

ASS3

```
create database library;
```

```
use library;
```

```
-- Drop and recreate the table just in case
```

```
DROP TABLE IF EXISTS members;
```

```
CREATE TABLE members (
```

```
    Member_Id INT PRIMARY KEY,
```

```
    Member_Name VARCHAR(30),
```

```
    Member_address VARCHAR(50),
```

```
    Acc_Open_Date DATE,
```

```
    Membership_type VARCHAR(20),
```

```
    Fees_paid INTEGER,
```

```
    Max_Books_Allowed INTEGER,
```

```
    Penalty_Amount DECIMAL(7,2)
```

```
);
```

```
-- Now insert the record
```

```
INSERT INTO members
```

```
VALUES (3, 'Amit Joshi', 'Mumbai', CURDATE(), 'Monthly', 500, 2, 10.00);
```

```
create table books(
```

```
    Book_No Integer,
```

```
    Book_Name VarChar(30),
```

```
    Author_name Varchar(30),
```

```
    Cost Decimal(7,2),
```

```
    Category Char(10)
```

```
);
```

```
create table issue(  
  Lib_Issue_Id Integer,  
  Book_No Integer,  
  Member_Id Integer,  
  Issue_Date Date,  
  Return_date Date  
);
```

-- 1) Create the table Member, Books and Issue without any constraints as
-- mentioned in the schema description above.

-- 2) View the structure of the tables.

```
describe members;  
describe books;  
describe issue;
```

-- 3) Drop the Member table
drop table members;

-- 4) Create the table Member again as per the schema description with the following constraints.

-- a. Member_Id – Primary Key

```
alter table members  
add constraint pk_member_id primary key(Member_Id);
```

-- b. Membership_type - 'Lifetime',' Annual', 'Half Yearly',' Quarterly'

```
ALTER TABLE members
```

```
ADD CONSTRAINT chk_membership_type
```

```
CHECK (Membership_type IN ('Lifetime', 'Annual', 'Half Yearly', 'Quarterly'));
```

```
INSERT INTO members (Member_Id, Membership_type) VALUES (10, 'Lifetime');
```

```
select * from members;
```

-- 5) Modify the table Member increase the width of the member name to 30 characters.

alter table members

modify Member_Name varchar(50);

-- 6) Add a column named as Reference of Char(30) to Issue table.

alter table issue

add column Reference Char(30) ;

-- 7) Delete/Drop the column Reference from Issue.

alter table issue

drop column Reference;

-- 8) Rename the table Issue to Lib_Issue.

alter table issue

rename lib_issue;

describe lib_issue;

-- 9) Insert following data in table Member

-- 10) Insert at least 5 records with suitable data.

insert into members values(1,"Richa Sharma","Pune",'10-12-5',"Lifetime",25000,5,50);

insert into members values(2,"Garima sen","Pune",curdate(),"Annual",1000,3,null);

INSERT INTO members

VALUES (3, 'Amit Joshi', 'Mumbai', CURDATE(), 'Monthly', 500, 2, 10);

INSERT INTO members

VALUES (4, 'Neha Patil', 'Nashik', CURDATE(), 'Lifetime', 30000, 7, 25);

INSERT INTO members

VALUES (5, 'Rohan Kulkarni', 'Nagpur', CURDATE(), 'Annual', 1500, 4, 0);

select * from members;

-- 11) Modify the column Member_name. Decrease the width of the member

-- name to 20 characters. (If it does not allow state the reason for that)

alter table members

modify Member_Name varchar(20);

-- 12) Try to insert a record with Max_Books_Allowed = 110, Observe the error that comes.

alter table members

modify Max_Books_Allowed int default 110;

-- 13) Generate another table named Member101 using a Create command

-- along with a simple SQL query on member table.

create table member101 as

select * from member where 1=0;

-- 14) Add the constraints on columns max_books_allowed and penalty_amt

-- as follows

-- a. max_books_allowed < 100

-- b. penalty_amt maximum 1000

-- Also give names to the constraints.

alter table members

add constraint chk_max_books_allowed

check (max_books_allowed<100);

alter table members

add constraint chk_Penalty_Amount

check (Penalty_Amount<=1000);

-- 15) Drop the table books.

drop table books;

-- 16) Create table Books again as per the schema description with the

-- following constraints.

