MOVIE DATABASE MANAGEMENT SYSTEM

Project for SQL Module

ABSTRACT :-

A Movie Database Management System (MDMS) is an information system that organizes, stores, and retrieves data related to movies. It allows users to efficiently manage and access information about movies, including their titles, directors, actors, genres, release dates, ratings, and reviews. MDMSs are commonly used by individuals, movie studios, rental services, and other organizations involved in the film industry.
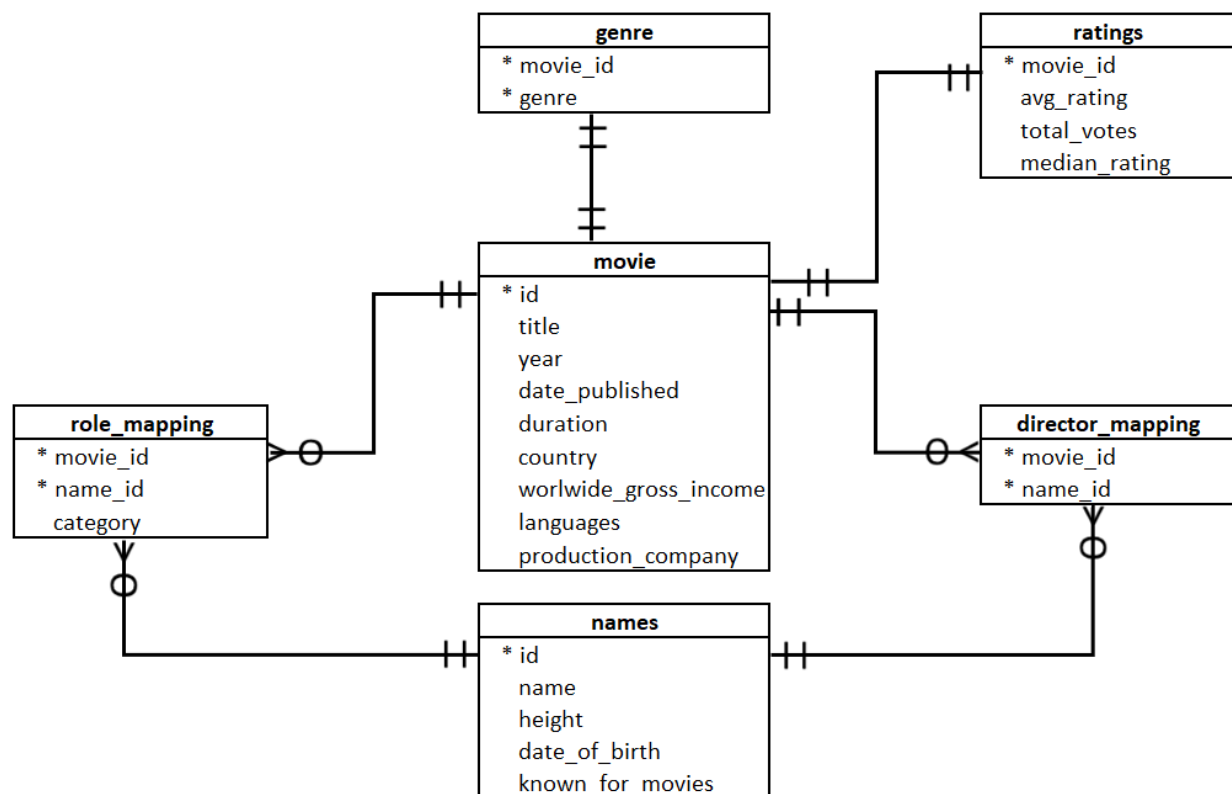
Key features of MDMSs typically include:

➢ **Movie Information Management:** Add, edit, and delete movie information, including titles, release dates, genres, and directors.
➢ **Search and Filtering:** Search for movies based on various criteria, such as title, genre, director, actor, or rating.
➢ **User Ratings and Reviews:** Allow users to rate movies and write reviews, providing valuable insights and recommendations.
➢ **Data Analysis and Reporting:** Generate reports on movie popularity, ratings trends, and other relevant data.
➢ **User Authentication and Access Control:** Implement secure user authentication and access control mechanisms to protect user data and prevent unauthorized access.

This database contains 6 tables:

1. Movie
2. Genre
3. Director_Mapping
4. Role_Mapping
5. Names
6. Ratings

The relation between above tables are shown in below page of ER-DIAGRAM.

ER-DIAGRAM (Entity Relation Diagram) :-

Table Descriptions :-

1. Movie

Field	Type	Null	Key	Default
id	varchar(10)	NO	PRI	NULL
title	varchar(200)	YES		NULL
year	int	YES		NULL
date_published	date	YES		NULL
duration	int	YES		NULL
country	varchar(250)	YES		NULL
worlwide_gross_income	varchar(30)	YES		NULL
languages	varchar(200)	YES		NULL
production_company	varchar(200)	YES		NULL

2. Genre

Field	Type	Null	Key	Default
movie_id	varchar(10)	NO	PRI	NULL
genre	varchar(20)	NO	PRI	NULL

3. Director_Mapping

Field	Type	Null	Key	Default
movie_id	varchar(10)	NO	PRI	NULL
name_id	varchar(10)	NO	PRI	NULL

4. Role_Mapping

Field	Type	Null	Key	Default
movie_id	varchar(10)	NO	PRI	NULL
name_id	varchar(10)	NO	PRI	NULL
category	varchar(10)	YES		NULL

5. Names

Field	Type	Null	Key	Default
id	varchar(10)	NO	PRI	NULL
name	varchar(100)	YES		NULL
height	int	YES		NULL
date_of_birth	date	YES		NULL
known_for_movies	varchar(100)	YES		NULL

6. Ratings

Field	Type	Null	Key	Default
movie_id	varchar(10)	NO	PRI	NULL
avg_rating	decimal(3,1)	YES		NULL
total_votes	int	YES		NULL
median_rating	int	YES		NULL

COMMANDS :-

Creating Database -

DROP DATABASE IF EXISTS imdb;

CREATE DATABASE imdb;

USE imdb;

Creating Tables -

Creating Table Movie :

DROP TABLE IF EXISTS movie;

CREATE TABLE movie

 (

 id VARCHAR(10) NOT NULL,

 title VARCHAR(200) DEFAULT NULL,

 year INT DEFAULT NULL,

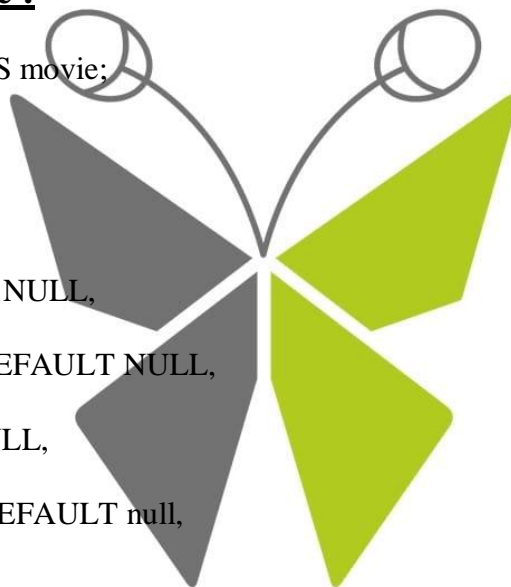 date_published DATE DEFAULT null,

 duration INT,

 country VARCHAR(250),

 worlwide_gross_income VARCHAR(30),

 languages VARCHAR(200),

 production_company VARCHAR(200),

 PRIMARY KEY (id)

);

Creating Table Genre :

DROP TABLE IF EXISTS genre;

CREATE TABLE genre

 (

  movie_id VARCHAR(10),

  genre VARCHAR(20),

  PRIMARY KEY (movie_id, genre)

);

Creating Table Director_ Mapping :

