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LIBRARY MANAGENT SYSTEM

INTRODUCTION:

LIBRARY MANAGEMENT SYSTEM is system prepared to manage public library that keeps record of books,members and loans.to improve efficiency,you need to trach whichj books are available,who has borrowed them,and due dates for returns.

DATA DICTIONARY

1.data dictionary for books table

ENTITY NAME:BOOKS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATA TYPE | size | DISCRIPTION | constraints |
| 1.bookid  2.book\_name  3.author  4.number\_of\_books | a.Integer  b.string  c.string  d.integer | 11  70  50  11 | i.Book id is primary key in the books entity.  ii.book\_name is attribute of books entity that help user to enter his or her name the data type is string and must be not null  iii.author:this is attribute of books entity you can fill here the name of some one who is the writer of the book  iii.number\_of\_books is the attribute of books entity where you can write the number of the book which is in library | Not null  Not null  Null  null |

2.DATA DICTIONARY FOR MEMBERS

ENTITY NAME:MEMBERS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATA TYPE | size | DISCRIPTION | constraints |
| 1.memberid  2.memebername  3.phone | A.integer  B.string  C.string | 11  70  11 | I.memberid is primary key in entity members  II.memebername is the attribute of members table thar must be not null and have string data type  III.phone is attribute in members entity that allow to enter the telephone number of members | NOT NULL  NOT NULL |

3.DATA DICTIONARY FOR LOANS ENTITY

ENTITY NAME:LOANS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATA TYPE | size | DISCRIPTION |  |
| 1.loanid  2.memeberid  3.bookid  4.borrowdate  5.returndate | A.integer  B.integer  c.integer  d.date  e.date | 11  11  11  50  50 | i.loan id is primary key in loans entity.  ii.memeberid is the foreign key references from members  iii.bookid this is foreign key references from books  iv.borrow date this is attribute which include in loans entity where in this column enter the date that member he/she borrowed book  v.returndate this is attribute which include in loans entity where in this column enter the date that member he/she returned the book |  |

PHYSICAL DATA MODEL

PHYSICAL data model FOR BOOKS ENTITY

PK

BOOKS

Bookid

book\_name

author

number\_of\_books

PHYSICAL data model FOR MEMBERS ENTITY

MEMBERS

memberid

membername

phone

PK

PHYSICAL DATA MODEL FOR LOANS ENTITY

PK

FK

FK

LOANS

Loonid

Bookid

Memberid

Borrowdate

Returndate

entity relationship diagram

Borrow

Loans

Loanid

Memberid

Bookid

Borrowdate

Returndate

MEMBERS

Memberid

Membername

phone

Books

Bookid

Book\_name

Number\_book

LOGICAL DATA MODEL

books(Bookid,book\_name,author,number\_of\_books)

MEMBERS(memberid,membername,phone)

LOANS(Loonid,Bookid#,Memberid#,Borrowdate,Returndate)

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