POPULATING THE DATABASE WITH DATA

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-- 1. INSERT INTO for Authors table

-- Using NULL for an unknown birth year to handle missing values

INSERT INTO Authors (author\_id, first\_name, last\_name, birth\_year) VALUES

(1, 'J.R.R.', 'Tolkien', 1892),

(2, 'C.S.', 'Lewis', 1898),

(3, 'George', 'Orwell', 1903),

(4, 'Harper', 'Lee', NULL); -- Example of using NULL

-- 2. INSERT INTO for Books table

INSERT INTO Books (book\_id, title, isbn, publication\_year) VALUES

(101, 'The Lord of the Rings', '9780618517657', 1954),

(102, 'The Hobbit', '9780547928227', 1937),

(103, '1984', '9780451524935', 1949),

(104, 'To Kill a Mockingbird', '9780446310789', 1960),

(105, 'The Lion, the Witch and the Wardrobe', '9780064404990', 1950);

-- 3. INSERT INTO for Patrons table

INSERT INTO Patrons (patron\_id, first\_name, last\_name, email) VALUES

(201, 'Alice', 'Smith', 'alice.smith@example.com'),

(202, 'Bob', 'Johnson', 'bob.johnson@example.com'),

(203, 'Charlie', 'Brown', 'charlie.brown@example.com');

-- 4. INSERT INTO for Book\_Authors linking table

-- J.R.R. Tolkien wrote The Lord of the Rings (101) and The Hobbit (102)

-- C.S. Lewis wrote The Lion, the Witch and the Wardrobe (105)

-- George Orwell wrote 1984 (103)

-- Harper Lee wrote To Kill a Mockingbird (104)

INSERT INTO Book\_Authors (book\_id, author\_id) VALUES

(101, 1),

(102, 1),

(105, 2),

(103, 3),

(104, 4);

-- 5. INSERT INTO for Loans table

-- Alice (201) borrowed The Hobbit (102)

-- Charlie (203) borrowed The Lion, the Witch and the Wardrobe (105)

INSERT INTO Loans (loan\_id, book\_id, patron\_id, loan\_date, due\_date) VALUES

(301, 102, 201, '2023-10-25', '2023-11-15'),

(302, 105, 203, '2023-10-20', '2023-11-10');

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-- DATA MANIPULATION

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-- 1. UPDATE statement

-- Update the title of a book and a patron's email.

-- The WHERE clause is crucial to ensure only the correct rows are affected.

UPDATE Books

SET title = 'The Hobbit, or There and Back Again'

WHERE book\_id = 102;

UPDATE Patrons

SET email = 'alice.s@newmail.com'

WHERE patron\_id = 201;

-- 2. DELETE statement

-- Delete a loan record.

-- The WHERE clause ensures we only delete the specific record, not all loans.

DELETE FROM Loans

WHERE loan\_id = 301;