DROP TABLE IF EXISTS director_mapping;

CREATE TABLE director_mapping

 (

  movie_id VARCHAR(10),

  name_id VARCHAR(10),

  PRIMARY KEY (movie_id, name_id)

);

Creating Table Role_ Mapping :

DROP TABLE IF EXISTS role_mapping;

CREATE TABLE role_mapping

 (

  movie_id VARCHAR(10) NOT NULL,

  name_id VARCHAR(10) NOT NULL,

  category VARCHAR(10),

  PRIMARY KEY (movie_id, name_id)

);

Creating Table Names :

DROP TABLE IF EXISTS names;

CREATE TABLE names

 (

 id varchar(10) NOT NULL,

 name varchar(100) DEFAULT NULL,

 height int DEFAULT NULL,

 date_of_birth date DEFAULT null,

 known_for_movies varchar(100),

 PRIMARY KEY (id)

);

Creating Table Ratings :

DROP TABLE IF EXISTS ratings;

CREATE TABLE ratings

(

 movie_id VARCHAR(10) NOT NULL,

 avg_rating DECIMAL(3,1),

 total_votes INT,

 median_rating INT,

 PRIMARY KEY (movie_id)

);

Populating Tables -

Populate Movie Table :-

INSERT INTO movie VALUES

('tt0012494','Der müde Tod',2017,'2017-06-09',97,'Germany','$ 12156','German','Decla-Bioscop AG'),

('tt0038733','A Matter of Life and Death',2017,'2017-12-08',104,'UK','$ 124241','English, French, Russian', 'The Archers'),

('tt0060908','Le roi de coeur',2018,'2018-06-08',102,'France, Italy','$ 18130','French, English, German','Fildebroc'),

('tt0069049','The Other Side of the Wind',2018,'2018-11-02',122,'France, Iran, USA', NULL, 'English, German', 'Royal Road Entertainment'),

('tt0071145','Ankur',2019,'2019-01-02',131,'India', NULL,' Hindi', 'Blaze Film Enterprises'),

('tt0082620','Kiss Daddy Goodbye',2018,'2018-11-23',92,'USA', NULL, 'English', 'Pendragon Film'),

('tt0083907','The Evil Dead',2018,'2018-10-31',85,'USA','$ 2893091','English','Renaissance Pictures'),

('tt0085953','Mo tai',2019,'2019-10-22',84,'Hong Kong', NULL, 'Cantonese', 'Lo Wei Motion Picture Company'),

('tt0095857','Pestonjee',2019,'2019-02-22',125,'India', NULL, 'Hindi', 'National Film Development Corporation of India (NFDC)'),

('tt0097268','Ek Din Achanak',2018,'2018-12-30',105,'India', NULL, 'Hindi', 'National Film Development Corporation'),

('tt0100275','La Telenovela Errante',2018,'2018-09-06',80,'Chile','$ 3624','Spanish','Poetastros'),

('tt0116851','Leila',2017,'2017-12-06',102,'Iran','$ 8231','Persian','Farabi Cinema Foundation'),

('tt0137204','Joe Finds Grace',2017,'2017-04-22',83,'Canada', NULL, 'English', 'Bradeway Pictures'),

('tt0147855','Aashirwad',2019,'2019-03-09',146,'India', NULL, 'Hindi', 'Film Enterprises'),

('tt0192669','Teenage Space Vampires',2018,'2018-11-15',90,'Romania, Canada, USA', NULL,'English','Canarom Productions'),

('tt0235166','Against All Hope',2017,'2017-10-20',90,'USA', NULL, 'English', NULL),

('tt0278422','Buttleman',2018,'2018-01-01',94,'USA', NULL,' English', 'Buttleman Productions LLC'),

('tt0331314','Bunyan and Babe',2017,'2017-01-12',84,'USA, India','$ 72060','English','Exodus Film Group'),

('tt0337383','Vaikai is Amerikos viesbucio',2017,'2017-03-09',88,'Soviet Union', NULL, 'Lithuanian, Russian','Lietuvos Kinostudija'),

('tt0339091','Gang of Roses',2019,'2019-09-20',94,'USA','$ 30497','English','Sleeping Giant Productions'),

('tt0339736','The Evil Within',2017,'2017-08-30',98,'USA', NULL, 'English', 'Supernova LLC'),

('tt0347307','Kaminnyy khrest',2018,'2018-10-30',80,'Soviet Union', NULL, 'Ukrainian', 'Dovzhenko Film Studios'),

('tt0352314','Ek Hasina Thi',2019,'2019-01-02',120,'India', NULL, 'Hindi, English', 'Bohra Bros Productions'),

('tt0360556','Fahrenheit 451',2018,'2018-05-20',100,'USA', NULL, 'English', 'HBO Films'),

('tt0361953','The Nest of the Cuckoo Birds',2017,'2017-10-16',81,'USA', NULL, 'English', 'Bert Williams Motion Pictures and Distributor'),

('tt0365545','Nappily Ever After',2018,'2018-09-21',98,'USA', NULL, 'English', 'Netflix'),

('tt0385887','Motherless Brooklyn',2019,'2019-11-01',144,'USA','$ 9205026','English','Class 5 Films'),

('tt0427543','A Million Little Pieces',2019,'2019-08-30',113,'USA','$ 49710','English','3Blackdot'),

('tt0437086','Alita: Battle Angel',2019,'2019-02-06',122,'USA','$ 404852543','English, Spanish', 'Twentieth Century Fox'),

('tt0441881','Danger Close: The Battle of Long Tan',2019,'2019-08-08',118,'Australia','$ 2034844','English','Deeper Water'),

('tt0443474','Crazy',2017,'2017-01-19',106,'USA', NULL, 'English', 'FN Crazy Film LLC'),

('tt0448115','Shazam!',2019,'2019-04-05',132,'USA, Canada','$ 364571656','English, Spanish', 'Warner Bros.'),

('tt0451201','Sludge',2017,'2017-09-19',95,'USA', NULL, 'English', 'Xeno Films'),

('tt0451279','Wonder Woman',2017,'2017-06-01',141,'USA, China, Hong Kong','$ 821847012','English, German, Dutch, French, Spanish, Chinese, Greek, Ancient (to 1453), North American Indian', 'Warner Bros.'),

('tt0456407','Fakir of Venice',2019,'2019-02-08',87,'India', NULL, 'English, Hindi', 'October Films'),

('tt0460890','The Only Living Boy in New York',2017,'2017-08-11',89,'USA','$ 2550321','English','Amazon Studios'),

('tt0490215','Silence',2017,'2017-01-01',161,'USA, UK, Taiwan, Japan, Mexico, Italy','$ 23737523','English, Japanese, Latin', 'Sharp Sword Films'),

('tt0491175','Suburbicon',2017,'2017-11-24',105,'UK, USA','$ 12751667','English','Black Bear Pictures'),

('tt0491203','Tulip Fever',2018,'2018-12-07',105,'UK, USA','$ 8381715','English','Worldview Entertainment'),

('tt0493405','CHIPS',2017,'2017-03-24',100,'USA','$ 26800152','English, Spanish', 'Primate Pictures'),

('tt0493407','Cook Off!',2017,'2017-11-17',98,'USA', NULL, 'English', NULL),

('tt0498381','Rings',2017,'2017-02-03',102,'USA','$ 83080890','English','Macari/Edelstein'),

('tt0499469','Emilio',2017,'2017-02-17',102,'USA', NULL, 'English, Spanish', 'Emilio Productions'),

('tt0765465','The Legend of Secret Pass',2019,'2019-01-15',92,'USA', NULL,'English','JC2 Animated Entertainment'),

('tt0800325','The Dirt',2019,'2019-03-22',107,'USA', NULL,'English','10th Street Entertainment'),

('tt0835802','Krystal',2018,'2018-04-13',90,'USA','$ 37516','English','Dorian Media'),

