



Global Academy of Technology

*Growing Ahead Of Time....*

Autonomous Institute, Affiliated To VTU

# Department of Artificial Intelligence & Machine Learning

## AML23403

### Database Management System Laboratory

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# Exercise-3

Consider the schema for Movie Database:

ACTOR (Act\_id, Act\_Name, Act\_Gender)

DIRECTOR (Dir\_id, Dir\_Name, Dir\_Phone)

MOVIES (Mov\_id, Mov\_Title, Mov\_Year, Mov\_Lang, Dir\_id)

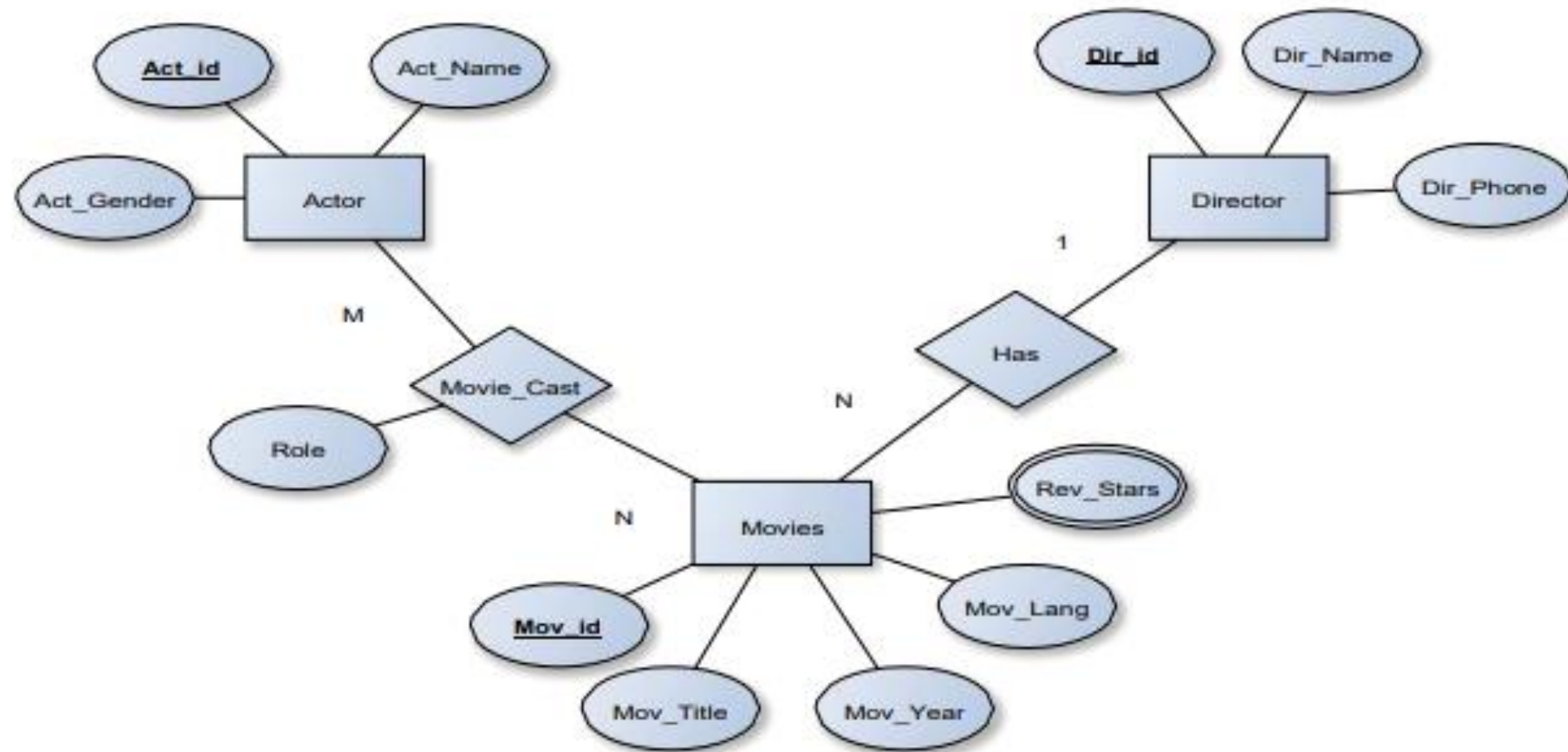
MOVIE\_CAST (Act\_id, Mov\_id, Role)

RATING (Mov\_id, Rev\_Stars)

# Write SQL queries to

1. List the titles of all movies directed by 'Hitchcock'.
2. Find the movie names where one or more actors acted in two or more movies.
3. List all actors who acted in a movie before 2000 and also in a movie after 2015  
(use JOIN operation).
4. Find the title of movies and number of stars for each movie that has at least one rating  
and find the highest number of stars that movie received. Sort the result by movie title.
5. Update rating of all movies directed by 'Steven Spielberg' to 5.

