==================== SQL ERROR LOG FILE ====================

1. ❌ Attempt to DELETE a Member who has LOANS

SQL:

DELETE FROM Member WHERE MemberID = 1;

ERROR:

Msg 547, Level 16, State 0, Line 161

The DELETE statement conflicted with the REFERENCE constraint "FK\_\_Loan\_\_MemberID\_\_68487DD7". The conflict occurred in database " Library Management System", table "dbo.Loan", column 'MemberID'.

The statement has been terminated.

CAUSE:

The member has related loans.

RESOLUTION:

Delete the loans first or enable ON DELETE CASCADE.

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2. ❌ Attempt to DELETE a Member who has WRITTEN REVIEWS

SQL:

DELETE FROM Member WHERE MemberID = 3;

ERROR:

Msg 547, Level 16, State 0, Line 163

The DELETE statement conflicted with the REFERENCE constraint "FK\_\_Loan\_\_MemberID\_\_68487DD7". The conflict occurred in database " Library Management System", table "dbo.Loan", column 'MemberID'.

The statement has been terminated.

CAUSE:

The member has written reviews.

RESOLUTION:

Delete reviews first or cascade delete.

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3. ❌ Attempt to DELETE a Book that is ON LOAN

SQL:

DELETE FROM Book WHERE BookID = 6;

ERROR:

Msg 547, Level 16, State 0, Line 166

The DELETE statement conflicted with the REFERENCE constraint "FK\_\_Loan\_\_BookID\_\_693CA210". The conflict occurred in database " Library Management System", table "dbo.Loan", column 'BookID'.

The statement has been terminated.

CAUSE:

Book is currently on loan.

RESOLUTION:

Delete or return the loaned book first.

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4. ❌ Attempt to DELETE a Book with REVIEWS

SQL:

DELETE FROM Book WHERE BookID = 1;

ERROR:

Msg 547, Level 16, State 0, Line 169

The DELETE statement conflicted with the REFERENCE constraint "FK\_\_Loan\_\_BookID\_\_693CA210". The conflict occurred in database " Library Management System", table "dbo.Loan", column 'BookID'.

The statement has been terminated.

CAUSE:

Book has associated reviews.

RESOLUTION:

Delete reviews before deleting the book.

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5. ❌ INSERT Loan with Non-Existent Member

SQL:

INSERT INTO Loan (MemberID, BookID, LoanDate, DueDate, Status)

VALUES (999, 1, '2024-06-01', '2024-06-10', 'Issued');

ERROR:

Msg 547, Level 16, State 0, Line 172

The INSERT statement conflicted with the FOREIGN KEY constraint "FK\_\_Loan\_\_MemberID\_\_68487DD7". The conflict occurred in database " Library Management System", table "dbo.Member", column 'MemberID'.

The statement has been terminated.

CAUSE:

Member 999 does not exist.

RESOLUTION:

Insert only for existing members.

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6. ❌ INSERT Loan with Non-Existent Book

SQL:

INSERT INTO Loan (MemberID, BookID, LoanDate, DueDate, Status)

VALUES (1, 999, '2024-06-01', '2024-06-10', 'Issued');

ERROR:

Msg 547, Level 16, State 0, Line 176

The INSERT statement conflicted with the FOREIGN KEY constraint "FK\_\_Loan\_\_BookID\_\_693CA210". The conflict occurred in database " Library Management System", table "dbo.Book", column 'BookID'.

The statement has been terminated.

RESOLUTION:

Use valid BookID from the database.

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7. ❌ UPDATE Book Genre to Invalid Value

SQL:

UPDATE Book SET Genre = 'Sci-Fi' WHERE BookID = 1;

ERROR:

Msg 547, Level 16, State 0, Line 180

The UPDATE statement conflicted with the CHECK constraint "CK\_\_Book\_\_Genre\_\_5DCAEF64". The conflict occurred in database " Library Management System", table "dbo.Book", column 'Genre'.

The statement has been terminated.

RESOLUTION:

Allowed values: 'Fiction', 'Non-fiction', 'Reference', 'Children'.

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8. ❌ INSERT Payment with Negative Amount

SQL:

INSERT INTO Payment (PaymentDate, Amount, Method, MemberID, BookID, LoanDate)

VALUES ('2024-06-01', -5.00, 'Cash', 1, 1, '2024-05-01');

ERROR:

Msg 547, Level 16, State 0, Line 183

The INSERT statement conflicted with the CHECK constraint "CK\_\_Payment\_\_Amount\_\_6C190EBB". The conflict occurred in database " Library Management System", table "dbo.Payment", column 'Amount'.

The statement has been terminated.

RESOLUTION:

Ensure payment amounts are positive.

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9. ❌ INSERT Payment with Missing Method

SQL:

INSERT INTO Payment (PaymentDate, Amount, MemberID, BookID, LoanDate)

VALUES ('2024-06-01', 2.50, 1, 1, '2024-05-01');

ERROR:

Msg 515, Level 16, State 2, Line 187

Cannot insert the value NULL into column 'Method', table ' Library Management System.dbo.Payment'; column does not allow nulls. INSERT fails.

The statement has been terminated.

RESOLUTION:

Supply a valid non-null payment method.

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10. ❌ INSERT Review for Non-Existent Book

SQL:

INSERT INTO Review (MemberID, BookID, ReviewDate, Rating)

VALUES (1, 999, '2024-06-01', 5);

ERROR:

Msg 547, Level 16, State 0, Line 191

The INSERT statement conflicted with the FOREIGN KEY constraint "FK\_\_Review\_\_BookID\_\_72C60C4A". The conflict occurred in database " Library Management System", table "dbo.Book", column 'BookID'.

The statement has been terminated.

RESOLUTION:

Book must exist before reviewing.

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11. ❌ INSERT Review by Non-Existent Member

SQL:

INSERT INTO Review (MemberID, BookID, ReviewDate, Rating)

VALUES (999, 1, '2024-06-01', 4);

ERROR:

Msg 547, Level 16, State 0, Line 195

The INSERT statement conflicted with the FOREIGN KEY constraint "FK\_\_Review\_\_MemberID\_\_71D1E811". The conflict occurred in database " Library Management System", table "dbo.Member", column 'MemberID'.

The statement has been terminated.

RESOLUTION:

Register the member first.

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12. ❌ UPDATE Loan MemberID to Non-Existent

SQL:

UPDATE Loan SET MemberID = 999 WHERE BookID = 1 AND LoanDate = '2024-05-01';

ERROR:

Msg 547, Level 16, State 0, Line 199

The UPDATE statement conflicted with the REFERENCE constraint "FK\_\_Payment\_\_6D0D32F4". The conflict occurred in database " Library Management System", table "dbo.Payment".

The statement has been terminated.

RESOLUTION:

Only assign to existing members.