('tt0837563','Pet Sematary',2019,'2019-04-04',101,'USA, Canada','$ 112399944','english','Paramount Pictures'),

('tt0858419','Bolden',2019,'2019-05-03',108,'USA', NULL, 'English', 'King Bolden'),

('tt0859635','Super Troopers 2',2018,'2018-06-15',99,'USA','$ 31626386','English','Votiv Films'),

('tt0862930','Dukun',2018,'2018-04-05',108,'Malaysia', NULL,'Hokkien, Malay', 'Astro Shaw');

Populate Genre Table :-

INSERT INTO genre VALUES

('tt0012494','Thriller'),

('tt0012494','Fantasy'),

('tt0012494','Drama'),

('tt0038733','Fantasy'),

('tt0038733','Drama'),

('tt0038733','Comedy'),

('tt0060908','Comedy'),

('tt0060908','Drama'),

('tt0069049','Drama'),

('tt0071145','Drama'),

('tt0082620','Horror'),

('tt0083907','Horror'),

('tt0085953','Horror'),

('tt0095857','Drama'),

('tt0095857','Comedy'),

('tt0097268','Drama'),

('tt0100275','Fantasy'),

('tt0100275','Drama'),

('tt0100275','Comedy'),

('tt0116851','Romance'),

('tt0116851','Family'),

('tt0116851','Drama'),

('tt0137204','Comedy'),

('tt0137204','Adventure'),

('tt0147855','Drama'),

('tt0192669','Sci-Fi'),

('tt0192669','Action'),

('tt0235166','Drama'),

('tt0278422','Comedy'),

('tt0331314','Comedy'),

('tt0331314','Adventure'),

('tt0337383','Drama'),

('tt0339091','Drama'),

('tt0339091','Action'),

('tt0339736','Horror'),

('tt0347307','Drama'),

('tt0352314','Mystery'),

('tt0352314','Drama'),

('tt0352314','Crime'),

('tt0360556','Thriller'),

('tt0360556','Sci-Fi'),

('tt0360556','Drama'),

('tt0361953','Horror'),

('tt0361953','Drama'),

('tt0365545','Romance'),

('tt0365545','Drama'),

('tt0365545','Comedy'),

('tt0385887','Drama'),

('tt0385887','Crime'),

('tt0427543','Drama'),

('tt0437086','Sci-Fi'),

('tt0437086','Adventure'),

('tt0437086','Action'),

('tt0441881','Drama'),

('tt0441881','Action'),

('tt0443474','Drama'),

('tt0448115','Comedy'),

('tt0448115','Adventure'),

('tt0448115','Action'),

('tt0451201','Horror'),

('tt0451279','Fantasy'),

('tt0451279','Adventure'),

('tt0451279','Action'),

('tt0456407','Drama'),

('tt0460890','Drama'),

('tt0490215','Drama'),

('tt0491175','Drama'),

('tt0491175','Crime'),

('tt0491175','Comedy'),

('tt0491203','Romance'),

('tt0491203','Drama'),

('tt0493405','Crime'),

('tt0493405','Comedy'),

('tt0493405','Action'),

('tt0493407','Comedy'),

('tt0498381','Mystery'),

('tt0498381','Horror'),

('tt0498381','Drama'),

('tt0499469','Mystery'),

('tt0499469','Drama'),

('tt0499469','Adventure'),

('tt0765465','Fantasy'),

('tt0765465','Family'),

('tt0800325','Drama'),

('tt0800325','Comedy'),

('tt0835802','Drama'),

('tt0835802','Comedy'),

('tt0837563','Thriller'),

('tt0837563','Mystery'),

('tt0837563','Horror'),

('tt0858419','Drama'),

('tt0859635','Mystery'),

('tt0859635','Crime'),

('tt0859635','Comedy'),

('tt0862930','Thriller'),

('tt0862930','Horror');

Populate Director Mapping Table :-

INSERT INTO director_mapping VALUES

('tt0038733','nm0003836'),

('tt0038733','nm0696247'),

('tt0060908','nm0003606'),

('tt0069049','nm0000080'),

('tt0082620','nm0716460'),

('tt0083907','nm0000600'),

('tt0085953','nm0490551'),

('tt0100275','nm0749914'),

('tt0100275','nm0765384'),

('tt0147855','nm0611531'),

('tt0192669','nm0939869'),

('tt0235166','nm0003761'),

('tt0339091','nm0478713'),

('tt0339736','nm1274189'),

('tt0347307','nm0652673'),

('tt0360556','nm1023919'),

('tt0427543','nm0853374'),

('tt0451279','nm0420941'),

('tt0491175','nm0000123'),

('tt0491203','nm0149491'),

('tt0800325','nm0871860'),

('tt0837563','nm1556116'),
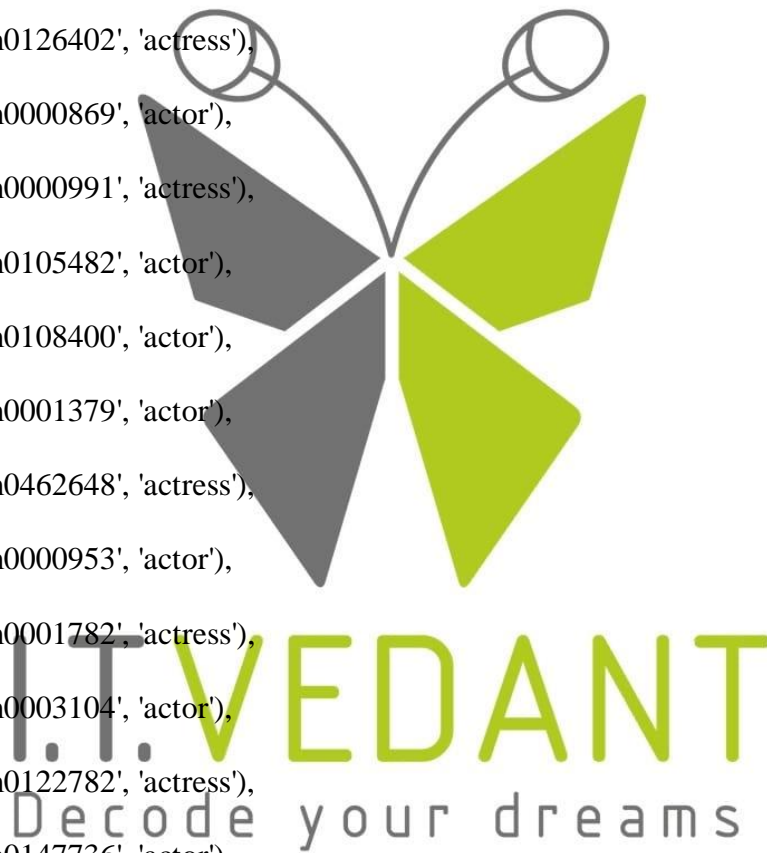
('tt0837563','nm1552637'),

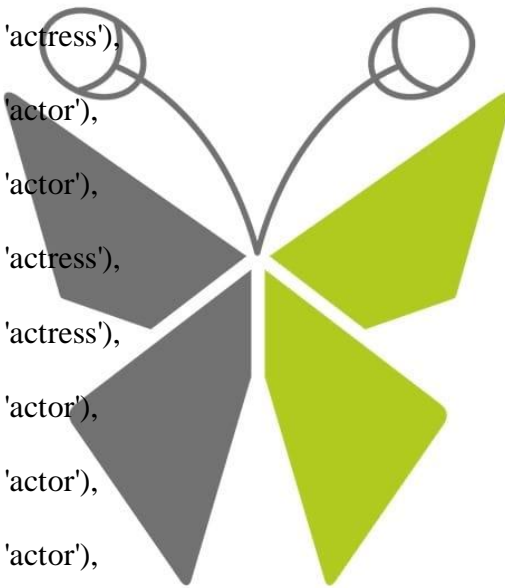('tt0862930','nm1012100');

