Set 2

SQL Assignment

# Library System

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

**Tables**

# Member

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| Member\_Id | Number(5) | Unique Member ID |
| Member\_Name | Char(25) | Name of the Library member |
| Acc\_Open\_Date | Date | Date of membership |
| Max\_Books\_Allowed | Number(2) | Total Number of books that can be issued to the member. |
| Penalty\_Amount | Number(7,2) | Penalty amount due |

# Book

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| Book\_No | Number(6) | Book identification number |
| Book\_Name | VarChar2(30) | Name of the book |
| Author | Char(30) | Author of the book |
| Cost | Number(7,2) | Cost of the book |
| Category | Char(10) | Category like Science , Fiction etc. |

# Issue

|  |  |  |
| --- | --- | --- |
| **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: 1 Hrs)

**Concept**: SQL Basics,

DDL commands Create , Alter , Drop

DML commands Insert, Update , Delete ,

Transaction Control Commit , Rollback , Savepoint.

**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, Book and Issue without any constraints as mentioned in the schema description above.

Solution :

1. View the structure of the tables.
2. **select** \* **from** information\_schema.**columns** **where** ***table\_name*** = **'employees'**
3. Add column Comments to table Issue of width 100 characters.
4. Modify the table Member increase the width of the member name to 30 characters.
5. Add a column Reference Char(30) to Issue table.
6. Delete/Drop the column Reference from Issue.
7. Rename the table Issue to Lib\_Issue.
8. Insert following data in table Member

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Member ID** | **Member Name** | **Acc\_Open\_Date** | **Max\_Books\_Allowed** | **Penalty\_Amount** |
| 1 | Richa Sharma | 10-Dec-05 | 5 | 50 |
| 2 | Garima Sen | current date | 3 | Null |

Insert at least 5 records with suitable data, put null values in various columns other then member id and name in different records.

1. Modify the column Member Decrease the width of the member

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

1. Try to insert a record with Max\_Books\_Allowed = 110, Observe the error that comes. Report the reason for this error.
2. Generate another table Member101 using a Create command along with a simple SQL query on member table.
3. 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 |

1. Insert more records in Book table using & operator in the insert

statement.

1. Create table Book101 similar to Book in structure with no data in

it.

1. Insert into Book101 all the data in Book table using Select

statement.

1. Save all the data so far inserted in the tables.
2. View the data in the tables using simple SQL query.
3. Insert into Book following data.

105, National Geographic, Adis Scott, 1000, Science

1. Undo the last changes.
2. Modify the price of book with id 103 to Rs 300 and category to

RDBMS.

1. Rename the table Lib\_Issue to Issue.
2. 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 |  |

1. Save the data.
2. Insert 2 records in Issue table.
3. Modify the Return\_Date of 7004,7005 to 15 days after the

Issue\_date.

1. Modify the Penalty\_Amount for Garima Sen to Rs 100.
2. Perform a save point X here.
3. Remove all the records from Issue table where member\_ID is 1

and Issue date in before 10-Dec-06.

1. Remove all the records from Book table with category other

then RDBMS and Database.

1. Undo the changes done after savepoint X.
2. Save all the changes done before X.
3. Remove the table Member101.
4. Remove the table Book101.
5. View the data and structure of all the three tables Member,

Issue, Book.