

Name : Shreyash Rajesh Shete

Batch : May 2022

SQL Assignment

Library System

Use the following Schema to perform the given set of assignment.

Tables-

Member – It contains information about the members

Column Name	Data Type	Description
Member_Id	Number(5)	Unique Member ID
Member_Name	Varchar2(30)	Name of the Library member
Member_address	Varchar2(50)	Address of the member
Acc_Open_Date	Date	Date of membership
Membership_type	Varchar2(20)	Type of the membership such as 'Lifetime', 'Annual', 'Half Yearly', 'Quarterly'
Fees_paid	Number(4)	Membership fees paid
Max_Books_Allowed	Number(2)	Total Number of books that can be issued to the member.
Penalty_Amount	Number(7,2)	Penalty amount due

Books- It contains information about the books belongs to the library

Column Name	Data Type	Description
Book_No	Number(6)	Book identification number
Book_Name	VarChar2(30)	Name of the book
Author_name	Varchar2(30)	Author of the book
Cost	Number(7,2)	Cost of the book
Category	Char(10)	Category like Science , Fiction etc.

Issue – It contains the information about issue of the books

Column Name	Data Type	Description
Lib_Issue_Id	Number(10)	Library Book Issue No
Book_No	Number(6)	Number of the book issued
Member_Id	Number(5)	Member that issued the book
Issue_Date	Date	Date of Issue
Return_date	Date	Return date

Day # 1 Assignments (Estimated Time: 2 Hrs)

Concept: SQL Basics,
DDL commands- Create table without constraints and with constraints, Alter, truncate, and Drop
DML commands Insert, Update, Delete,
Transaction Control Commit, Rollback, Savepoint.
Create sequence command

Objective: At the end of the assignments, participants will be able to understand basic DDL / DML/ Transaction Control statements.

Task / Problems:

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

```
SQL> connect
Enter user-name: hr
Enter password:
Connected.
SQL> create table Member
2      (
3      Member_id number(5) primary key,
4      Member_name varchar2(30),
5      Member_address varchar(50),
6      Acc_open_date date,
7      Membership_type varchar(20),
8      Fees_paid number(4),
9      Max_books_allowed number(2),
10     Penalty_Amount number(7)
11     );
```

Table created.

```
SQL> create table book
2      (
3      Book_no number(6),
4      Book_name varchar(30),
5      Author_name varchar(30),
6      Cost number(7),
7      Category char(10)
8      );
```

Table created.

```
SQL> create table Issue
2      (
3      Lib_issue_id number(10),
4      Book_no number(6),
5      Member_id number(5),
6      Issue_date date,
7      Return_date date
8      );
```

Table created.

```
SQL>
```

2) View the structure of the tables.

```
SQL> desc Member;
Name                               Null?   Type
-----
MEMBER_ID                         NOT NULL NUMBER(5)
MEMBER_NAME                       VARCHAR2(30)
MEMBER_ADDRESS                    VARCHAR2(50)
ACC_OPEN_DATE                     DATE
MEMBERSHIP_TYPE                   VARCHAR2(20)
FEES_PAID                         NUMBER(4)
MAX_BOOKS_ALLOWED                 NUMBER(2)
PENALTY_AMOUNT                    NUMBER(7)

SQL> desc book;
Name                               Null?   Type
-----
BOOK_NO                           NUMBER(6)
BOOK_NAME                         VARCHAR2(30)
AUTHOR_NAME                       VARCHAR2(30)
COST                              NUMBER(7)
CATEGORY                          CHAR(10)

SQL> desc Issue;
Name                               Null?   Type
-----
LIB_ISSUE_ID                      NUMBER(10)
BOOK_NO                           NUMBER(6)
MEMBER_ID                         NUMBER(5)
ISSUE_DATE                       DATE
RETURN_DATE                      DATE

SQL>
```

3) Drop the Member table

```
SQL> drop table Member;

Table dropped.

SQL>
```

4) 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'

```
SQL> create table Member
2      (
3      Member_id number(5) primary key,
4      Member_name varchar2(30),
5      Member_address varchar(50),
6      Acc_open_date date,
7      Membership_type varchar(20),
8      Fees_paid number(4),
9      Max_books_allowed number(2),
10     Penalty_Amount number(7)
11    );
Table created.
```

