

Assignment 2

The Movie Database

Last updated: Wednesday 1st March 3:47pm

Most recent changes are shown in red ... older changes are shown in brown.

[Specification] [Database] [Examples] [Testing] [Submitting]

Introduction

This document contains a description of the Movie database. We give both an ER model and an SQL schema.

Background

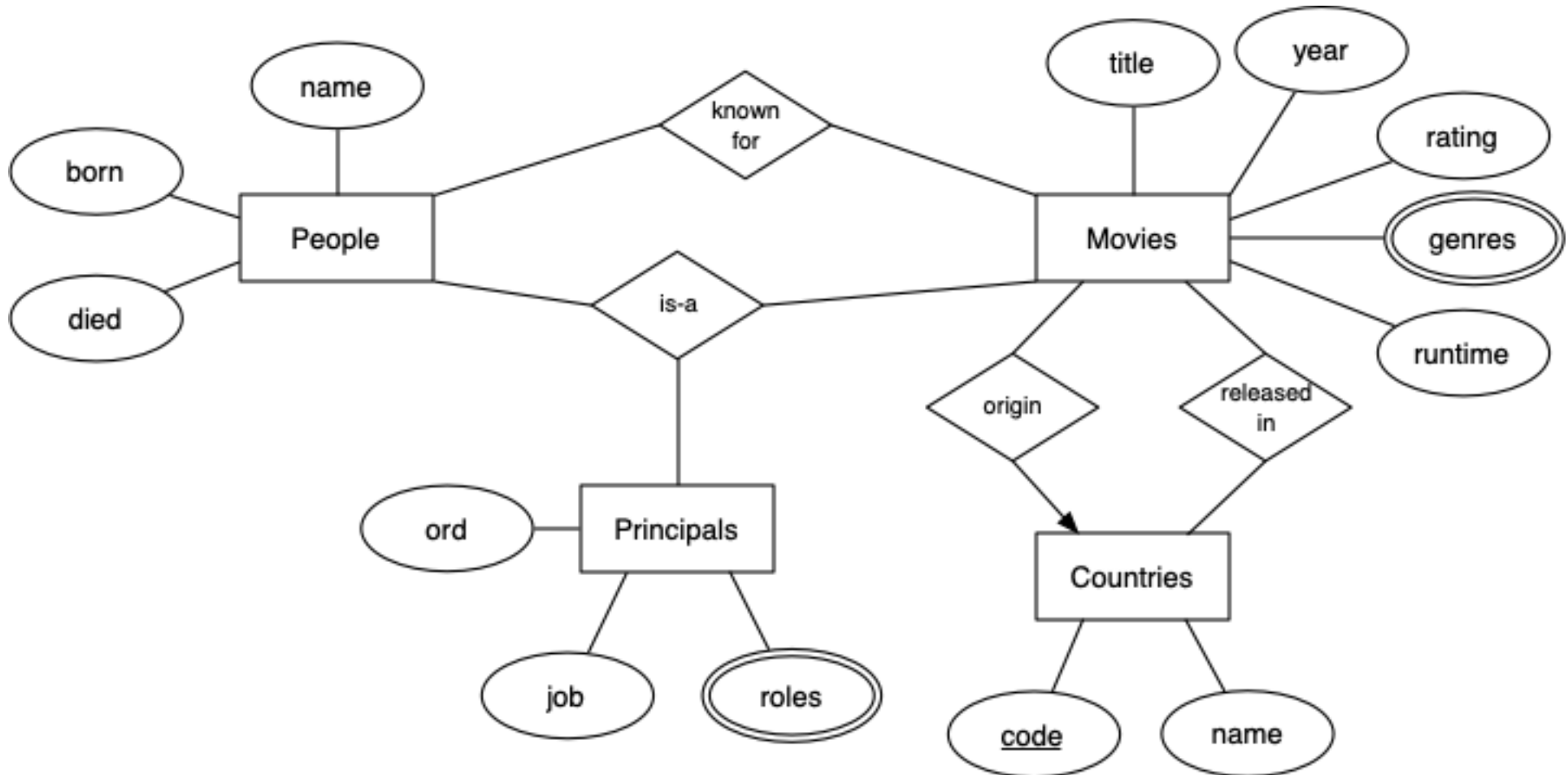
The Internet Movie Database (IMDB) is a vast store of information about all kinds of video content (movies, TV series, short films, ...). It holds details of the video products themselves, the people involved in making them (actors, directors, etc.) and the roles played by these people.

For this assignment, we have set up a database, which is a tiny subset of the main IMDB, containing information about movies from 1990 to 2022. The main entities in this database are:

- Movies: title, running time, year made, country of origin, rating
- People: name, year born, year died, jobs they have had in the industry
- Principals: people who have an important role in a movie (e.g. star actor)
- Countries: places where movies are made and released

ER Model

The following diagram shows major components of the Movie database:



SQL Schema

The following is the SQL schema used in building the Movie database:

```
1.  -- COMP3311 22T3, Movie Database Schema
2.
3.  CREATE DOMAIN YearType AS INTEGER CHECK (VALUE > 1000);
4.  CREATE DOMAIN MinutesType AS INTEGER CHECK (VALUE > 0);
5.  CREATE DOMAIN CountType AS INTEGER CHECK (VALUE >= 0);
6.  CREATE DOMAIN RatingType AS FLOAT CHECK (VALUE BETWEEN 0.0 AND 10.0);
7.  CREATE DOMAIN CountryCodeType AS CHAR(2);
8.
9.  CREATE TABLE People (
10.     id      INTEGER,
11.     name    text NOT NULL,
12.     born    yeartype,
13.     died    yeartype,
14.     PRIMARY KEY (id)
15. );
16.
17. CREATE TABLE Countries (
18.     code    CountryCodeType,
19.     name    text NOT NULL,
20.     PRIMARY KEY (code)
21. );
22.
23. CREATE TABLE Movies (
24.     id      INTEGER,
25.     title   text NOT NULL,
26.     YEAR    YearType NOT NULL,
27.     runtime MinutesType,
28.     origin  CountryCodeType REFERENCES Countries(code),
29.     rating  RatingType,
30.     nvotes  CountType,
31.     PRIMARY KEY (id)
32. );
33.
34. CREATE TABLE MovieGenres (
35.     movie   INTEGER REFERENCES movies(id),
36.     genre   text,
37.     PRIMARY KEY (movie,genre)
38. );
39.
40. CREATE TABLE ReleasedIn (
41.     movie   INTEGER REFERENCES Movies(id),
42.     country CountryCodeType REFERENCES Countries(code),
43.     PRIMARY KEY (movie,country)
44. );
45.
46. CREATE TABLE KnownFor (
47.     person  INTEGER REFERENCES People(id),
48.     movie   INTEGER REFERENCES Movies(id),
49.     PRIMARY KEY (person,movie)
50. );
51.
52. CREATE TABLE Principals (
53.     id      INTEGER,
54.     movie   INTEGER NOT NULL REFERENCES Movies(id),
55.     person  INTEGER NOT NULL REFERENCES People(id),
56.     ord     INTEGER NOT NULL CHECK (ord > 0),
57.     job     text NOT NULL,
58.     PRIMARY KEY (id)
59. );
60.
61. CREATE TABLE PlaysRole (
62.     inMovie INTEGER REFERENCES Principals(id),
63.     ROLE    text,
64.     PRIMARY KEY (inMovie,ROLE)
65. );
66.
```