➢ Design a database schema for a library system, including tables, fields, and constraints like NOT NULL, UNIQUE, and CHECK. Include primary and foreign keys to establish relationships between tables.

✓ Designing a database schema for a Library System involves creating several tables to manage books, members, loans, and other related entities

1. create table

members ( member\_id number(10) primary key,

name varchar2(50) not null,

email varchar2(100) not null unique,

phone\_number varchar2(15) not null,

address varchar2(255) not null,

membership\_date date not null

);

1. create table books (

book\_id number(10) primary key

title varchar2(255) not null,

author varchar2(255) not null,

publisher varchar2(255) not null,

isbn varchar2(13) not null unique,

copies\_available number(10) not null check (copies\_available >= 0)

);

1. create table loans

(

loan\_id number(10) primary key,

member\_id number(10) not null,

book\_id number(10) not null,

loan\_date date not null,

due\_date date not null,

return\_date date,

foreign key (member\_id) references members(member\_id),

foreign key (book\_id) references books(book\_id)

);

1. create table categories

(

category\_id number(10) primary key,

category\_name varchar2(100) not null unique

);

1. create table

book\_categories ( book\_id number(10) not null,

category\_id number(10) not null,

primary key (book\_id, category\_id),

foreign key (book\_id) references books(book\_id),

foreign key (category\_id) references categories(category\_id)

);