-- Delete item with particular title
DELETE FROM "collections" WHERE "title" = 'Spring outing';

-- Delete item where value is NULL
DELETE FROM "collections" WHERE "acquired" IS NULL;

-- Delete items acquired before the museum moved to a new location in 1909
DELETE FROM "collections" WHERE "acquired" < '1909-01-01';
-- Raise a foreign key constraint error
DELETE FROM "artists" WHERE "name" = 'Unidentified artist';

-- Delete the artist's affiliation with their work, using hard-coded id
DELETE FROM "created" WHERE "artist_id" = 3;

-- Delete the artist's affiliation with their work, using subquery
DELETE FROM "created" WHERE "artist_id" = (SELECT "id" FROM "artists" WHERE "name" = 'Unidentified artist');</ref>

-- Delete the artist themselves
DELETE FROM "artists" WHERE "name" = 'Unidentified artist';
-- Delete an artist when foreign key ON DELETE action is set to CASCADE

DELETE FROM "artists" WHERE "name" = 'Unidentified artist';
-- Add a "deleted" column to "collections" table
ALTER TABLE "collections" ADD COLUMN "deleted" INTEGER DEFAULT 0;

-- View updated schema of collections table
.schema "collections"

-- View data
SELECT * FROM "collections";

-- Instead of deleting an item, update its deleted column to be 1
UPDATE "collections" SET "deleted" = 1 WHERE "title" = 'Farmers working at dawn';

-- Select all items from collections that are not deleted
SELECT * FROM "collections" WHERE "deleted" != 1;
-- Import into an existing table by specifying mode and skipping header columns
.import --csv --skip 1 mfa.csv collections
<table>
<thead>
<tr>
<th>id</th>
<th>title</th>
<th>accession_number</th>
<th>acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Profusion of flowers</td>
<td>56.257</td>
<td>1956-04-12</td>
</tr>
<tr>
<td>2</td>
<td>Farmers working at dawn</td>
<td>11.6152</td>
<td>1911-08-03</td>
</tr>
<tr>
<td>3</td>
<td>Spring outing</td>
<td>14.76</td>
<td>1914-01-08</td>
</tr>
<tr>
<td>4</td>
<td>Imaginative landscape</td>
<td>56.496</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Peonies and butterfly</td>
<td>06.1899</td>
<td>1906-01-01</td>
</tr>
</tbody>
</table>
-- Import into an existing table using a CSV without primary keys

.import --csv mfa.csv temp

INSERT INTO "collections" ("title", "accession_number", "acquired")
SELECT "title", "accession_number", "acquired" FROM "temp";

DROP TABLE "temp";
<table>
<thead>
<tr>
<th>title</th>
<th>accession_number</th>
<th>acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profusion of flowers</td>
<td>56.257</td>
<td>1956-04-12</td>
</tr>
<tr>
<td>Farmers working at dawn</td>
<td>11.6152</td>
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</tr>
<tr>
<td>Spring outing</td>
<td>14.76</td>
<td>1914-01-08</td>
</tr>
<tr>
<td>Imaginative landscape</td>
<td>56.496</td>
<td></td>
</tr>
<tr>
<td>Peonies and butterfly</td>
<td>06.1899</td>
<td>1906-01-01</td>
</tr>
</tbody>
</table>
-- Add a new item to the collections
INSERT INTO "collections" ("id", "title", "accession_number", "acquired")
VALUES (1, 'Profusion of flowers', '56.257', '1956-04-12');

-- Add a new item to the collections
-- Farmers working at dawn: https://collections.mfa.org/objects/256/farmers-working-at-dawn?ctx=59408041-a021-4b91-bceb-580fd6fe7e17&idx=7
INSERT INTO "collections" ("id", "title", "accession_number", "acquired")
VALUES (2, 'Farmers working at dawn', '11.6152', '1911-08-03');

-- Add a new item to the collections
-- Spring outing: https://collections.mfa.org/objects/353/spring-outing?ctx=87931f50-caf4-4309-8175-96c5196e52bb&idx=23
-- Primary key now autoincrements
INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES ('Spring outing', '14.76', '1914-01-08');

-- Show violation of UNIQUE
INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES ('Spring outing', '14.76', '1914-01-08');

-- Show violation of NOT NULL
INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES (NULL, '56.496', '1914-01-08');
-- Add a set of new items to the collections
-- Imaginative landscape: https://collections.mfa.org/objects/318/imaginative-landscape?ctx=792f664e-1945-4e0e-9c34-1de7d932bf36&idx=14
-- Peonies and butterfly: https://collections.mfa.org/objects/8532/peonies-and-butterfly?ctx=26ebba4c-6b5c-4234-8e01-60eba690cd70&idx=65
-- Typically, doing one bulk INSERT tends to be faster than many individual INSERTs

INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES
('Imaginative landscape', '56.496', NULL),
('Peonies and butterfly', '06.1899', '1906-01-01');
CREATE TABLE "collections"(
  "id" INTEGER,
  "title" TEXT NOT NULL,
  "accession_number" TEXT NOT NULL UNIQUE,
  "acquired" NUMERIC,
  PRIMARY KEY("id")
);

-- Tile Lunette: https://collections.mfa.org/objects/8559/tile-lunette?ctx=0510197c-0c9b-4a77-93ea-f5246427388a&idx=3
-- Statuette of a shrew: https://collections.mfa.org/objects/132432/statuette-of-a-shrew?ctx=3247cc4b-30db-4047-b9c7-813a6d39e11c&idx=5

INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES ('Profusion of flowers', '56.257', '1956-04-12'),
('Farmers working at dawn', '11.6152', '1911-08-03'),
('Spring outing', '14.76', '1914-01-08'),
('Imaginative landscape', '56.496', NULL),
('Peonies and butterfly', '06.1899', '1906-01-01'),
('Tile Lunette', '06.2437', '1906-11-08'),
('Statuette of a shrew', '01.105', '1901-02-11');
-- Add additional tables to raise a foreign key constraint error

CREATE TABLE "collections" (  
"id" INTEGER,  
"title" TEXT NOT NULL,  
"accession_number" TEXT NOT NULL UNIQUE,  
"acquired" NUMERIC,  
PRIMARY KEY("id")  
);  

INSERT INTO "collections" ("title", "accession_number", "acquired")  
VALUES  
('Farmers working at dawn', '11.6152', '1911-08-03'),  
('Imaginative landscape', '56.496', NULL),  
('Profusion of flowers', '56.257', '1956-04-12'),  
('Spring outing', '14.76', '1914-01-08');  

CREATE TABLE "artists" (  
"id" INTEGER,  
"name" TEXT NOT NULL,  
PRIMARY KEY("id")  
);  

INSERT INTO "artists" ("name")  
VALUES  
('Li Yin'),  
('Qian Weicheng'),  
('Unidentified artist'),  
('Zhou Chen');  

CREATE TABLE "created" (  
"artist_id" INTEGER,  
"collection_id" INTEGER,  
PRIMARY KEY("artist_id", "collection_id"),  
FOREIGN KEY("artist_id") REFERENCES "artists"("id"),  
FOREIGN KEY("collection_id") REFERENCES "collections"("id")  
);  

INSERT INTO "created" ("artist_id", "collection_id")  
VALUES  
((SELECT "id" FROM "artists" WHERE "name" = 'Li Yin'), (SELECT "id" FROM "collections" WHERE "title" = 'Imaginative landscape')),  
((SELECT "id" FROM "artists" WHERE "name" = 'Qian Weicheng'), (SELECT "id" FROM "collections" WHERE "title" = 'Profusion of flowers')),
(SELECT "id" FROM "artists" WHERE "name" = 'Unidentified artist'), (SELECT "id" FROM "collections" WHERE "title" = 'Farmers working at dawn'),

(_SELECT "id" FROM "artists" WHERE "name" = 'Zhou Chen'), (SELECT "id" FROM "collections" WHERE "title" = 'Spring outing');
-- Add ON DELETE CASCADE

CREATE TABLE "collections" (  
  "id" INTEGER,  
  "title" TEXT NOT NULL,  
  "accession_number" TEXT NOT NULL UNIQUE,  
  "acquired" NUMERIC,  
  PRIMARY KEY("id") 
);

INSERT INTO "collections" ("title", "accession_number", "acquired") VALUES  
('Farmers working at dawn', '11.6152', '1911-08-03'),  
('Imaginative landscape', '56.496', NULL),  
('Profusion of flowers', '56.257', '1956-04-12'),  
('Spring outing', '14.76', '1914-01-08');

CREATE TABLE "artists" (  
  "id" INTEGER,  
  "name" TEXT NOT NULL,  
  PRIMARY KEY("id") 
);

INSERT INTO "artists" ("name") VALUES  
('Li Yin'),  
('Qian Weicheng'),  
('Unidentified artist'),  
('Zhou Chen');

CREATE TABLE "created" (  
  "artist_id" INTEGER,  
  "collection_id" INTEGER,  
  PRIMARY KEY("artist_id", "collection_id"),  
  FOREIGN KEY("artist_id") REFERENCES "artists"("id") ON DELETE CASCADE,  
  FOREIGN KEY("collection_id") REFERENCES "collections"("id") ON DELETE CASCADE 
);

INSERT INTO "created" ("artist_id", "collection_id") VALUES  
((SELECT "id" FROM "artists" WHERE "name" = 'Li Yin'), (SELECT "id" FROM "collections" WHERE "title" = 'Imaginative landscape')),

((SELECT "id" FROM "artists" WHERE "name" = 'Qian Weicheng'), (SELECT "id" FROM "collections" WHERE "title" = 'Profusion of flowers')),
43 (SELECT "id" FROM "artists" WHERE "name" = 'Unidentified artist'), (SELECT "id" FROM "collections" WHERE "title" = 'Farmers working at dawn'),

44 (SELECT "id" FROM "artists" WHERE "name" = 'Zhou Chen'), (SELECT "id" FROM "collections" WHERE "title" = 'Spring outing'));
CREATE TABLE "collections" (  
  "id" INTEGER,
  "title" TEXT NOT NULL,
  "accession_number" TEXT NOT NULL UNIQUE,
  "acquired" NUMERIC,
  PRIMARY KEY("id")
 );
CREATE TABLE "collections" (
    "id" INTEGER,
    "title" TEXT NOT NULL,
    "accession_number" TEXT NOT NULL UNIQUE,
    "acquired" NUMERIC,
    PRIMARY KEY("id")
);

INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES
('Farmers working at dawn', '11.6152', '1911-08-03'),
('Imaginative landscape', '56.496', NULL),
('Profusion of flowers', '56.257', '1956-04-12'),
('Spring outing', '14.76', '1914-01-08');

CREATE TABLE "artists" (  
    "id" INTEGER,
    "name" TEXT NOT NULL,
    PRIMARY KEY("id")
);

INSERT INTO "artists" ("name")
VALUES
('Li Yin'),
('Qian Weicheng'),
('Unidentified artist'),
('Zhou Chen');

CREATE TABLE "created" (  
    "artist_id" INTEGER,
    "collection_id" INTEGER,
    PRIMARY KEY("artist_id", "collection_id"),
    FOREIGN KEY("artist_id") REFERENCES "artists"("id") ON DELETE CASCADE,
    FOREIGN KEY("collection_id") REFERENCES "collections"("id") ON DELETE CASCADE
);

INSERT INTO "created" ("artist_id", "collection_id")
VALUES
((SELECT "id" FROM "artists" WHERE "name" = 'Li Yin'), (SELECT "id" FROM "collections" WHERE "title" = 'Imaginative landscape')),
((SELECT "id" FROM "artists" WHERE "name" = 'Qian Weicheng'), (SELECT "id" FROM "collections" WHERE "title" = 'Profusion of flowers')),
((SELECT "id" FROM "artists" WHERE "name" = 'Unidentified artist'), (SELECT "id" FROM "collections" WHERE "title" = 'Farmers working at dawn'));
42 ((SELECT "id" FROM "artists" WHERE "name" = 'Zhou Chen'), (SELECT "id" FROM "collections" WHERE "title" = 'Spring outing'));
CREATE TABLE "collections" (
    "id" INTEGER,
    "title" TEXT NOT NULL,
    "accession_number" TEXT NOT NULL UNIQUE,
    "acquired" NUMERIC,
    PRIMARY KEY("id")
);

INSERT INTO "collections" ("title", "accession_number", "acquired")
VALUES
('Farmers working at dawn', '11.6152', '1911-08-03'),
('Imaginative landscape', '56.496', NULL),
('Profusion of flowers', '56.257', '1956-04-12'),
('Spring outing', '14.76', '1914-01-08');

CREATE TABLE "artists" (
    "id" INTEGER,
    "name" TEXT NOT NULL,
    PRIMARY KEY("id")
);

INSERT INTO "artists" ("name")
VALUES
('Li Yin'),
('Qian Weicheng'),
('Unidentified artist'),
('Zhou Chen');

CREATE TABLE "created" (
    "artist_id" INTEGER,
    "collection_id" INTEGER,
    PRIMARY KEY("artist_id", "collection_id"),
    FOREIGN KEY("artist_id") REFERENCES "artists"("id") ON DELETE CASCADE,
    FOREIGN KEY("collection_id") REFERENCES "collections"("id") ON DELETE CASCADE
);

INSERT INTO "created" ("artist_id", "collection_id")
VALUES
((SELECT "id" FROM "artists" WHERE "name" = 'Li Yin'), (SELECT "id" FROM "collections" WHERE "title" = 'Imaginative landscape')),
((SELECT "id" FROM "artists" WHERE "name" = 'Qian Weicheng'), (SELECT "id" FROM "collections" WHERE "title" = 'Profusion of flowers')),
((SELECT "id" FROM "artists" WHERE "name" = 'Unidentified artist'), (SELECT "id" FROM "collections" WHERE "title" = 'Farmers working at dawn'));
dawn)),
42 ((SELECT "id" FROM "artists" WHERE "name" = 'Zhou Chen'), (SELECT "id" FROM "collections" WHERE "title" = 'Spring outing'));

src3/schemas/update/schema.sql
-- Create a table to track buying and selling of items from collections
CREATE TABLE "transactions" (  
  "id" INTEGER,  
  "title" TEXT,  
  "action" TEXT,  
  PRIMARY KEY("id")  
);

-- Create a trigger to log selling items from collections
CREATE TRIGGER "sell"  
BEFORE DELETE ON "collections"  
BEGIN  
    INSERT INTO "transactions" ("title", "action")  
    VALUES (OLD."title", 'sold');
END;

-- List existing triggers

-- Delete from collections
DELETE FROM "collections" WHERE "title" = 'Profusion of flowers';

-- Create a trigger to log buying items
CREATE TRIGGER "buy"  
AFTER INSERT ON "collections"  
BEGIN  
    INSERT INTO "transactions" ("title", "action")  
    VALUES (NEW."title", 'bought');
END;

-- Add item to collections
INSERT INTO "collections" ("title", "accession_number", "acquired")  
VALUES ('Profusion of flowers', '56.257', '1956-04-12');
-- Update authorship (incorrectly)
UPDATE "created" SET "artist_id" = ( 
    SELECT "id" FROM "artists"
    WHERE "name" = 'Li Yin'
) ;

-- Update authorship (correctly) for a piece with a previously unknown authorship
UPDATE "created" SET "artist_id" = ( 
    SELECT "id" FROM "artists"
    WHERE "name" = 'Li Yin'
) 
WHERE "collection_id" = ( 
    SELECT "id" FROM "collections"
    WHERE "title" = 'Farmers working at dawn'
) ;
-- Clean data from a CSV of votes for favorite artwork

-- Count votes
SELECT "title", COUNT("title") FROM "votes" GROUP BY "title";

-- Remove trailing whitespace
UPDATE "votes" SET "title" = trim("title");

-- Force to uppercase
UPDATE "votes" SET "title" = upper("title");

-- Manually update the titles of "Farmers working at dawn"
UPDATE "votes" SET "title" = 'FARMERS WORKING AT DAWN'
WHERE "title" = 'FARMERS WORKING';

UPDATE "votes" SET "title" = 'FARMERS WORKING AT DAWN'
WHERE "title" = 'FAMERS WORKING AT DAWN';

-- Fix misspellings of "Farmers working at dawn"
UPDATE "votes" SET "title" = 'FARMERS WORKING AT DAWN'
WHERE "title" LIKE 'Fa%';

-- Fix misspellings of "Imaginative landscape"
UPDATE "votes" SET "title" = 'IMAGINATIVE LANDSCAPE'
WHERE "title" LIKE 'Imag%';

-- Fix misspellings of "Profusion of flowers"
UPDATE "votes" SET "title" = 'PROFUSION OF FLOWERS'
WHERE "title" LIKE 'Profusion %';
title
Farmers working at dawn
Farmers Working at Dawn
Imaginative landscape
Profusion of flowers
Spring outing
Spring outing
Imaginative landscape
Farmers working at dawn
Farmers working at dawn
Profusion
Imaginative landscape
Profusion of flowers
Farmers working
Imaginative landscape
Imaginative landscape
Spring outing
Spring outing
Profusion of flowers
SPring outing
Farmers working at dawn