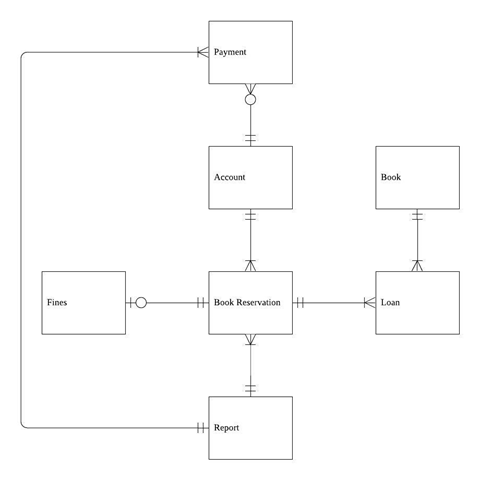
**Attributes and Keys**



Account (account\_no, first\_name, last\_name, email, password, identity, date\_Joined, fine\_due)

Book Reservation (reserve\_no, reserve\_date, account\_no\*, report\_no\*)

Loan (reserve\_no\*, book\_id\*, collection\_date, return\_date)

Book (book\_id, book\_title, language, author, publisher, isbn, publish\_year)

Fines (fine\_no, day\_count, fine\_amount, reserve\_no\*)

Payment (payment\_no, amount, account\_no\*, report\_no\*, payment\_method, payment\_date)

Report (report\_no, date\_created)

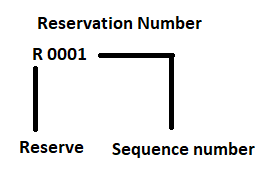
**Codes**

**Account Number**

000001

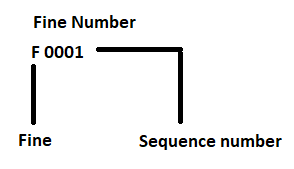
Six number that shows the number of accounts that had been registered. E.g. 000010 is the 10th account registered, 000021 is the 21st account registered and so on. As our members do not have any special membership, a special method of recording account number is not required. We can also simply find the total number of accounts created by looking at the latest account number.

**Book Reserve Number**



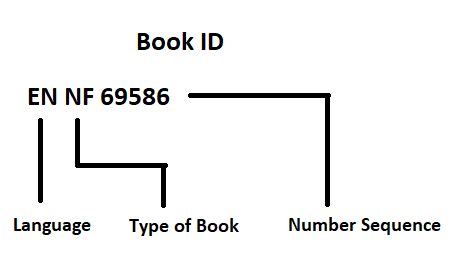
The ‘R’ letter is at front of all reservation number to show it is a reservation. A four-number-code is placed after the ‘R’ letter. The four-number-code is the sequence number of the reservation

**Fine Number**



The fine number works similarly as the reservation number except it starts with the ‘F’ letter instead of ‘R’.

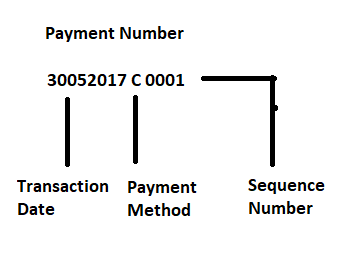
**Book ID**



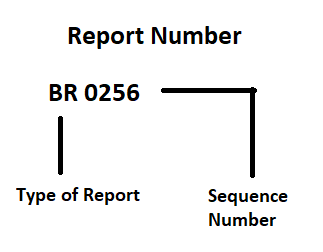
|  |  |  |
| --- | --- | --- |
| **Language** | **Type of Book** | **Number Sequence** |
| EN- English  ZH- Chinese  ES- Spanish  FR- French  KO- Korean  JP- Japanese  MS- Malay  TA- Tamil | NF- Non-Fiction  F- Fiction | 5 system generated numbers |

**Payment Number**

|  |  |  |
| --- | --- | --- |
| **Transaction Date** | **Payment Method** | **Sequence Number** |
| DDMMYYYY | C- Cash  DC- Debit Card  CC- Credit Card | The number of transactions made by using any type of payment method at any day. |



**Report Number**



|  |  |
| --- | --- |
| **Type of Report** | **Sequence Number** |
| BR- Book Report  PR- Payment Report | The number of reports made. There will be 2 report with a same sequence number which is book report and payment report. Reports with same sequence number are made in the same day. |

**Table Design**

**Account Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format** |
| Account No. | Varchar(6) | Primary Key | - |
| First Name | Varchar(20) | - | - |
| Last Name | Varchar(20) | - | - |
| Email | Varchar(30) | - | - |
| Password | Varchar(16) | - | - |
| Identity | Varchar (16) | - | - |
| Date Joined | Date | - | DD/MM/YYYY |
| Fine Amount Due | Number (6,2) | - | RM 9,999.99 |

**Book Reservation Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format** |
| Reserve No. | Varchar(5) | Primary Key | - |
| Reserve Date | Date | - | DD/MM/YYYY |
| Book ID | Varchar(9) | Foreign Key | Reference Loan Table |
| Account No. | Varchar(6) | Foreign Key | Reference Account Table |
| Report No. | Varchar(6) | Foreign Key | Reference Report Table |

**Loan Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format or Reference** |
| Reserve No. | Varchar(5) | Primary Key & Foreign Key | Reference Book Reservation Table |
| Book ID | Varchar(9) | Primary Key & Foreign Key | Reference Book Table |
| Collection Date | Date | - | DD/MM/YYYY |
| Return Date | Date | - | DD/MM/YYYY |

**Book Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format or Reference** |
| Book ID | Varchar(9) | Primary Key | - |
| Book Title | Varchar (50) | - | - |
| Language | Varchar (20) | - | - |
| Author | Varchar (50) | - | - |
| Publisher | Varchar (50) | - | - |
| ISBN | Varchar (13) | - | - |
| Publish Year | Number (4) | - | - |

**Fines Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format or Reference** |
| Fine No. | Varchar(5) | Primary Key | - |
| Day Count | Number (6) | - | - |
| Fine Amount | Number (6,2) | - | RM 999,999.99 |
| Payment Status | Char(1) | - |  |
| Account No. | Varchar(6) | Foreign Key | Reference Account Table |

**Payment Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format or Reference** |
| Payment No. | Varchar(5) | Primary Key | - |
| Payment Amount | Number (6,2) | - | RM 999,999.99 |
| Account No. | Varchar(6) | Foreign Key | - |

**Report Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Data Type** | **Remark** | **Format or Reference** |
| Report No. | Varchar(6) | Primary Key | - |
| Date Created | Date | - | DD/MM/YYYY |

**Data Records**