<u>Populate Role_Mapping Table :-</u>

INSERT INTO role_mapping VALUES

('tt0038733', 'nm0000057', 'actor'),

('tt0038733', 'nm0001375', 'actress'),

('tt0038733', 'nm0178509', 'actor'),

('tt0038733', 'nm0126402', 'actress'),

('tt0060908', 'nm0000869', 'actor'),

('tt0060908', 'nm0000991', 'actress'),

('tt0060908', 'nm0105482', 'actor'),

('tt0060908', 'nm0108400', 'actor'),

('tt0069049', 'nm0001379', 'actor'),

('tt0069049', 'nm0462648', 'actress'),

('tt0069049', 'nm0000953', 'actor'),

('tt0069049', 'nm0001782', 'actress'),

('tt0082620', 'nm0003104', 'actor'),

('tt0082620', 'nm0122782', 'actress'),

('tt0082620', 'nm0147736', 'actor'),

('tt0082620', 'nm0588922', 'actor'),

('tt0083907', 'nm0132257', 'actor'),

('tt0083907', 'nm0762445', 'actress'),

('tt0083907', 'nm0217822', 'actor'),

('tt0083907', 'nm0048260', 'actress'),
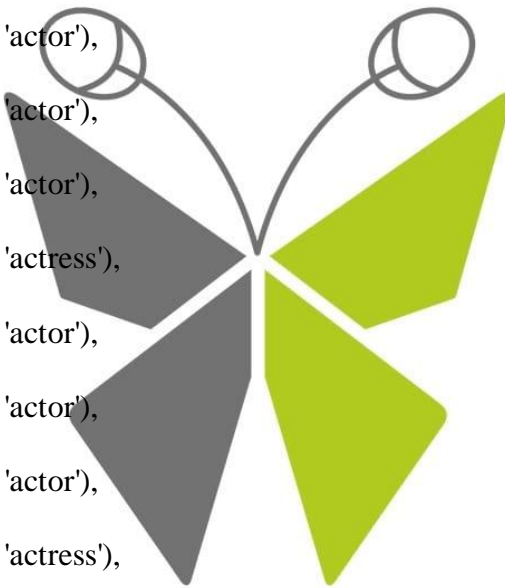
('tt0085953', 'nm0150874', 'actor'),

('tt0085953', 'nm1845142', 'actor'),

('tt0085953', 'nm0387360', 'actor'),

('tt0085953', 'nm4628925', 'actor'),

('tt0085953', 'nm0490623', 'actor'),

('tt0100275', 'nm0016013', 'actor'),

('tt0100275', 'nm0728971', 'actress'),

('tt0100275', 'nm0721280', 'actor'),

('tt0100275', 'nm1415193', 'actress'),

('tt0147855', 'nm0006369', 'actor'),

('tt0147855', 'nm0474876', 'actor'),

('tt0147855', 'nm0764407', 'actress'),

('tt0147855', 'nm0474940', 'actress'),

('tt0192669', 'nm0242903', 'actor'),

('tt0192669', 'nm0299479', 'actor'),

('tt0192669', 'nm0444339', 'actor'),

('tt0192669', 'nm0095751', 'actress'),

('tt0235166', 'nm0000514', 'actor'),

('tt0235166', 'nm0565247', 'actress'),

('tt0235166', 'nm2199466', 'actor'),

('tt0235166', 'nm2199374', 'actor'),

('tt0339091', 'nm0004793', 'actress'),

('tt0339091', 'nm0428591', 'actress'),

('tt0339091', 'nm0001107', 'actress'),

('tt0339091', 'nm0559069', 'actress'),
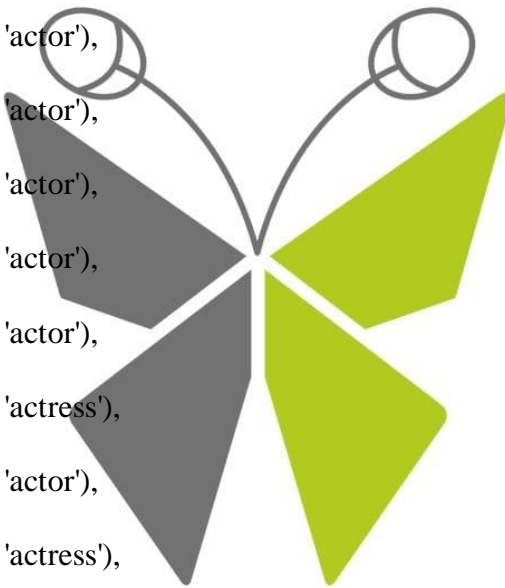
('tt0339736', 'nm0001218', 'actor'),

('tt0339736', 'nm0000539', 'actress'),

('tt0339736', 'nm0462735', 'actor'),

('tt0339736', 'nm0077720', 'actor'),

('tt0347307', 'nm0111410', 'actor'),

('tt0347307', 'nm0407597', 'actor'),

('tt0347307', 'nm1300963', 'actress'),

('tt0347307', 'nm0586645', 'actor'),

('tt0347307', 'nm0767512', 'actor'),

('tt0360556', 'nm0430107', 'actor'),

('tt0360556', 'nm2210323', 'actor'),

('tt0360556', 'nm0441654', 'actress'),

('tt0360556', 'nm0788335', 'actor'),

('tt0427543', 'nm1093951', 'actor'),

('tt0427543', 'nm0000671', 'actor'),

('tt0427543', 'nm3747611', 'actress'),

('tt0427543', 'nm0000610', 'actor'),

('tt0451279', 'nm2933757', 'actress'),

('tt0451279', 'nm1517976', 'actor'),

('tt0451279', 'nm0000705', 'actress'),

('tt0451279', 'nm0205063', 'actress'),

('tt0491175', 'nm0000354', 'actor'),

('tt0491175', 'nm0000194', 'actress'),

('tt0491175', 'nm1209966', 'actor'),

('tt0491175', 'nm7415871', 'actor'),

('tt0491203', 'nm2539953', 'actress'),

('tt0491203', 'nm2851530', 'actor'),

('tt0491203', 'nm1925239', 'actor'),

('tt0491203', 'nm0334441', 'actress'),

('tt0493405', 'nm0671567', 'actor'),

('tt0493405', 'nm1009277', 'actor'),

('tt0493405', 'nm0000352', 'actor'),

('tt0493405', 'nm4023073', 'actress'),

('tt0800325', 'nm3150488', 'actor'),

('tt0800325', 'nm3701064', 'actor'),

('tt0800325', 'nm0446622', 'actor'),

('tt0800325', 'nm3206486', 'actor'),

('tt0837563', 'nm0164809', 'actor'),

('tt0837563', 'nm1541272', 'actress'),

('tt0837563', 'nm0001475', 'actor'),

('tt0837563', 'nm5503448', 'actress'),

('tt0862930', 'nm0014474', 'actress'),

('tt0862930', 'nm0404003', 'actor'),

('tt0862930', 'nm2382489', 'actress'),

('tt0862930', 'nm0368349', 'actor');

Populate Names Table :-

INSERT INTO names VALUES

('nm0003836', 'Michael Powell', '188', '1905-09-30', 'tt0038733'),

('nm0178509', 'Robert Coote', '200', '1909-02-04', 'tt0038733'),

('nm0515193', 'Roger Livesey', '200', '1906-06-25', 'tt0038733'),

('nm0696247', 'Emeric Pressburger', '97', '1902-12-05', 'tt0038733'),

('nm0000953', 'Peter Bogdanovich', '178', '1939-07-30', 'tt0069049'),

('nm0462648', 'Oja Kodar', NULL, '1941-04-25', 'tt0069049'),

('nm0716460', 'Patrick Regan', NULL, NULL, 'tt0082620'),

('nm0000600', 'Sam Raimi', '180', '1959-10-23', 'tt0083907'),

('nm0048260', 'Betsy Baker', NULL, '1955-05-08', 'tt0083907'),

('nm0132257', 'Bruce Campbell', '200', '1958-06-22', 'tt0083907'),

('nm0217822', 'Richard DeManincor', '200', NULL, 'tt0083907'),

('nm0762445', 'Ellen Sandweiss', '97', '1958-12-30', 'tt0083907'),

('nm4628925', 'Meng-Kuang Hsu', NULL, NULL, 'tt0085953'),

('nm0749914', 'Raoul Ruiz', NULL, '1941-07-25', 'tt0100275'),

('nm0765384', 'Valeria Sarmiento', NULL, '1948-10-29', 'tt0100275'),

('nm1415193', 'Consuelo Castillo', NULL, NULL, 'tt0100275'),

('nm0006369', 'Ashok Kumar', NULL, '1911-10-13', 'tt0147855'),

('nm0611531', 'Hrishikesh Mukherjee', NULL, '1922-09-30', 'tt0147855'),

('nm0003761', 'Edward T. McDougal', NULL, NULL, 'tt0235166'),

('nm0565247', 'Maureen McCarthy', NULL, NULL, 'tt0235166'),

('nm2199374', 'Rex Flores', NULL, NULL, 'tt0235166'),

('nm2199466', 'Cecil Moe', NULL, NULL, 'tt0235166'),

('nm1056714', 'Tim Swain', NULL, NULL, 'tt0339091'),

('nm1274189', 'Andrew Getty', NULL, '1967-07-01', 'tt0339736'),

('nm0407597', 'Daniil Ilchenko', NULL, '1894-12-25', 'tt0347307'),

('nm1300963', 'Yekaterina Mateyk', NULL, NULL, 'tt0347307'),

('nm0007107', 'Urmila Matondkar', '156', '1974-02-04', 'tt0352314'),

('nm1437189', 'Sriram Raghavan', NULL, NULL, 'tt0352314, tt8108198'),

('nm1023919', 'Ramin Bahrani', '84', '1975-03-20', 'tt0360556'),

('nm2210323', 'Aaron Davis', NULL, NULL, 'tt0360556'),

('nm2650183', 'Eric Berryman', NULL, '1989-01-09', 'tt0385887, tt5974044, tt6317236, tt6688022'),

('nm0853374', 'Sam Taylor-Johnson', NULL, '1967-03-04', 'tt0427543'),

('nm0000680', 'Casper Van Dien', '178', '1968-12-18', 'tt0437086'),

('nm0001194', 'Jeff Fahey', '183', '1952-11-29', 'tt0437086'),

('nm2784856', 'Jorge A. Jimenez', '200', NULL, 'tt0437086'),

('nm3156758', 'Elle LaMont', '200', '1981-09-12', 'tt0437086'),

('nm4665416', 'Lassiter Holmes', '200', NULL, 'tt0437086'),

('nm5277107', 'Keean Johnson', '200', NULL, 'tt0437086'),

('nm6388037', 'James Storer', '200', '1995-03-17', 'tt0441881'),

('nm1157048', 'Zachary Levi', '84', '1980-09-29', 'tt0448115'),

('nm2803689', 'Marta Milans', '200', '1982-04-19', 'tt0448115'),

('nm4755508', 'Asher Angel', '200', '2002-09-06', 'tt0448115'),

('nm0000667', 'David Thewlis', '190', '1963-03-20', 'tt0451279'),

('nm0090674', 'Rainer Bock', '200', '1954-07-31', 'tt0451279'),

('nm0205063', 'Lucy Davis', '200', '1973-02-17', 'tt0451279'),

('nm0420941', 'Patty Jenkins', '200', '1971-07-24', 'tt0451279'),

('nm0811583', 'Zack Snyder', '94', '1966-03-01', 'tt0451279'),

('nm1517976', 'Chris Pine', '84', '1980-08-26', 'tt0451279'),

('nm1915282', 'Eleanor Matsuura', '76', NULL, 'tt0451279'),

('nm2933757', 'Gal Gadot', '200', '1985-04-30', 'tt0451279'),

('nm4302215', 'Shawn Dixon', NULL, NULL, 'tt0451279'),

('nm0001971', 'Ewen Bremner', '173', '1972-01-23', 'tt0451279, tt2763304'),

('nm1322293', 'David Bispham', NULL, NULL, 'tt0451279, tt4158096, tt3548276'),

('nm0297983', 'Nobuaki Fukuda', NULL, '1950-12-18', 'tt0490215'),

('nm0441098', 'Hairi Katagiri', '200', '1963-01-18', 'tt0490215'),

('nm0475900', 'Asuka Kurosawa', '200', '1971-12-22', 'tt0490215'),

('nm1328568', 'Munetaka Aoki', '84', '1980-03-14', 'tt0490215'),

('nm5862455', 'Nana Komatsu', '200', NULL, 'tt0490215'),

('nm0149491', 'Justin Chadwick', NULL, '1968-12-01', 'tt0491203'),

('nm4436761', 'Matilda Anna Ingrid Lutz', '200', NULL, 'tt0498381, tt6738136'),

('nm0871860', 'Jeff Tremaine', '94', NULL, 'tt0800325'),

('nm2473806', 'Aaron Jay Rome', '200', '1985-05-02', 'tt0800325'),

('nm3150488', 'Douglas Booth', '200', '1992-07-09', 'tt0800325'),

('nm3206486', 'Daniel Webber', '200', NULL, 'tt0800325'),

('nm3330483', 'Rebekah Graf', '200', '1982-07-27', 'tt0800325'),

('nm3701064', 'Iwan Rheon', '200', '1985-05-13', 'tt0800325'),

('nm3812343', 'Sylvia Grace Crim', '200', NULL, 'tt0800325'),

('nm0446622', 'Machine Gun Kelly', '200', '1990-04-22', 'tt0800325,tt5519340,tt5968394'),

('nm1541272', 'Amy Seimetz', '84', '1981-11-25', 'tt0837563'),

('nm1552637', 'Dennis Widmyer', NULL, NULL, 'tt0837563'),

('nm1556116', 'Kevin Kölsch', NULL, NULL, 'tt0837563'),

('nm5503448', 'Jeté Laurence', NULL, '2007-07-27', 'tt0837563, tt1758810'),

('nm1887429', 'Hayes MacArthur', '76', '1977-04-16', 'tt0859635'),

('nm0014474', 'Umie Aida', NULL, '1973-01-18', 'tt0862930'),

('nm1012100', 'Dain Said', NULL, NULL, 'tt0862930'),

('nm2382489', 'Elyana', NULL, NULL, 'tt0862930'),

('nm0906207', 'Kin Wah Chew', NULL, NULL, 'tt0862930, tt9231140');