## Entity-Relationship Diagram



# Schema Diagram

# Table Creation

1. `CREATE TABLE ACTOR (ACT_ID INTEGER, ACT_NAME VARCHAR (20), ACT_GENDER CHAR (1), PRIMARY KEY (ACT_ID));`
2. `CREATE TABLE DIRECTOR( DIR_ID INTEGER,DIR_NAME VARCHAR (20),DIR_PHONE BIGINT,PRIMARY KEY (DIR_ID));`
3. `CREATE TABLE MOVIES (MOV_ID INTEGER,MOV_TITLE VARCHAR (25),MOV_YEAR INTEGER,MOV_LANG VARCHAR (12),DIR_ID INTEGER,PRIMARY KEY(MOV_ID),FOREIGN KEY (DIR_ID) REFERENCES DIRECTOR (DIR_ID));`
4. `CREATE TABLE MOVIE_CAST (ACT_ID INTEGER, MOV_ID INTEGER, ROLE VARCHAR(10), PRIMARY KEY (ACT_ID, MOV_ID), FOREIGN KEY (ACT_ID) REFERENCES ACTOR (ACT_ID),FOREIGN KEY (MOV_ID) REFERENCES MOVIES(MOV_ID));`
5. `CREATE TABLE RATING( MOV_ID INTEGER,REV_STARS VARCHAR(25), PRIMARY KEY(MOV_ID),FOREIGN KEY (MOV_ID) REFERENCES MOVIES (MOV_ID));`

# Table Description

- DESC ACTOR;
- DESC DIRECTOR;
- DESC MOVIES;
- DESC MOVIE\_CAST;
- DESC RATING;

- Insertion of Values to Tables –  
ACTOR  
DIRECTOR  
MOVIES  
MOVIE\_CAST  
RATING



## Query-1

List the titles of all movies directed by 'Hitchcock'.

```
SELECT MOV_TITLE FROM  
MOVIES  
WHERE DIR_ID IN (SELECT DIR_ID  
FROM DIRECTOR  
WHERE DIR_NAME = 'HITCHCOCK');
```

*(NOTE: VALUE 'HITCHCOCK' CAN BE CHANGED AS PER YOUR TABLE DATA)*

## Query-2

Find the movie names where one or more actors acted in two or more movies

```
SELECT MOV_TITLE
FROM MOVIES M, MOVIE_CAST MV
WHERE M.MOV_ID=MV.MOV_ID
      AND
      ACT_ID IN (SELECT ACT_ID
                  FROM MOVIE_CAST
                  GROUP BY ACT_ID HAVING COUNT (ACT_ID)>1)
GROUP BY MOV_TITLE HAVING COUNT (*)>1;
```

## Query-3

List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation)

```
SELECT A.ACT_NAME, A.ACT_NAME, C.MOV_TITLE, C.MOV_YEAR  
FROM ACTOR A, MOVIE_CAST B, MOVIES C  
WHERE A.ACT_ID=B.ACT_ID AND B.MOV_ID=C.MOV_ID  
      AND C.MOV_YEAR NOT BETWEEN 2000 AND 2015;
```

## Query-4

Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.

```
SELECT MOV_TITLE, MAX (REV_STARS)
FROM MOVIES
INNER JOIN RATING USING (MOV_ID)
    GROUP BY MOV_TITLE
    HAVING MAX (REV_STARS)>0
ORDER BY MOV_TITLE;
```

## Query-5

Update rating of all movies directed by 'Steven Spielberg' to 5

```
UPDATE RATING SET REV_STARS=5
WHERE MOV_ID IN (SELECT MOV_ID FROM MOVIES
                  WHERE DIR_ID IN
                    (SELECT DIR_ID
                     FROM DIRECTOR
                     WHERE DIR_NAME = 'STEVEN SPIELBERG'));
```

*(NOTE: VALUE 'STEVEN SPIELBERG' CAN BE CHANGED AS PER YOUR TABLE DATA)*