  | Yes |  |

1. **User Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field Name** | **Data Type** | **Minimum length** | **Maximum length** | **Required** | **Unique** |
| 1 | **User ID** | Number |  |  | Yes | Yes |
| 2 | E-mail | Text | 10 | 64 | Yes | Yes |
| 3 | Full Name | Text | 8 | 30 | Yes |  |
| 4 | Password | Text | 8 | 16 | Yes |  |

And the following entity relationship diagram depicts the relationship among these tables:

