



English Country Dancing

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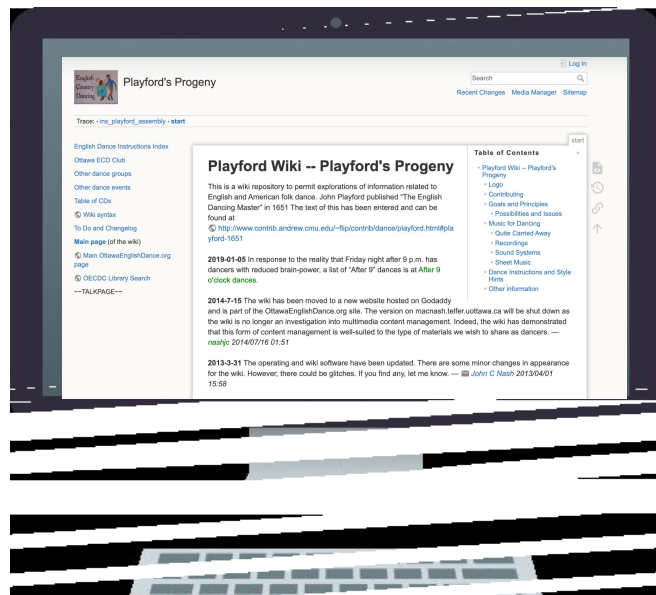
What is English Country Dance?

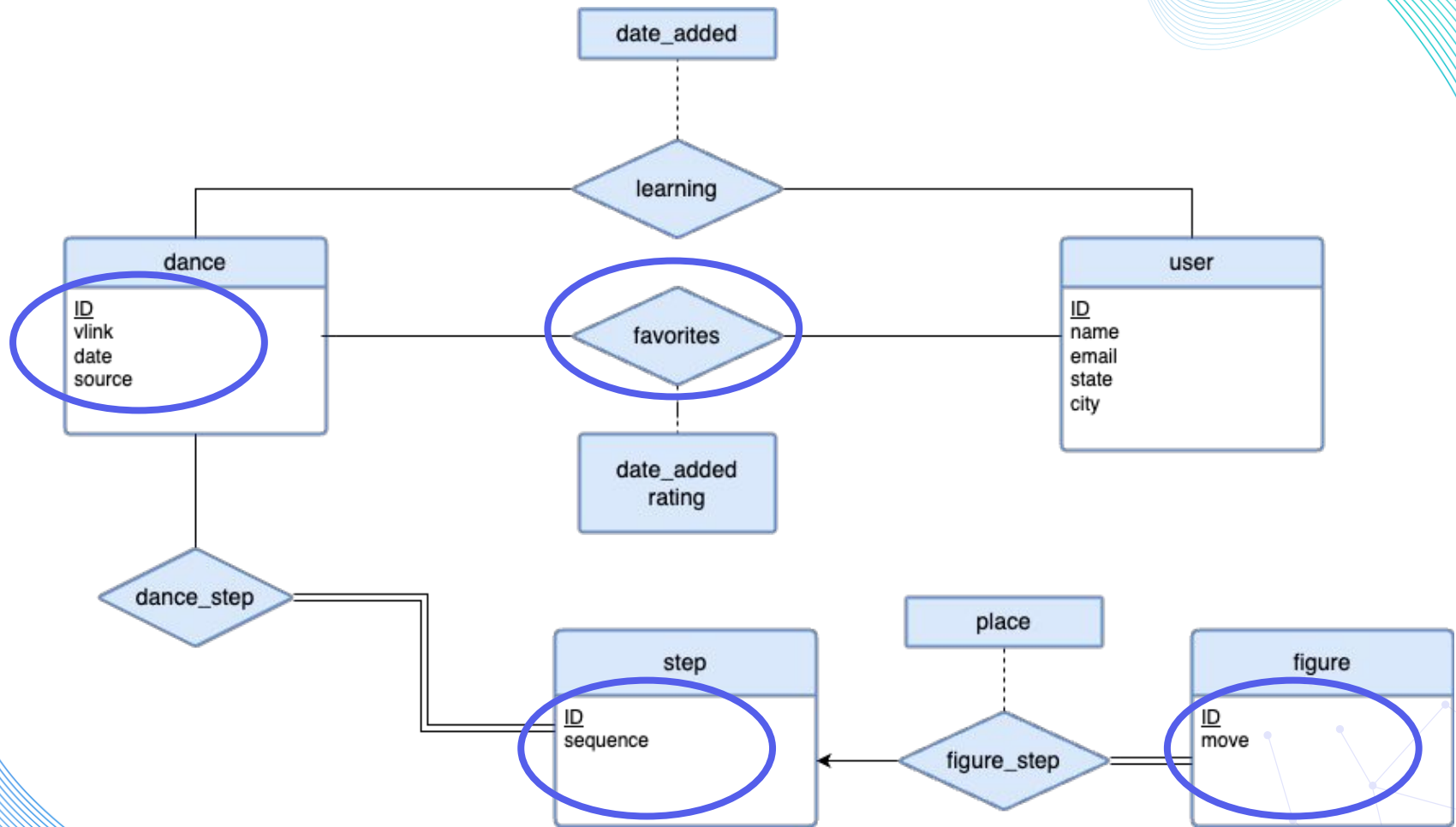
- A traditional communal dance form dating back to 16th-century England
- Thousands of unique dances, each composed of common "figures"
 - e.g. Right Star, Two Hand Turn
- Dances are taught using "caller's notes" — brief, semi-formal instructions for leaders

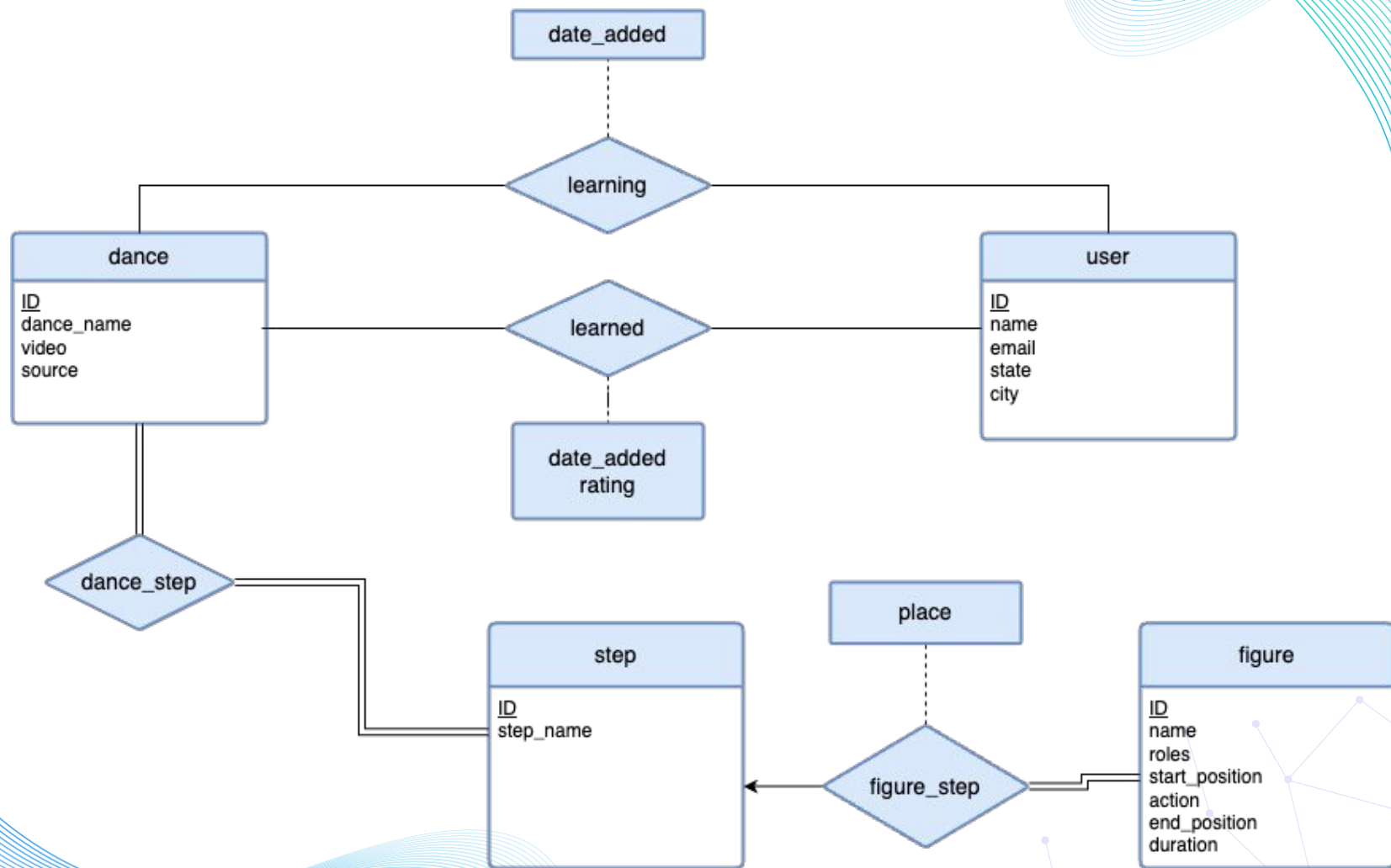


Current Challenge:

- Existing collections like Playford's Progeny are hosted on platforms like DokuWiki
 - Not very user friendly
- Issues:
 - Links to media are prone to breaking and hard to maintain
 - Caller's notes are inconsistent and semi-structured, limiting advanced analysis
 - No easy way to search dance moves
 - No library of specific movements







