create table Librarians

(

FirstName varchar(255),

LastName varchar(255),

Email varchar(255) check (Email ~\* '^[A-Za-z0-9.\_+%-]+@[A-Za-z0-9.-]+[.][A-Za-z]+$'),

Phone varchar(10) check(Phone ~ '^[0-9]{10}$'),

Pin varchar(10),

primary key (Email)

);

create table Members

( FirstName varchar(255),

LastName varchar(255),

Email varchar(255) check (Email ~\* '^[A-Za-z0-9.\_+%-]+@[A-Za-z0-9.-]+[.][A-Za-z]+$'),

Phone varchar(10) check(Phone ~ '^[0-9]{10}$'),

Pin varchar(10),

primary key (email)

);

create table Book

(bookID numeric(12,0) check (BookID > 0),

bookTitle varchar(255),

copies numeric(2,0) check(Copies > 0 and copies < 101),

author varchar(255),

publisher varchar(255),

primary key (BookID)

);

create table Book\_Access

(

BookID numeric(12,0) check (BookID > 0),

email varchar(255) check (Email ~\* '^[A-Za-z0-9.\_+%-]+@[A-Za-z0-9.-]+[.][A-Za-z]+$'),

BorrowDate date not null default CURRENT\_DATE,

ReturnDate date not null default CURRENT\_DATE+ INTERVAL '10 DAY',

primary key(email,BookID),

foreign key (BookID) references Book(BookID) on delete cascade ,

foreign key (email) references Members(email) on delete cascade

);

create table Book\_Author

(

BookID numeric(12,0) check (BookID > 0),

FirstName varchar(255) not null,

LastName varchar(255) not null,

primary key (BookID,FirstName,LastName),

foreign key (BookID) references Book(BookID)

);

create table Publisher

(BookID numeric(12,0) check (BookID > 0),

PublisherName varchar(255) ,

Edition numeric(3,2) not null check (Edition > 0.00),

year numeric(4,0) not null check (year < 2023),

primary key (BookID,PublisherName),

foreign key (BookID) references Book(BookID) on delete set null

);

Create table Journal

(

JournalID numeric(12,0) check (JournalID > 0),

JournalTitle varchar(255) not null,

Copies numeric(2,0) check(Copies > 0 and copies < 101),

primary key (JournalID)

);

create table Journal\_Access

(

MemberID numeric(8,0),

JournalID numeric(12,0) check (JournalID > 0),

BorrowDate date not null default CURRENT\_DATE,

ReturnDate date not null default CURRENT\_DATE+ INTERVAL '10 DAY',

primary key(MemberID,JournalID),

foreign key (JournalID) references Journal(JournalID),

foreign key (MemberID) references Members(MemberID)

);

Create table JournalIssue

(

JournalIssueNo numeric(6,2) check (JournalIssueNo > 0.00),

PublicationDate Date not null check (DATE\_PART('year',PublicationDate::Date)< 2023),

JournalID numeric(12,0) check (JournalID > 0),

primary key(JournalIssueNo),

foreign key (JournalID) references Journal(JournalID) on delete set null

);

Create table Article

(

ArticleName varchar(255),

JournalIssueNo numeric(6,2) check (JournalIssueNo > 0.00),

primary key(ArticleName,JournalIssueNo),

foreign key (JournalIssueNo) references JournalIssue(JournalIssueNo) on delete set null

);

create table Magazine

( MagazineID numeric(12,0) check (MagazineID > 0),

MagazineName varchar(255),

Copies numeric(2,0) check(Copies > 0 and copies < 101),

primary key(MagazineID)

);

create table Magazine\_Access

(

MemberID numeric(8,0),

MagazineID numeric(12,0) check (MagazineID > 0),

BorrowDate date not null default CURRENT\_DATE,

ReturnDate date not null default CURRENT\_DATE+ INTERVAL '10 DAY',

primary key(MemberID,MagazineID),

foreign key (MagazineID) references Magazine(MagazineID),

foreign key (MemberID) references Members(MemberID)

);

Create table MagazineIssue

(

MagazineIssueNo numeric(6,2) check (MagazineID > 0.0),

MagazineIssueDate Date not null check (DATE\_PART('year',MagazineIssueDate::Date)< 2023),

MagazineID numeric(12,0) check(MagazineID > 0),

primary key(MagazineIssueNo),

foreign key (MagazineID) references Magazine(MagazineID) on delete set null

);

Create table MagazineIssue\_Contributors(

MagazineIssueNo numeric(6,2) check(MagazineIssueNo > 0.00),

FirstName varchar(255) ,

LastName varchar(255) ,

field varchar(255) ,

primary key (MagazineIssueNo,FirstName,LastName,field),

foreign key (MagazineIssueNo) references MagazineIssue(MagazineIssueNo) on delete set null

);