-- a. Book_No – Primary Key

-- b. Book_Name – Not Null

-- c. Category – System, Fiction, Database, RDBMS, Others.

```
create table books(  
Book_No varchar(30) Primary Key,  
Book_Name varchar(30) not null,  
Category varchar(30)  
);
```

-- 17) Insert data in Book table as follows:

```
alter table books add column Cost int after Book_Name;  
alter table books add column Auther varchar(20) after Book_Name;
```

-- 18) Insert more records in Book table.

```
insert into books values(101,"Let us C","Denis Ritchie",450,"System");  
insert into books values(102,"Oracle complete refrence ","Loni",550,"Database");  
insert into books values(103,"Mastering SQL","Loni",250,"Datbase");  
insert into books values(104,"PL SQL ref","Scott Umran ",750,"Database");
```

-- 19) View the data in the tables using simple SQL query.

```
select * from books;
```

-- 20) Insert into Book following data.

```
insert into books values(105,"National Geographic ","Adis scott ",1000,"Science");
```

-- 21) Rename the table Lib_Issue to Issue.

```
show tables;  
alter table lib_issue  
rename issue;
```

-- 22) Drop table Issue.

```
Drop table issue;
```

-- 23) As per the given structure Create table Issue again with following constraints.

-- ① Lib_Issue_Id-Primary key

-- ② Book_No- foreign key

-- ③ Member_id - foreign key

-- ④ Issue_date

-- ⑤ Return_date

```
CREATE TABLE Issue (  
    Lib_Issue_Id INT PRIMARY KEY,  
    Book_No VARCHAR(30),  
    Member_Id INT,  
    Issue_date DATE,  
    Return_date DATE,  
    FOREIGN KEY (Book_No) REFERENCES books(Book_No),  
    FOREIGN KEY (Member_Id) REFERENCES members(Member_Id)  
);
```

-- 24) Insert following data into Issue table.

```
INSERT INTO Issue VALUES (7001, '101', 1, STR_TO_DATE('10-Dec-06', '%d-%b-%y'), NULL);  
INSERT INTO Issue (Lib_Issue_Id, Book_No, Member_Id, Issue_date, Return_date) VALUES  
(7002, '102', 2, STR_TO_DATE('10-Dec-06', '%d-%b-%y'), STR_TO_DATE('25-Dec-06', '%d-%b-%y')),  
(7003, '104', 1, STR_TO_DATE('25-Dec-06', '%d-%b-%y'), STR_TO_DATE('15-Jan-06', '%d-%b-%y')),  
(7004, '101', 1, STR_TO_DATE('15-Jan-06', '%d-%b-%y'), STR_TO_DATE('04-Jul-06', '%d-%b-%y')),  
(7005, '104', 2, STR_TO_DATE('04-Jul-06', '%d-%b-%y'), STR_TO_DATE('15-Nov-06', '%d-%b-%y')),  
(7006, '101', 3, STR_TO_DATE('15-Nov-06', '%d-%b-%y'), STR_TO_DATE('18-Feb-06', '%d-%b-%y'));
```

-- 25) Remove the constraints on Issue table

-- 26) Insert a record in Issue table. The member_id should not exist in

-- member table.

```
INSERT INTO Issue (Lib_Issue_Id, Book_No, Member_Id, Issue_date, Return_date)
```

```
VALUES (7007, '105', 999, STR_TO_DATE('01-Jan-07', '%d-%b-%y'), NULL);
```

-- 27) Now enable the constraints of Issue table. Observe the error

-- 28) Delete the record inserted at Q-27) and enable the constraints.

```
DELETE FROM Issue WHERE Lib_Issue_Id = 7007;
```

-- 29) Try to delete the record of member id 1 from member table and

-- observe the error .

```
DELETE FROM members WHERE Member_Id = 1;
```

-- 30) View the data and structure of all the three tables Member,

-- Issue, Book.

-- View data in the tables

```
SELECT * FROM members;
```

```
SELECT * FROM Issue;
```

```
SELECT * FROM books;
```

-- View structure of the tables

```
DESCRIBE members;
```

```
DESCRIBE Issue;
```

```
DESCRIBE books;
```

-- 31) Modify the Return_Date of 7004,7005 to 15 days after the

-- Issue_date.

```
UPDATE Issue
```

```
SET Return_date = DATE_ADD(Issue_date, INTERVAL 15 DAY)
```

```
WHERE Lib_Issue_Id IN (7004, 7005);
```

-- 32) Remove all the records from Issue table where member_ID is 1

-- and Issue date in before 10-Dec-06.

```
DELETE FROM Issue
```

```
WHERE Member_Id = 1 AND Issue_date < STR_TO_DATE('10-Dec-06', '%d-%b-%y');
```

-- 33) Remove all the records from Book table with category other
-- than RDBMS and Database.

```
DELETE FROM books  
WHERE Category NOT IN ('RDBMS', 'Database');
```

-- 34) Remove the table Member.

```
DROP TABLE IF EXISTS members;
```

-- 35) Remove the table Book.

```
DROP TABLE IF EXISTS books;
```