Populate Ratings Table :-

INSERT INTO ratings VALUES

('tt0012494', '7.7', '4695', '8'),

('tt0038733', '8.1', '17693', '8'),

('tt0060908', '7.5', '3392', '8'),

('tt0069049', '6.9', '5014', '7'),

('tt0071145', '8.2', '789', '8'),

('tt0082620', '3.6', '236', '3'),

('tt0083907', '7.5', '174505', '8'),

('tt0085953', '6.2', '262', '6'),

('tt0095857', '7', '137', '8'),

('tt0097268', '6.9', '179', '7'),

('tt0100275', '6.6', '121', '7'),

('tt0116851', '7.6', '3149', '8'),

('tt0137204', '8.6', '264', '9'),

('tt0147855', '7.3', '171', '8'),

('tt0192669', '2.6', '449', '2'),

('tt0235166', '3.6', '145', '4'),

('tt0278422', '5', '109', '8'),

('tt0331314', '5', '319', '5'),

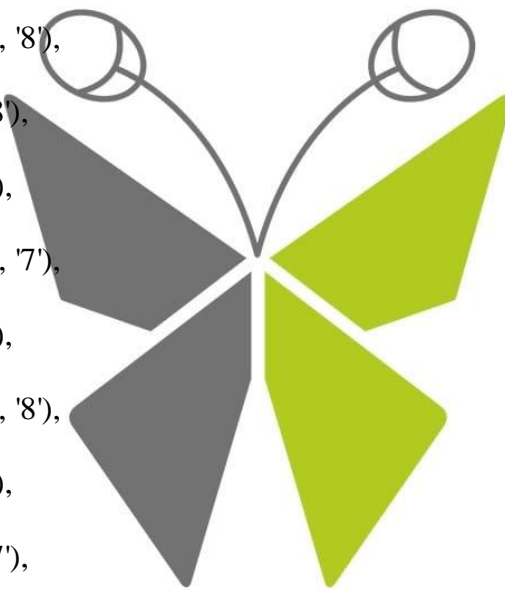('tt0337383', '8.2', '493', '9'),

('tt0339091', '2.4', '943', '2'),

('tt0339736', '5.5', '2577', '6'),

('tt0347307', '7.3', '129', '8'),

('tt0352314', '7.6', '6014', '8'),

('tt0360556', '4.9', '15320', '5'),

('tt0361953', '5.1', '220', '5'),

('tt0365545', '6.4', '6732', '7'),

('tt0385887', '7.2', '4414', '8'),

('tt0427543', '6.5', '292', '7'),

('tt0437086', '7.4', '171427', '8'),

('tt0441881', '7.1', '1872', '8'),

('tt0443474', '6.6', '568', '7'),

('tt0448115', '7.1', '191155', '7'),

('tt0451201', '6.3', '382', '9'),

('tt0451279', '7.4', '507173', '8'),

('tt0456407', '5.1', '188', '6'),

('tt0460890', '6.3', '9426', '7'),

('tt0490215', '7.1', '88842', '7'),

('tt0491175', '5.7', '34001', '6'),

('tt0491203', '6.2', '16190', '6'),

('tt0493405', '6', '38693', '6'),

('tt0493407', '4', '745', '4'),

('tt0498381', '4.5', '35233', '5'),

('tt0499469', '7.3', '174', '8.5'),

('tt0765465', '5', '340', '5'),

('tt0800325', '7', '31672', '7'),

('tt0835802', '5.4', '1016', '6'),

('tt0837563', '5.8', '61560', '6'),

('tt0858419', '5.5', '295', '6'),

('tt0859635', '6.1', '21489', '6'),

('tt0862930', '6.9', '339', '8');

select * from movie;

DESC movie;

select * from genre;

DESC genre;

select * from director_mapping;

DESC director_mapping;

select * from role_mapping;

DESC role_mapping;

select * from names;

DESC names;

select * from ratings;

DESC ratings;

JOIN QUERIES :-

1) Retrieve the names of actors and actresses who worked in the movie with the title 'A Matter of Life and Death' (tt0038733).

SELECT B.name

FROM movie AS A INNER JOIN names AS B

ON A.id = B.known_for_movies

WHERE B.known_for_movies = "tt0038733";

name
Michael Powell
Robert Coote
Roger Livesey
Emeric Pressburger

2) List the titles and release years of movies directed by Patrick Regan.

SELECT A.title, A.year

FROM movie AS A INNER JOIN names AS B

ON A.id = B.known_for_movies

WHERE name = "Patrick Regan";

title	year
Kiss Daddy Goodbye	2018

3) Find the total number of movies in the 'Horror' genre.

SELECT COUNT(*) AS Count

FROM movie AS A INNER JOIN genre AS B

ON A.id = B.movie_id

WHERE genre = "Horror";

Count
9

4) Display the names of directors who directed movies with a duration greater than 120 minutes.

SELECT C.name

FROM director_mapping AS A

INNER JOIN movie AS B ON A.movie_id = B.id

INNER JOIN names AS C ON B.id = C.known_for_movies

WHERE duration > 120;

name
David Thewlis
Peter Bogdanovich
Ashok Kumar
Rainer Bock
Lucy Davis
Patty Jenkins
Oja Kodar
Hrishikesh Mukherjee
Zack Snyder
Chris Pine
Eleanor Matsuura
Gal Gadot
Shawn Dixon

5) Retrieve the average rating and total votes for movies released in the year 2018.

SELECT B.avg_rating, B.total_votes

FROM movie AS A INNER JOIN ratings AS B

ON A.id = B.movie_id WHERE year = 2018;

avg_rating	total_votes
7.5	3392
6.9	5014
4.0	236
7.5	174505
6.9	179
6.6	121
2.6	449
5.0	1109
7.3	129
4.9	15320
6.4	6732
6.2	16190
5.4	1016
6.1	21489
6.9	339

6) Retrieve a list of all movies and their corresponding actors, including those with no associated actors.

SELECT A.id, A.title AS Movie_Name, C.known_for_movies, C.name AS Actor_Name

FROM movie AS A

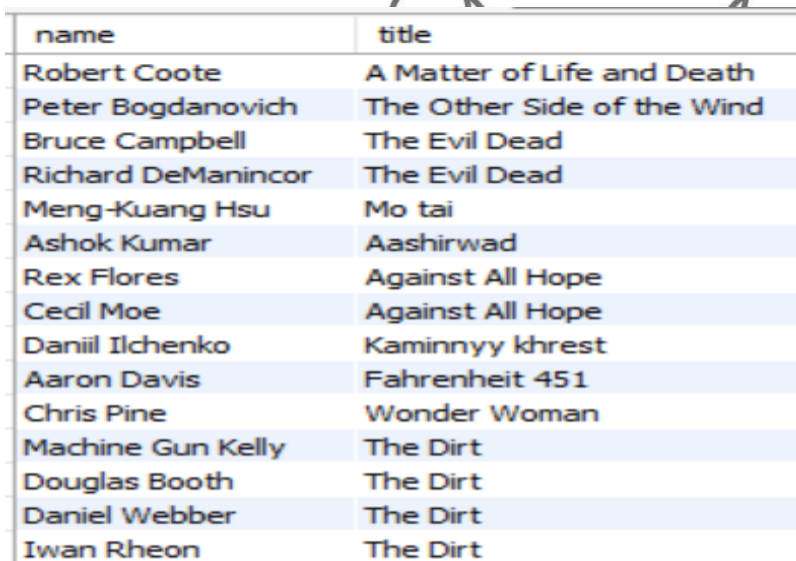LEFT JOIN role_mapping AS B ON A.id = B.movie_id AND B.category = "actor"

LEFT JOIN names AS C ON B.name_id = C.id;

id	Movie_Name	known_for_movies	Actor_Name
tt0012494	Der müde Tod	NULL	NULL
tt0038733	A Matter of Life and Death	NULL	NULL
tt0038733	A Matter of Life and Death	tt0038733	Robert Coote
tt0060908	Le roi de coeur	NULL	NULL
tt0060908	Le roi de coeur	NULL	NULL
tt0060908	Le roi de coeur	NULL	NULL
tt0069049	The Other Side of the Wind	tt0069049	Peter Bogdanovich
tt0069049	The Other Side of the Wind	NULL	NULL
tt0071145	Ankur	NULL	NULL
tt0082620	Kiss Daddy Goodbye	NULL	NULL
tt0082620	Kiss Daddy Goodbye	NULL	NULL
tt0082620	Kiss Daddy Goodbye	NULL	NULL
tt0083907	The Evil Dead	tt0083907	Bruce Campbell
tt0083907	The Evil Dead	tt0083907	Richard DeManincor
tt0085953	Mo tai	NULL	NULL
tt0085953	Mo tai	NULL	NULL
tt0085953	Mo tai	NULL	NULL
tt0085953	Mo tai	NULL	NULL
tt0085953	Mo tai	tt0085953	Meng-Kuang Hsu

7) Display the names of all actors and the movies they have acted in, even if some actors haven't been cast in any movies.

SELECT A.name, C.title

FROM names AS A

LEFT JOIN role_mapping AS B ON A.id = B.name_id

LEFT JOIN movie AS C ON B.Movie_id = C.id

WHERE B.category = "actor";

name	title
Robert Coote	A Matter of Life and Death
Peter Bogdanovich	The Other Side of the Wind
Bruce Campbell	The Evil Dead
Richard DeManincor	The Evil Dead
Meng-Kuang Hsu	Mo tai
Ashok Kumar	Aashirwad
Rex Flores	Against All Hope
Cecil Moe	Against All Hope
Daniil Ilchenko	Kaminnyy khrest
Aaron Davis	Fahrenheit 451
Chris Pine	Wonder Woman
Machine Gun Kelly	The Dirt
Douglas Booth	The Dirt
Daniel Webber	The Dirt
Iwan Rheon	The Dirt

8) Retrieve a list of all actors and the movies they have acted in, along with the corresponding genres.

SELECT A.name AS actor_name, C.title AS movie_title, C.year AS movie_year, GROUP_CONCAT(D.genre) AS genres

FROM names AS A

INNER JOIN role_mapping AS B ON A.id = B.name_id

INNER JOIN movie AS C ON B.movie_id = C.id

INNER JOIN genre AS D ON C.id = D.movie_id

WHERE B.category = "actor"

GROUP BY A.name, C.title, C.year ORDER BY A.name, C.year;

actor_name	movie_title	movie_year	genres
Aaron Davis	Fahrenheit 451	2018	Drama,Sci-Fi,Thriller
Ashok Kumar	Aashirwad	2019	Drama
Bruce Campbell	The Evil Dead	2018	Horror
Cecil Moe	Against All Hope	2017	Drama
Chris Pine	Wonder Woman	2017	Action,Adventure,Fantasy
Daniel Webber	The Dirt	2019	Comedy,Drama
Daniil Ilchenko	Kaminnyy khrest	2018	Drama
Douglas Booth	The Dirt	2019	Comedy,Drama
Iwan Rheon	The Dirt	2019	Comedy,Drama
Machine Gun Kelly	The Dirt	2019	Comedy,Drama
Meng-Kuang Hsu	Mo tai	2019	Horror
Peter Bogdanovich	The Other Side ...	2018	Drama
Rex Flores	Against All Hope	2017	Drama
Richard DeManincor	The Evil Dead	2018	Horror
Robert Coote	A Matter of Life...	2017	Comedy,Drama,Fantasy

9) Display the names of all directors, their directed movies, and the corresponding genres of those movies.

SELECT B.name AS Director_Name, C.title AS Movie_Name, GROUP_CONCAT(D.genre) AS Movie_Genres

FROM director_mapping AS A

INNER JOIN names AS B ON A.name_id = B.id

INNER JOIN movie AS C ON A.movie_id = C.id

LEFT JOIN genre AS D ON C.id = D.movie_id

GROUP BY Director_name, Movie_Name

ORDER BY Director_name, Movie_Name;

Director_Name	Movie_Name	Movie_Genres
Andrew Getty	The Evil Within	Horror
Dain Said	Dukun	Thriller,Horror
Dennis Widmyer	Pet Sematary	Thriller,Mystery,Horror
Edward T. McDougal	Against All Hope	Drama
Emeric Pressburger	A Matter of Life and Death	Comedy,Drama,Fantasy
Hrishikesh Mukherjee	Aashirwad	Drama
Jeff Tremaine	The Dirt	Drama,Comedy
Justin Chadwick	Tulip Fever	Drama,Romance
Kevin Kölsch	Pet Sematary	Mystery,Horror,Thriller
Michael Powell	A Matter of Life and Death	Comedy,Drama,Fantasy
Patrick Regan	Kiss Daddy Goodbye	Horror
Patty Jenkins	Wonder Woman	Action,Adventure,Fant...
Ramin Bahrani	Fahrenheit 451	Drama,Thriller,Sci-Fi
Raoul Ruiz	La Telenovela Errante	Fantasy,Drama,Comedy
Sam Raimi	The Evil Dead	Horror
Sam Taylor-Johnson	A Million Little Pieces	Drama
Valeria Sarmiento	La Telenovela Errante	Fantasy,Drama,Comedy

SUBQUERIES :-

1) Find the names of actors and actresses who played roles in the movie 'The Evil Dead' (tt0083907).

SELECT name FROM names

WHERE known_for_movies IN (SELECT movie_id FROM role_mapping WHERE movie_id IN (SELECT id FROM movie WHERE title = "The Evil Dead"));

name
Sam Raimi
Betsy Baker
Bruce Campbell
Richard DeManincor
Ellen Sandweiss

2) List the movies where Zack Snyder (nm0811583) played a role.

SELECT title FROM movie

WHERE id = (SELECT known_for_movies FROM names WHERE name = "Zack Snyder");

title
Wonder Woman

3) Identify the movies directed by Sam Raimi (nm0000600) that have a duration less than the average duration of all movies.

SELECT title FROM movie

WHERE id = (SELECT known_for_movies FROM names WHERE name = "Sam Raimi") AND duration < (SELECT AVG(duration) FROM movie);

title
The Evil Dead

4) Find the movies where the average rating is higher than the median rating.

SELECT title FROM movie

WHERE id IN (SELECT movie_id FROM ratings WHERE avg_rating > median_rating);

title
A Matter of Life and Death
Ankur
Kiss Daddy Goodbye
Mo tai
Teenage Space Vampires
Gang of Roses
The Nest of the Cuckoo Birds
Shazam!
Silence
Tulip Fever
Super Troopers 2

5) Retrieve the names who worked in movies released in the year 2019 with a duration greater than 120 minutes.

SELECT name FROM names

WHERE known_for_movies IN (SELECT id FROM movie WHERE year = 2019 AND duration > 120);

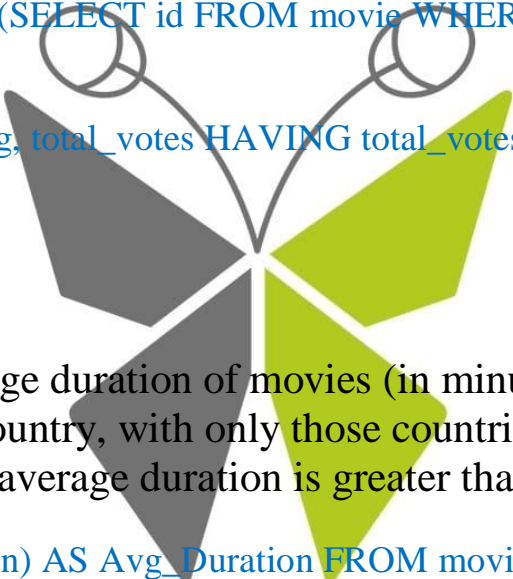| name |
| --- |
| Casper Van Dien |
| Jeff Fahey |
| Ashok Kumar |
| Hrishikesh Mukherjee |
| Zachary Levi |
| Jorge A. Jimenez |
| Marta Milans |
| Elle LaMont |
| Lassiter Holmes |
| Asher Angel |
| Keean Johnson |

WHERE CLAUSE, GROUP BY CLAUSE, HAVING CLAUSE, AGGREGATE :-

1) Determine the average of avg_rating of movies released in the year 2017 and 2018 and have a total number of votes greater than 100000.

SELECT ROUND(AVG(avg_rating),2) AS Average FROM ratings

WHERE movie_id IN (SELECT id FROM movie WHERE year IN (2017,2018))

GROUP BY avg_rating, total_votes HAVING total_votes > 100000;

Average
7.50
7.40

2) What is the average duration of movies (in minutes) released in 2018, grouped by country, with only those countries included in the result set where the average duration is greater than 100 minutes?

