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# -- 1) Postcodes

CREATE TABLE Postcodes (

PostcodeID INT PRIMARY KEY AUTO\_INCREMENT,

Postcode INT NOT NULL,

City VARCHAR(255) NOT NULL,

Country VARCHAR(255) NOT NULL

);

-- 2) Borrower

CREATE TABLE Borrower (

BorrowerID INT PRIMARY KEY AUTO\_INCREMENT,

FirstName VARCHAR(255) NOT NULL,

LastName VARCHAR(255) NOT NULL,

Streetname VARCHAR(255) NOT NULL,

House\_number INT NOT NULL,

PostcodeID INT,

Telephone VARCHAR(255) NOT NULL,

Email VARCHAR(255) NOT NULL,

FOREIGN KEY (PostcodeID) REFERENCES Postcodes(PostcodeID)

);

-- 3) Books

CREATE TABLE Books (

BookID INT PRIMARY KEY AUTO\_INCREMENT,

Genre VARCHAR(255) NOT NULL,

Author VARCHAR(255) NOT NULL,

Title VARCHAR(255) NOT NULL,

Quantity INT NOT NULL CHECK (Quantity >= 0),

InStock TINYINT(1) NOT NULL DEFAULT 1,

Language VARCHAR(45),

IsFavourite BOOLEAN DEFAULT FALSE

);

-- 4) LoanStatus (Lookup-Tabelle für Statuswerte)

CREATE TABLE LoanStatus (

LoanStatusID INT PRIMARY KEY AUTO\_INCREMENT,

StatusName VARCHAR(50) NOT NULL

);

-- 5) Loans

CREATE TABLE Loans (

LoanID INT PRIMARY KEY AUTO\_INCREMENT,

BorrowerID INT NOT NULL,

BookID INT NOT NULL,

LoanDate DATETIME NOT NULL,

ReturnDate DATETIME,

LoanStatusID INT DEFAULT 1,

FOREIGN KEY (BorrowerID) REFERENCES Borrower(BorrowerID),

FOREIGN KEY (BookID) REFERENCES Books(BookID),

FOREIGN KEY (LoanStatusID) REFERENCES LoanStatus(LoanStatusID)

);

-- INSERT SAMPLE STATUSES

INSERT INTO LoanStatus (StatusName) VALUES ('borrowed'), ('returned'), (‘lost’);

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-- VIEW: BorrowedBooks

CREATE VIEW BorrowedBooks AS

SELECT

b.Title,

b.Author,

br.FirstName,

br.LastName,

l.LoanDate,

ls.StatusName

FROM Loans l

JOIN Books b ON l.BookID = b.BookID

JOIN Borrower br ON l.BorrowerID = br.BorrowerID

JOIN LoanStatus ls ON l.LoanStatusID = ls.LoanStatusID

WHERE ls.StatusName = 'borrowed';

-- QUERY: Overdue Books (Assuming 30-day borrow period)

SELECT

b.Title, br.FirstName, br.LastName, l.LoanDate

FROM Loans l

JOIN Books b ON l.BookID = b.BookID

JOIN Borrower br ON l.BorrowerID = br.BorrowerID

WHERE l.LoanStatusID = 1

AND l.LoanDate < NOW() - INTERVAL 30 DAY;