Schema Overview

- Designed a relational database to support dances in a way which modularizes them
- Initial schema included tables like:
 - Dance, Step, Figure, FigureStep, Learning, Favorites
- Goal: support learning progress, favorites, and dance composition while keeping performance efficient.

```
CREATE TABLE Figure (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  Name TEXT NOT NULL,  
  Roles TEXT NOT NULL,  
  StartPosition TEXT NOT NULL,  
  Action TEXT NOT NULL,  
  EndPosition TEXT NOT NULL,  
  Duration INTEGER NOT NULL  
);
```

```
CREATE TABLE Dance (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  DanceName TEXT NOT NULL,  
  Video TEXT,  
  Source TEXT  
);  
  
CREATE TABLE Step (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  DanceID INTEGER,  
  StepName TEXT,  
  FOREIGN KEY (DanceID) REFERENCES Dance (ID)  
);
```

```
CREATE TABLE User (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  Username TEXT UNIQUE NOT NULL,  
  Password TEXT,  
  Name TEXT NOT NULL,  
  Email TEXT NOT NULL,  
  State TEXT,  
  City TEXT,  
  CreatedAt TIMESTAMP DEFAULT CURRENT_TIMESTAMP,  
  UpdatedAt TIMESTAMP DEFAULT CURRENT_TIMESTAMP  
);
```

Schema Evolution

- Main Issue: Circular references
 - Dance \leftrightarrow Step, Step \rightarrow FigureStep, Figure \rightarrow FigureStep
- Caused insertion failures due to dependencies needing each other.
- These relationships seemed logical but created unseen circular loops.
- Refactored schema to remove unnecessary dependencies.
- Lesson: You don't fully understand a schema's flaws until you try using it.
- Additionally, we needed authentication for the User.

Key Fixes + Added Functionality

- Removed circular references between Dance, Step, and FigureStep.
- Replaced Learning and Favorites with:
 - Learning: tracks in-progress material.
 - Learned: tracks completed dances with user ratings.
- Ratings allow users to see their favorites and improve personalization.
- Added Additional Information to Figure, and authentication to User.
- Schema is now cleaner, and better aligned with app needs.

```
CREATE TABLE FigureStep (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  StepID INTEGER,  
  FigureID INTEGER,  
  Place INTEGER,  
  FOREIGN KEY (StepID) REFERENCES Step (ID),  
  FOREIGN KEY (FigureID) REFERENCES Figure (ID)  
);
```

```
CREATE TABLE Learned (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  UserID TEXT,  
  DanceID TEXT,  
  DateAdded TEXT,  
  Rating INTEGER,  
  FOREIGN KEY (UserID) REFERENCES User (ID),  
  FOREIGN KEY (DanceID) REFERENCES Dance (ID)  
);
```

```
CREATE TABLE Learning (  
  ID INTEGER PRIMARY KEY AUTOINCREMENT,  
  UserID TEXT,  
  DanceID TEXT,  
  DateAdded TEXT,  
  FOREIGN KEY (UserID) REFERENCES User (ID),  
  FOREIGN KEY (DanceID) REFERENCES Dance (ID)  
);
```


Data Pipeline

- <https://www.ottawaenglishdance.org/playford/doku.php?id=start>
- Web Scraping
 - Extract the homepage raw text; returning a directory of all dances
 - `[[ins_a_celts_new_dance | A Celt's New Dance]]`
 - Use regex to get a list of all the names following `[[` and starting with `ins_`
 - For each name, query `https://www.ottawaenglishdance.org/playford/doku.php?id=<name>&do=export_raw` where `<name>` coincides with name
 - Store the result in `/dances` the directory

Generate and Dedupe Figures

for dance in dances:



Dance (.txt)

gpt-4.0-mini
"Generate Figures"

Raw Figures (.json)

```
{  
  "name": "Circle Left and Fall Back",  
  "roles": "Bottom 2 Couples (1st & 3rd)",  
  "start_position": "Facing each other in a circle of 4",  
  "action": "Circle 4 to the left, half way then fall back",  
  "end_position": "Facing each other in a line",  
  "duration": 4  
},
```

Raw Figures
(.json)



random

50 figures

50 figures

⋮

50 figures

50 figures

87 figures

93 figures

Generate Dances

for dance in dances:

Dance (.txt)



gpt-4.0-mini
"Generate Dances"



Deduped Figures (.json)

```
{
  "title": "The Dance",
  "source": "Traditional English Country Dance",
  "formation": "Longways set for several couples",
  "music_structure": "A1 A2 B1 B2",
  "phrases": {
    "A1": [
      "Lead Up and Fall Back",
      "Partners Set and Turn Single"
    ],
    "A2": [
      "Lead Up and Fall Back",
      "Partners Set and Turn Single"
    ],
    "B1": [
      "Men Face Left Wall and Move Forward",
      "Men Set to Partners and Turn Single"
    ],
    "B2": [
      "Women Face Right Wall and Move Forward",
      "Women Set to Partners and Turn Single"
    ]
  },
  "name": "ins_adsons_saraband"
}
```

Demo

Questions?