**Assignment 2 DDL**

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

* **Memebr Table :-**

create table Member

(member\_id int,

member\_name varchar(30),

member\_address varchar(50),

acc\_open\_date date,

membership\_type varchar(20),

fees\_paid int,

max\_books\_allowed int,

penalty\_amount decimal(7,2));

* **Books Table :-**

create table Books

(book\_no int ,

book\_name varchar(30),

author\_name varchar(30),

cost decimal(7,2),

category char(10));

* **Issue Table :-**

create table Issue

(lib\_issue\_id int,

book\_no int,

member\_id int,

issue\_date date,

return\_date date);

1. **View the structure of the tables.**

* **Member :-**

desc Member;

* **Books :-**

desc Books;

* **Issue :-**

desc Issue;

1. **Drop the Member table.**

* drop table Member;

1. **Create the table Member again as per the schema description with the following constraints.**

**a. Member\_Id – Primary Key**

**b. Membership\_type - ‘Lifetime’,’ Annual’, ‘Half Yearly’,’ Quarterly’.**

* **Member Table :-**

create table Member

(member\_id int primary key,

member\_name varchar(30),

member\_address varchar(50),

acc\_open\_date date,

membership\_type varchar(20)

check (membership\_type in('Lifetime','Annual','Half Yearly','Quarterly')),

fees\_paid int,

max\_books\_allowed int,

penalty\_amount decimal(7,2));

1. **Modify the table Member increase the width of the member name to 30**

**characters.**

* alter table Member

modify column member\_name varchar(30);

1. **Add a column named as Reference of Char(30) to Issue table.**

* alter table Issue

add column reference char(30);

1. **Delete/Drop the column Reference from Issue.**

* alter table Issue

drop column reference;

1. **Rename the table Issue to Lib\_Issue.**

* alter table Issue rename to Lib\_Issue;

1. **Insert following data in table Member.**

* insert into Member

(member\_id,member\_name,member\_address,

acc\_open\_date,membership\_type,fees\_paid,

max\_books\_allowed,penalty\_amount)

values(1,"Richa Sharma","Pune",'10-12-05',"Lifetime",25000,5,50);

* insert into member

(member\_id,member\_name,member\_address,

acc\_open\_date,membership\_type,fees\_paid,

max\_books\_allowed)

values(2,"Garima Sen","Pune",curdate(),"Annual",1000,3);

1. **Insert at least 5 records with suitable data.**

* insert into member

(member\_id,member\_name,member\_address,

acc\_open\_date,membership\_type,

max\_books\_allowed,penalty\_amount)

values

(3,"Pratik Pawar","Mumbai",'2022-03-25',"Half Yearly",6,30);

* insert into member

values(4,"Rahul Shinde","Satara",'2024-05-30','Quarterly',20000,2,40),

(5,"Apeksha Kadam","Jalna",'2020-4-3','Annual',3000,5,35),

(6,"Sanket Pol","Sangli",'2015-06-8','Lifetime',25000,2,40),

(7,"Athrva Rane","Amravti",'2023-9-23','Half Yearly',18000,5,25);

1. **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 member

modify column member\_name varchar(20);

1. **Try to insert a record with Max\_Books\_Allowed = 110, Observe the error that comes.**
2. **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);

1. **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.**

* **a)** alter table member

add constraint chk\_max\_books

check (max\_books\_allowed<100);

* **b)** alter table member

add constraint chk\_penalty\_amt

check (penalty\_amount <=1000);

1. **Drop the table books.**

* drop table books;

1. **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 int primary key,

book\_name varchar(30) not null,

author\_name varchar(30),

cost decimal(7,2),

category varchar(20)check(category in('System','Fiction','Database','RDBMS','Others')));

1. **Insert data in Book table as follows:**

* insert into books

values(101,"Let us C",'Denis Ritchie',450,'System'),

(102,"Oracle Complete Ref",'Loni',550,'Database'),

(103,"Mastering SQL",'Loni',250,'Database'),

(104,'PL SQL Ref','Scott Urman',750,'Database');

1. **Insert more records in Book table.**

* insert into books

values (105, 'Story Book', 'Ruskin Bond', 150, 'Fiction'),

(106, 'Learn Java', 'James Gosling', 275, 'System'),

(107, 'Fairy Tales', 'Brothers Grimm', 220, 'Fiction'),

(108, 'Database Made Easy', 'C.J. Date', 400, 'Database'),

(109, 'Oracle Guide', 'Steven Feuerstein', 500, 'RDBMS'),

(110, 'Science Facts', 'Isaac Asimov', 320, 'Others');

1. **View the data in the tables using simple SQL query.**

* Select \* from books;

1. **Insert into Book following data.**

**105, National Geographic, Adis Scott, 1000, Science**

* insert into books

values(105,'National Geography','Adis Scott',1000,'Science');

1. **Rename the table Lib\_Issue to Issue.**

* alter table Lib\_Issue rename to Issue;

1. **Drop table Issue.**

* drop table Issue;

1. **As per the given structure Create table Issue again with following**

**constraints.**

** Lib\_Issue\_Id-Primary key**

** Book\_No- foreign key**

** Member\_id - foreign key**

** Issue\_date**

** Return\_date**

* create table Issue

(lib\_issue\_id int primary key,

book\_no int,

member\_id int,

issue\_date date,

return\_date date,

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

foreign key(member\_id)references member(member\_id));

1. **Insert following data into Issue table.**

* insert into issue

(lib\_issue\_id,book\_no,member\_id,issue\_date)

values(7001,101,1,'2006-12-10'),

(7002,102,2,'2006-12-25'),

(7003,104,1,'2006-01-15'),

(7004,101,1,'2006-07-04'),

(7005,104,2,'2006-11-15'),

(7006,101,3,'2006-02-18');

1. **Remove the constraints on Issue table.**

* alter table issue

drop primary key,

drop constraint issue\_ibfk\_1,

drop constraint issue\_ibfk\_2;

1. **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(7007,101,22,'2025-09-27','2025-09-27');

1. **Now enable the constraints of Issue table. Observe the error.**

* alter table issue

add primary key(lib\_issue\_id);

* alter table issue

add foreign key(book\_no)

references books(book\_no);

* alter table issue

add foreign key(member\_id)

references member(member\_id);

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

* delete from issue

where lib\_issue\_id=7007;

* alter table issue

add foreign key(member\_id)

references member(member\_id);

1. **Try to delete the record of member id 1 from member table and observe the error .**

* delete from member

where member\_id=1;

1. **View the data and structure of all the three tables Member, Issue, Book.**

* desc books;
* desc member;
* desc issue;
* select \* from books;
* select \* from member;
* select \* from issue;

1. **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);

1. **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

&& issue\_date < '2006-12-10';

1. **Remove all the records from Book table with category other than RDBMS and Database.**

* delete from books

where category not in('RDBMS','Database');

1. **Remove the table Member.**

* drop table member;

1. **Remove the table Book.**

* drop table books;