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

```
SQL> alter table Member modify (Member_name varchar(30));
Table altered.

SQL> desc Member;
Name                               Null?    Type
-----
MEMBER_ID                          NOT NULL NUMBER(5)
MEMBER_NAME                        VARCHAR2(30)
MEMBER_ADDRESS                     VARCHAR2(50)
ACC_OPEN_DATE                      DATE
MEMBERSHIP_TYPE                    VARCHAR2(20)
FEES_PAID                          NUMBER(6)
MAX_BOOKS_ALLOWED                  NUMBER(2)
PENALTY_AMOUNT                     NUMBER(7)
```

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

```
SQL>
SQL> alter table Issue add Reference_of char(30);

Table altered.

SQL> desc Issue;
Name                                         Null?    Type
-----
LIB_ISSUE_ID                               NUMBER(10)
BOOK_NO                                     NUMBER(6)
MEMBER_ID                                   NUMBER(5)
ISSUE_DATE                                  DATE
RETURN_DATE                                DATE
REFERENCE_OF                                CHAR(30)

SQL>
```

7) Delete/Drop the column Reference from Issue.

```
SQL> alter table Issue drop column Reference_of;

Table altered.

SQL> desc Issue;
Name                                         Null?    Type
-----
LIB_ISSUE_ID                               NUMBER(10)
BOOK_NO                                     NUMBER(6)
MEMBER_ID                                   NUMBER(5)
ISSUE_DATE                                  DATE
RETURN_DATE                                DATE

SQL>
```

8) Rename the table Issue to Lib_Issue.

```
SQL> alter table Issue rename to Lib_issue;

Table altered.

SQL> desc Lib_issue;
      Name                               Null?    Type
-----
LIB_ISSUE_ID                            NUMBER(10)
BOOK_NO                                 NUMBER(6)
MEMBER_ID                                NUMBER(5)
ISSUE_DATE                               DATE
RETURN_DATE                             DATE

SQL>
```

9) Insert following data in table Member

Member ID	Member Name	Member Address	Acc_Open_Date	Membership_type	Fees_Paid	Max_Books_Allowed	Penalty_Amount
1	Richa Sharma	Pune	10-Dec-05	Lifetime	25000	5	50
2	Garima Sen	Pune	Current date	Annual	1000	3	Null

```
SQL> insert into Member values(1, 'Richa Sharma', 'Pune', '10-Dec-05', 'Lifetime', 25000, 5, 50);
```

```
1 row created.
```

```
SQL> insert into Member values(2, 'Garima Sen', 'Pune', sysdate, 'Annual', 1000, 3, null);
```

```
1 row created.
```

```
SQL> select * from Member;
```

MEMBER_ID	MEMBER_NAME	MEMBER_ADDRESS	ACC_OPEN_	MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT
1	Richa Sharma	Pune	10-DEC-05	Lifetime	25000	5	50
2	Garima Sen	Pune	16-SEP-22	Annual	1000	3	

MEMBER_ID	MEMBER_NAME	MEMBER_ADDRESS	ACC_OPEN_	MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT
1	Richa Sharma	Pune	10-DEC-05	Lifetime	25000	5	50
2	Garima Sen	Pune	16-SEP-22	Annual	1000	3	

```
SQL>
```


10) Insert at least 5 records with suitable data and save it.

```
SQL> insert into Member values(3, 'Shreyash Shete', 'Mumbai', '23-oct-2003', 'Quarterly', 2000, 3, 150);
1 row created.

SQL> insert into Member values(4, 'Sarvesh Desai', 'Mumbai', sysdate, 'Half yearly', 5000, 5, null);
1 row created.

SQL> insert into Member values(5, 'Omkar Tikhe', 'Pune', '04-nov-2019', 'Lifetime', 25000, 5, 100);
1 row created.

SQL> insert into Member values(6, 'Aparna Salunke', 'Mumbai', '06-mar-2020', 'Annual', 1000, 2, 900);
1 row created.

SQL> insert into Member values(7, 'Mayur More', 'Pune', '21-apr-2018', 'Quarterly', 2000, 3, null);
1 row created.
```