SELECT AVG(duration) AS Avg_Duration FROM movie

WHERE year = 2018 GROUP BY duration, country HAVING AVG(duration) > 100;

Avg_Duration
102.0000
122.0000
105.0000
105.0000
108.0000

3) What are the movie genres that have more than two occurrences in the dataset, and how many movies belong to each of those genres?

SELECT genre, COUNT(movie_id) AS Movie_Count FROM genre

GROUP BY genre HAVING COUNT(movie_id) > 2;

genre	Movie_Count
Drama	32
Fantasy	5
Thriller	4
Comedy	15
Horror	9
Romance	3
Adventure	6
Action	7
Sci-Fi	3
Crime	5
Mystery	5

4) Retrieve the names (id, name) who have movies and have an average height greater than 185.

SELECT id, name FROM names

WHERE height IS NOT NULL

GROUP BY id, name HAVING AVG(height) > 185;

id	name
nm0000667	David Thewlis
nm0003836	Michael Powell
nm0090674	Rainer Bock
nm0132257	Bruce Campbell
nm0178509	Robert Coote
nm0205063	Lucy Davis
nm0217822	Richard DeManincor
nm0420941	Patty Jenkins
nm0441098	Hairi Katagiri
nm0446622	Machine Gun Kelly
nm0475900	Asuka Kurosawa
nm0515193	Roger Livesey
nm2473806	Aaron Jay Rome
nm2784856	Jorge A. Jimenez
nm2803689	Marta Milans
nm2933757	Gal Gadot
nm3150488	Douglas Booth
nm3156758	Elle LaMont
nm3206486	Daniel Webber

5) Find the average duration of movies produced in each country, but only include countries that have more than two movies in the database.

SELECT country, AVG(duration) FROM movie

GROUP BY country HAVING COUNT(*) > 2;

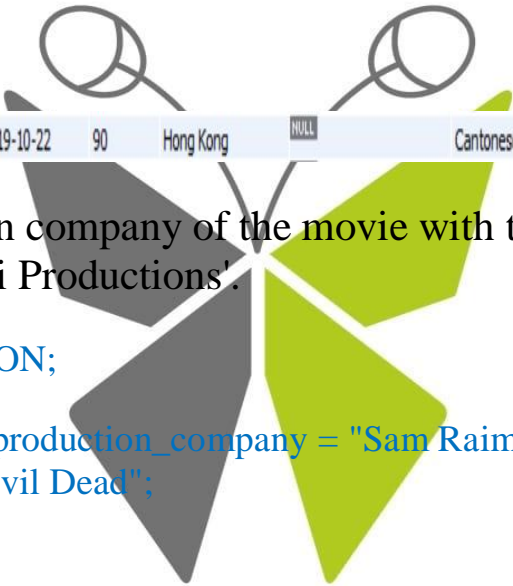| country	AVG(duration)
India	119.0000
USA	99.9583

UPDATE, SET, WHERE :-

1) Update the duration of the movie with the ID 'tt0085953' to 90 minutes.

START TRANSACTION;

UPDATE movie SET duration = 90 WHERE id = "tt0085953";

ROLLBACK;

COMMIT;

| tt0085953 | Mo tai | 2019 | 2019-10-22 | 90 | Hong Kong | NULL | | Cantonese | Lo Wei Motion Picture Company |

2) Set the production company of the movie with the title 'The Evil Dead' to 'Sam Raimi Productions'.

START TRANSACTION;

UPDATE movie SET production_company = "Sam Raimi Productions" WHERE title = "The Evil Dead";

ROLLBACK;

COMMIT;

| tt0083907 | The Evil Dead | 2018 | 2018-10-31 | 85 | USA | $ 2893091 | English | Sam Raimi Productions |

3) Update the year of the movie with the ID 'tt0116851' to 2018.

START TRANSACTION;

UPDATE movie SET year = 2018 WHERE id = "tt0116851";

ROLLBACK;

COMMIT;

| tt0116851 | Leila | 2018 | 2017-12-06 | 102 | Iran | $ 8231 | Persian | Farabi Cinema Foundation |

4) Update the avg_rating column of the movie with movie_id 'tt0082620' to '4.0'.

START TRANSACTION;

UPDATE ratings SET avg_rating = 4.0 WHERE movie_id = "tt0082620";

ROLLBACK;

COMMIT;

| tt0082620 | 4.0 | 236 | 3 |

5) Increase the total_votes by 1000 for the movie with movie_id 'tt0278422'.

START TRANSACTION;

UPDATE ratings SET total_votes = total_votes + 1000 WHERE movie_id = "tt0278422";

ROLLBACK;

COMMIT;

| tt0278422 | 5.0 | 2109 | 8 |

ALTER :-

1) Add a new column named 'Number_Cast' to the 'movies' table with a data type of INT.

ALTER TABLE movie

ADD Number_Cast INT;

DESC movie;

Field	Type	Null	Key	Default
id	varchar(10)	NO	PRI	NULL
title	varchar(200)	YES		NULL
year	int	YES		NULL
date_published	date	YES		NULL
duration	int	YES		NULL
country	varchar(250)	YES		NULL
worlwide_gross_income	varchar(30)	YES		NULL
languages	varchar(200)	YES		NULL
production_company	varchar(200)	YES		NULL
Number_Cast	int	YES		NULL

2) Modify the 'role_mapping' table to increase the length of the 'category' column to 10 to 30.

ALTER TABLE role_mapping

MODIFY category VARCHAR(30);

DESC role_mapping;

Field	Type	Null	Key	Default
movie_id	varchar(10)	NO	PRI	NULL
name_id	varchar(10)	NO	PRI	NULL
category	varchar(30)	YES		NULL

3) Add a NOT NULL constraint to the 'release_year' column in the 'movies' table.

ALTER TABLE movie

MODIFY year INT NOT NULL;

DESC movie;

Field	Type	Null	Key	Default
id	varchar(10)	NO	PRI	NULL
title	varchar(200)	YES		NULL
year	int	NO		NULL
date_published	date	YES		NULL
duration	int	YES		NULL
country	varchar(250)	YES		NULL
worlwide_gross_income	varchar(30)	YES		NULL
languages	varchar(200)	YES		NULL
production_company	varchar(200)	YES		NULL
Number_Cast	int	YES		NULL

4) Change the name of column duration of movie table to time_period.

ALTER TABLE movie

CHANGE duration time_period INT;

DESC movie;

Field	Type	Null	Key	Default
id	varchar(10)	NO	PRI	NULL
title	varchar(200)	YES		NULL
year	int	NO		NULL
date_published	date	YES		NULL
time_period	int	YES		NULL
country	varchar(250)	YES		NULL
worlwide_gross_income	varchar(30)	YES		NULL
languages	varchar(200)	YES		NULL
production_company	varchar(200)	YES		NULL
Number_Cast	int	YES		NULL

5) Drop the number_cast column from movie table.

ALTER TABLE movie

DROP number_cast;

DESC movie;

Field	Type	Null	Key	Default
id	varchar(10)	NO	PRI	NULL
title	varchar(200)	YES		NULL
year	int	NO		NULL
date_published	date	YES		NULL
time_period	int	YES		NULL
country	varchar(250)	YES		NULL
worlwide_gross_income	varchar(30)	YES		NULL
languages	varchar(200)	YES		NULL
production_company	varchar(200)	YES		NULL

<u>CONCLUSION:-</u>

The movie database management system developed using MySQL effectively stores and manages data related to movies, directors, actors, genres, and ratings. The system provides a user-friendly interface for adding, editing, and deleting information, enabling users to easily manage their movie collection. The implementation of relational database principles ensures data integrity and consistency, allowing for efficient retrieval and analysis of movie-related information. This project demonstrates the versatility of MySQL in managing complex data sets and highlights its applicability in developing practical database applications.

THANK YOU