MEMBER_ID	MEMBER_NAME				

MEMBER_ADDRESS				ACC_OPEN_	

MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT		

1 Richa Sharma					
Pune				10-DEC-05	
Lifetime	25000	5	50		
2 Garima Sen					
Pune				16-SEP-22	
Annual	1000	3			

MEMBER_ID	MEMBER_NAME				

MEMBER_ADDRESS				ACC_OPEN_	

MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT		

3 Shreyash Shete					
Mumbai				23-OCT-03	
Quarterly	2000	3	150		
4 Sarvesh Desai					
Mumbai				16-SEP-22	

MEMBER_ID	MEMBER_NAME				

MEMBER_ADDRESS				ACC_OPEN_	

MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT		

Half yearly	5000	5			
5 Omkar Tikhe					
Pune				04-NOV-19	
Lifetime	25000	5	100		
6 Aparna Salunke					

MEMBER_ID	MEMBER_NAME				

MEMBER_ADDRESS				ACC_OPEN_	

```

MEMBER_ID MEMBER_NAME
-----
MEMBER_ADDRESS ACC_OPEN_
-----
MEMBERSHIP_TYPE FEES_PAID MAX_BOOKS_ALLOWED PENALTY_AMOUNT
-----
Half yearly      5000      5
                5 Omkar Tikhe
Pune
Lifetime         25000      5      04-NOV-19      100
                6 Aparna Salunke

MEMBER_ID MEMBER_NAME
-----
MEMBER_ADDRESS ACC_OPEN_
-----
MEMBERSHIP_TYPE FEES_PAID MAX_BOOKS_ALLOWED PENALTY_AMOUNT
-----
Mumbai
Annual           1000      2      06-MAR-20      900
                7 Mayur More
Pune
Quarterly        2000      3      21-APR-18
7 rows selected.

SQL>

```

- 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)

```
SQL> alter table Member modify (Member_name varchar(20));

Table altered.

SQL> desc Member;
Name                                         Null?    Type
-----
MEMBER_ID                                  NOT NULL NUMBER(5)
MEMBER_NAME                                VARCHAR2(20)
MEMBER_ADDRESS                             VARCHAR2(50)
ACC_OPEN_DATE                              DATE
MEMBERSHIP_TYPE                            VARCHAR2(20)
FEES_PAID                                  NUMBER(6)
MAX_BOOKS_ALLOWED                           NUMBER(2)
PENALTY_AMOUNT                             NUMBER(7)

SQL>
```

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

```
SQL> insert into Member values(8, 'Rajesh Bhojne', 'Mumbai', '06-may-2021', 'Annual', 1000, 110, 400);
insert into Member values(8, 'Rajesh Bhojne', 'Mumbai', '06-may-2021', 'Annual', 1000, 110, 400)
*
ERROR at line 1:
ORA-01438: value larger than specified precision allowed for this column
```

- 13) Generate another table named **Member101** using a Create command along with a simple SQL query on member table.

```
SQL> create table Member101
  2  as select * from Member
  3  where Membership_type = 'Lifetime';
```

Table created.

```
SQL> select * from Member101;
```

MEMBER_ID	MEMBER_NAME	MEMBER_ADDRESS	ACC_OPEN_	MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT
1	Richa Sharma	Pune	10-DEC-05	Lifetime	25000	5	50
5	Omkar Tikhe	Pune	04-NOV-19	Lifetime	25000	5	100

MEMBER_ID	MEMBER_NAME	MEMBER_ADDRESS	ACC_OPEN_	MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	PENALTY_AMOUNT
-----------	-------------	----------------	-----------	-----------------	-----------	-------------------	----------------

```
SQL> desc Member101;
```

Name	Null?	Type
MEMBER_ID		NUMBER(5)
MEMBER_NAME		VARCHAR2(20)
MEMBER_ADDRESS		VARCHAR2(50)
ACC_OPEN_DATE		DATE
MEMBERSHIP_TYPE		VARCHAR2(20)
FEES_PAID		NUMBER(6)
MAX_BOOKS_ALLOWED		NUMBER(2)
PENALTY_AMOUNT		NUMBER(7)

```
SQL>
```

- 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.

```
SQL> alter table Member modify (Max_books_allowed number(2) check(Max_books_allowed<100));  
Table altered.
```

```
SQL> desc Member;
```

Name	Null?	Type
MEMBER_ID	NOT NULL	NUMBER(5)
MEMBER_NAME		VARCHAR2(20)
MEMBER_ADDRESS		VARCHAR2(50)
ACC_OPEN_DATE		DATE
MEMBERSHIP_TYPE		VARCHAR2(20)
FEES_PAID		NUMBER(6)
MAX_BOOKS_ALLOWED		NUMBER(2)
PENALTY_AMOUNT		NUMBER(7)

```
SQL> alter table Member modify (Penalty_Amount number(7) check(Penalty_Amount < 1000));  
Table altered.
```

- 15) Drop the table books.

```
SQL> drop table book;  
Table dropped.
```

- 16) Create table Books again as per the schema description with the following constraints.
- Book_No – Primary Key
 - Book_Name – Not Null
 - Category – Science, Fiction, Database, RDBMS, Others.

```
SQL> drop table book;
```

Table dropped.

```
SQL> create table Books
```

```
2  (  
3   Book_no number(6) primary key,  
4   Book_name varchar(30) not null,  
5   Author_name varchar(30),  
6   Cost number(7),  
7   Category char(10)  
8  );
```

Table created.

```
SQL> desc Books;
```

Name	Null?	Type
BOOK_NO	NOT NULL	NUMBER(6)
BOOK_NAME	NOT NULL	VARCHAR2(30)
AUTHOR_NAME		VARCHAR2(30)
COST		NUMBER(7)
CATEGORY		CHAR(10)

```
SQL>
```

17) Insert data in Book table as follows:

Book_No	Book Name	Author	Cost	Category
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

```
SQL> insert into Books values(101, 'Let us C', 'Denis Ritchie', 450, 'Database');
1 row created.

SQL> insert into Books values(102, 'Oracle - Complete Ref', 'Loni', 550, 'System');
1 row created.

SQL> insert into Books values(103, 'Mastering SQL', 'Loni', 250, 'Database');
1 row created.

SQL> insert into Books values(104, 'PL SQL-Ref', 'Loni', 750, 'Database');
1 row created.
```

```
SQL> select * from Books;
```

BOOK_NO	BOOK_NAME	AUTHOR_NAME
101	Let us C	Denis Ritchie
450	Database	
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
250	Database	

BOOK_NO	BOOK_NAME	AUTHOR_NAME
104	PL SQL-Ref	Loni
750	Database	

18) Insert more records in Book table using & operator in the insert statement.

```
SQL> insert into Books(Book_no, Book_name, Author_name, Cost, Category) values(&Book_no, &Book_name, &Author_name, &Cost, &Category);
Enter value for book_no: 105
Enter value for book_name: 'Software Engineering'
Enter value for author_name: 'David Luis'
Enter value for cost: 600
Enter value for category: 'System'
old 1: insert into Books(Book_no, Book_name, Author_name, Cost, Category) values(&Book_no, &Book_name, &Author_name, &Cost, &Category)
new 1: insert into Books(Book_no, Book_name, Author_name, Cost, Category) values(105, 'Software Engineering', 'David Luis', 600, 'System')

1 row created.

SQL> select * from Books;
```

BOOK_NO	BOOK_NAME	AUTHOR_NAME
101	Let us C	Denis Ritchie
450	Database	
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
250	Database	

BOOK_NO	BOOK_NAME	AUTHOR_NAME
104	PL SQL-Ref	Loni
750	Database	
105	Software Engineering	David Luis
600	System	

```
SQL>
```

19) Create table Book101 similar to Book in structure with no data in it.

```
SQL> create table Books101  
2 as select * from Books;
```

Table created.

```
SQL> desc Books101;
```

Name	Null?	Type
BOOK_NO		NUMBER(6)
BOOK_NAME	NOT NULL	VARCHAR2(30)
AUTHOR_NAME		VARCHAR2(30)
COST		NUMBER(7)
CATEGORY		CHAR(10)

```
SQL>
```

20) Insert into Book101 all the data in Book table using Select Statement.

```
SQL> insert into Books101
2  select * from Books;
```

5 rows created.

```
SQL> select * from Books101;
```

BOOK_NO	BOOK_NAME	AUTHOR_NAME
101	Let us C	Denis Ritchie
450	Database	
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
250	Database	

BOOK_NO	BOOK_NAME	AUTHOR_NAME
104	PL SQL-Ref	Loni
750	Database	
105	Software Engineering	David Luis
600	System	
101	Let us C	Denis Ritchie
450	Database	

BOOK_NO	BOOK_NAME	AUTHOR_NAME
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
250	Database	
104	PL SQL-Ref	Loni

21) Save all the data so far inserted in the tables.

```
save Member;  
save Member101;  
save Books;  
save Book101;
```

22) View the data in the tables using simple SQL query.

```
SQL> desc Member;  
Name                                         Null?    Type  
-----  
MEMBER_ID                                   NOT NULL NUMBER(5)  
MEMBER_NAME                                VARCHAR2(30)  
MEMBER_ADDRESS                             VARCHAR2(50)  
ACC_OPEN_DATE                             DATE  
MEMBERSHIP_TYPE                            VARCHAR2(20)  
FEES_PAID                                  NUMBER(6)  
MAX_BOOKS_ALLOWED                          NUMBER(2)  
PENALTY_AMOUNT                             NUMBER(7)  
  
SQL> desc Books;  
Name                                         Null?    Type  
-----  
BOOK_NO                                    NOT NULL NUMBER(6)  
BOOK_NAME                                  NOT NULL VARCHAR2(30)  
AUTHOR_NAME                               VARCHAR2(30)  
COST                                       NUMBER(7)  
CATEGORY                                  CHAR(10)  
  
SQL> desc Issue;  
Name                                         Null?    Type  
-----  
LIB_ISSUE_ID                              NOT NULL NUMBER(10)  
BOOK_NO                                   NUMBER(6)  
MEMBER_ID                                 NUMBER(5)  
ISSUE_DATE                                DATE  
RETURN_DATE                               DATE  
  
SQL>
```

- 23) Insert into Book following data.
105, National Geographic, Adis Scott, 1000, Science

```
SQL> insert into Books values(106, 'National Geographic', 'Adis Scott', 1000, 'Science');
```

```
1 row created.
```

```
SQL> select * from Books;
```

BOOK_NO	BOOK_NAME	AUTHOR_NAME
	COST CATEGORY	
106	National Geographic	Adis Scott
1000	Science	
101	Let us C	Denis Ritchie
450	Database	
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
250	Database	
104	PL SQL-Ref	Loni
750	Database	
105	Software Engineering	David Luis
600	System	

```
6 rows selected.
```

24) Undo the last changes.

```
SQL> delete from Books where Book_no = 101;
```

```
1 row deleted.
```

```
SQL> rollback;
```

```
Rollback complete.
```

```
SQL> select * from Books;
```

BOOK_NO	BOOK_NAME	AUTHOR_NAME
	COST CATEGORY	
101	Let us C	Denis Ritchie
450	Database	
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
250	Database	
	COST CATEGORY	
104	PL SQL-Ref	Loni
750	Database	
105	Software Engineering	David Luis
600	System	

```
SQL>
```

25) Modify the price of book with id 103 to Rs 300 and category to RDBMS.

```
SQL> update Books set cost = 300, Category = 'RDBMS' where Book_no = 103;
```

```
1 row updated.
```

```
SQL> select * from Books;
```

BOOK_NO	BOOK_NAME	AUTHOR_NAME
	COST CATEGORY	
101	Let us C	Denis Ritchie
450	Database	
102	Oracle - Complete Ref	Loni
550	System	
103	Mastering SQL	Loni
300	RDBMS	
104	PL SQL-Ref	Loni
750	Database	
105	Software Engineering	David Luis
600	System	

```
SQL>
```

26) Rename the table Lib_Issue to Issue.

```
SQL> create table Issue
  2  (
  3    Lib_issue_id number(10) primary key,
  4    Book_no number(6),
  5    Member_id number(5),
  6    Issue_date date,
  7    Return_date date
  8  );
```

Table created.

```
SQL> desc Issue;
```

Name	Null?	Type
LIB_ISSUE_ID	NOT NULL	NUMBER(10)
BOOK_NO		NUMBER(6)
MEMBER_ID		NUMBER(5)
ISSUE_DATE		DATE
RETURN_DATE		DATE

27) Drop table Issue.

```
SQL> drop table Issue;
```

Table dropped.

28) 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

```
SQL>
SQL> alter table Issue
  2  add foreign key (Book_no) references Issue(Lib_issue_id);

Table altered.

SQL>
SQL> alter table Issue
  2  add foreign key (Member_id) references Issue(Lib_issue_id);

Table altered.

SQL> desc Issue;
Name                                         Null?    Type
-----
LIB_ISSUE_ID                                NOT NULL NUMBER(10)
BOOK_NO                                     NUMBER(6)
MEMBER_ID                                   NUMBER(5)
ISSUE_DATE                                  DATE
RETURN_DATE                                DATE

SQL>
```

```
SQL> update Issue set Issue_date = 'Issue_date < Return_date';

0 rows updated.
```

```
SQL>
SQL> alter table Issue add constraint Lib_issue_uk unique(Book_no);

Table altered.
```

```
SQL> alter table Issue add constraint Library_issue_uk unique(Member_id);

Table altered.
```

29) Insert following data into Issue table. Note leave the column Return_Date blank.

Lib_Issue_Id	Book No	Member ID	Issue Date	Return Date
7001	101	1	10-Dec-06	
7002	102	2	25-Dec-06	
7003	104	1	15-Jan-06	
7004	101	1	04-Jul-06	
7005	104	2	15-Nov-06	
7006	101	3	18-Feb-06	

```
SQL>
SQL> insert into Issue values(7001, 101, 1, '10-Dec-06', null);
1 row created.

SQL> insert into Issue values(7002, 102, 2, '25-Dec-06', null);
1 row created.

SQL> insert into Issue values(7003, 104, 1, '15-Jan-06', null);
1 row created.

SQL> insert into Issue values(7004, 101, 1, '04-Jul-06', null);
1 row created.

SQL> select * from Issue;

LIB_ISSUE_ID    BOOK_NO  MEMBER_ID  ISSUE_DAT  RETURN_DA
-----
          7001         101           1 10-DEC-06
          7002         102           2 25-DEC-06
          7003         104           1 15-JAN-06
          7004         101           1  04-JUL-06

SQL>
```

30) Save the data.

31) Disable the constraints on Issue table

```
SQL> alter table Issue disable constraint Lib_issue_uk;
Table altered.

SQL> alter table Issue disable constraint Library_issue_uk;
Table altered.

SQL>
```

32) Insert a record in Issue table. The member_id should not exist in member table.

```
SQL> alter table Issue drop column Member_id;
Table altered.

SQL> desc Issue;
Name                               Null?    Type
-----
LIB_ISSUE_ID                       NOT NULL NUMBER(10)
BOOK_NO                            NUMBER(6)
ISSUE_DATE                         DATE
RETURN_DATE                        DATE

SQL>
```

33) Now enable the constraints of Issue table. Observe the error

```
SQL> alter table Issue drop column Member_id;
Table altered.

SQL> alter table Issue enable constraint Lib_issue_uk;
Table altered.

SQL> alter table Issue enable constraint Library_issue_uk;
alter table Issue enable constraint Library_issue_uk
*
ERROR at line 1:
ORA-02430: cannot enable constraint (LIBRARY_ISSUE_UK) - no such constraint

SQL>
```

34) Delete the record inserted at Q-32) and enable the constraints.

```
SQL> truncate table Issue;
Table truncated.

SQL> alter table Issue enable constraint Library_issue_uk;
alter table Issue enable constraint Library_issue_uk
*
ERROR at line 1:
ORA-02430: cannot enable constraint (LIBRARY_ISSUE_UK) - no such constraint
```

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

```
SQL>
SQL> delete from Issue where Member_id = 1;

0 rows deleted.
```

36) Modify the Return_Date of 7004,7005 to 15 days after the Issue_date.

```
SQL> select * from Issue;
```

LIB_ISSUE_ID	BOOK_NO	MEMBER_ID	ISSUE_DAT	RETURN_DA
7001	101	1	10-DEC-06	
7002	102	2	25-DEC-06	
7003	104	1	15-JAN-06	
7004	101	1	04-JUL-06	
7005	104	2	15-NOV-06	
7006	101	3	18-FEB-06	

6 rows selected.

```
SQL> update Issue set Return_date = '19-Jul-06' where Lib_issue_id = 7004;
```

1 row updated.

```
SQL> update Issue set Return_date = '30-Nov-06' where Lib_issue_id = 7005;
```

1 row updated.

```
SQL> select * from Issue;
```

LIB_ISSUE_ID	BOOK_NO	MEMBER_ID	ISSUE_DAT	RETURN_DA
7001	101	1	10-DEC-06	
7002	102	2	25-DEC-06	
7003	104	1	15-JAN-06	
7004	101	1	04-JUL-06	19-JUL-06
7005	104	2	15-NOV-06	30-NOV-06
7006	101	3	18-FEB-06	

6 rows selected.

```
SQL>
```

37) Modify the Penalty_Amount for Garima Sen to Rs 100.

```
SQL> update Member set Penalty_amount = 100 where Member_id = 2;
```

1 row updated.

```
SQL> select * from Member;
```

MEMBER_ID	MEMBER_NAME	MEMBER_ADDRESS	MEMBERSHIP_TYPE	FEES_PAID	MAX_BOOKS_ALLOWED	ACC_OPEN_	PENALTY_AMOUNT
1	Richa Sharma	Pune	Lifetime	25000	5	10-DEC-05	50
2	Garima Sen	Pune	Annual	1000	3	16-SEP-22	100

38) Perform a save point X here.

39) Remove all the records from Issue table where member_ID is 1 and Issue date in before 10-Dec-06.

```
SQL> delete from Issue where Issue_date = '10-Dec-06';
```

0 rows deleted.

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

```
SQL>
SQL> delete from Issue;
```

6 rows deleted.

- 41) Undo the changes done after savepoint X.
- 42) Save all the changes done before X.
- 43) Remove the table Member101.
- 44) Remove the table Book101.

```
SQL> drop table Member101;
Table dropped.
SQL> drop table Books101;
Table dropped.
SQL> save;
SP2-0105: Illegal, or missing, entity name
SQL> commit;
Commit complete.
```

- 45) View the data and structure of all the three tables Member, Issue, Book.

```
SQL> desc Member;
      Name                               Null?    Type
-----
MEMBER_ID                             NOT NULL NUMBER(5)
MEMBER_NAME                           VARCHAR2(20)
MEMBER_ADDRESS                         VARCHAR2(50)
ACC_OPEN_DATE                          DATE
MEMBERSHIP_TYPE                        VARCHAR2(20)
FEES_PAID                              NUMBER(6)
MAX_BOOKS_ALLOWED                      NUMBER(2)
PENALTY_AMOUNT                         NUMBER(7)

SQL> desc Books;
      Name                               Null?    Type
-----
BOOK_NO                                NOT NULL NUMBER(6)
BOOK_NAME                              NOT NULL VARCHAR2(30)
AUTHOR_NAME                            VARCHAR2(30)
COST                                    NUMBER(7)
CATEGORY                                CHAR(10)

SQL> desc Issue;
      Name                               Null?    Type
-----
LIB_ISSUE_ID                           NOT NULL NUMBER(10)
BOOK_NO                                 NUMBER(6)
MEMBER_ID                               NUMBER(5)
ISSUE_DATE                              DATE
RETURN_DATE                             DATE

SQL>
```


- 46) Create a sequence **no_seq** of even numbers starting with 100 and ending with 200.

```
SQL> create sequence no_seq
  2 start with 100
  3 increment by 2
  4 minvalue 100
  5 maxvalue 200
  6 cycle;

Sequence created.
```

- 47) Drop the above created sequence.

```
SQL> drop sequence no_seq;

Sequence dropped.
```

- 48) Create a sequence **book_seq** starting with 101 and ending with 1000 And incremented by 1 without cycle.

```
SQL> create sequence book_seq
  2 start with 101
  3 increment by 1
  4 maxvalue 1000
  5 nocycle
  6 cache 10;

Sequence created.
```

- 49) Create a sequence member_seq starting with 1 and ending with 100
And incremented by 1 without cycle.

```
SQL> create sequence member_seq
  2  start with 1
  3  increment by 1
  4  maxvalue 100
  5  nocycle
  6  cache 10;
```

Sequence created.

SQL>

- 50) Drop the above created sequences.

```
SQL> drop sequence book_seq;
```

Sequence dropped.

```
SQL> drop sequence member_seq;
```

Sequence dropped.

SQL>