

DBMS Lab Exercise-6 SQL Correlated queries & views

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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)

Code for creating table:

```
CREATE TABLE ACTOR_21bce1163 ( ACT_ID NUMBER (3), ACT_NAME VARCHAR
(20), ACT_GENDER CHAR (1), PRIMARY KEY (ACT_ID));
```

```
CREATE TABLE DIRECTOR_21bce1163 ( DIR_ID NUMBER (3), DIR_NAME
VARCHAR (20), DIR_PHONE NUMBER (10), PRIMARY KEY (DIR_ID), FOREIGN
KEY (DIR_ID) REFERENCES DIRECTOR_21bce1163 (DIR_ID));
```

```
CREATE TABLE MOVIES_21bce1163 ( MOV_ID NUMBER (4), MOV_TITLE
VARCHAR (25), MOV_YEAR NUMBER (4), MOV_LANG VARCHAR (12) ,
DIR_ID NUMBER (3), PRIMARY KEY (MOV_ID), FOREIGN KEY (MOV_ID)
REFERENCES MOVIES_21bce1163 (MOV_ID));
```

```
CREATE TABLE MOVIE_CAST_21bce1163 ( ACT_ID NUMBER (3), MOV_ID
NUMBER (4), ROLE VARCHAR (10), PRIMARY KEY (ACT_ID, MOV_ID),
FOREIGN KEY (ACT_ID) REFERENCES ACTOR_21bce1163 (ACT_ID));
```

```
CREATE TABLE RATING_21bce1163 ( MOV_ID NUMBER (4), REV_STARS
VARCHAR (25), PRIMARY KEY (MOV_ID));
```

```

INSERT INTO ACTOR_21bce1163 VALUES (301,'ANUSHKA','F');
INSERT INTO ACTOR_21bce1163 VALUES (302,'PRABHAS','M');
INSERT INTO ACTOR_21bce1163 VALUES (303,'PUNITH','M');
INSERT INTO ACTOR_21bce1163 VALUES (304,'JERMY','M');

INSERT INTO DIRECTOR_21bce1163 VALUES (60,'RAJAMOULI',
8751611001);
INSERT INTO DIRECTOR_21bce1163 VALUES (61,'HITCHCOCK',
7766138911);
INSERT INTO DIRECTOR_21bce1163 VALUES (62,'FARAN', 9986776531);
INSERT INTO DIRECTOR_21bce1163 VALUES (63,'STEVEN SPIELBERG',
8989776530);

INSERT INTO MOVIES_21bce1163 VALUES (1001,'BAHUBALI-2', 2017,
'TELAGU', 60);
INSERT INTO MOVIES_21bce1163 VALUES (1002,'BAHUBALI-1', 2015,
'ENGLISH', 60);
INSERT INTO MOVIES_21bce1163 VALUES (1003,'AKASH', 2008,
'KANNADA', 61);
INSERT INTO MOVIES_21bce1163 VALUES (1004,'WAR HORSE', 2011,
'ENGLISH', 63);

INSERT INTO MOVIE_CAST_21bce1163 VALUES (301, 1002, 'HEROINE');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (301, 1001, 'HEROINE');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (303, 1003, 'HERO');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (303, 1002, 'GUEST');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (304, 1004, 'HERO');

INSERT INTO RATING_21bce1163 VALUES (1001, 4);
INSERT INTO RATING_21bce1163 VALUES (1002, 3);
INSERT INTO RATING_21bce1163 VALUES (1003, 5);
INSERT INTO RATING_21bce1163 VALUES (1004, 4);
select * from ACTOR_21bce1163;
select * from DIRECTOR_21bce1163 ;
select * from MOVIES_21bce1163;
select * from RATING_21bce1163;

```

ACT_ID	ACT_NAME	ACT_GENDER
301	ANUSHKA	F
302	PRABHAS	M
303	PUNITH	M
304	JERMY	M

DIR_ID	DIR_NAME	DIR_PHONE
60	RAJAMOULI	8751611001
61	HITCHCOCK	7766138911
62	FARAN	9986776531
63	STEVEN SPIELBERG	8989776530

MOV_ID	MOV_TITLE	MOV_YEAR	MOV_LANG	DIR_ID
1001	BAHUBALI-2	2017	TELAGU	60
1002	BAHUBALI-1	2015	ENGLISH	60
1003	AKASH	2008	KANNADA	61
1004	WAR HORSE	2011	ENGLISH	63

MOV_ID	REV_STARS
1001	4
1002	3
1003	5
1004	4

Write SQL queries for the following

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

```
select MOV_TITLE from MOVIES_21bce1163 where DIR_ID=(select DIR_ID from DIRECTOR_21bce1163 where DIR_NAME='HITCHCOCK');
```

4 rows selected.

MOV_TITLE
AKASH

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

```
SELECT MOV_TITLE FROM MOVIES_21bce1163 WHERE MOV_ID IN (SELECT MOV_ID FROM
MOVIE_CAST_21bce1163 WHERE ACT_ID IN (SELECT ACT_ID FROM
ACTOR_21bce1163 WHERE ACT_ID IN (SELECT ACT_ID FROM
MOVIE_CAST_21bce1163 GROUP BY ACT_ID HAVING COUNT(ACT_ID)>1)));
```

MOV_TITLE
BAHUBALI-2
BAHUBALI-1
AKASH

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

```
SELECT ACT_NAME FROM ACTOR_21bce1163 JOIN
MOVIE_CAST_21bce1163 ON
ACTOR_21bce1163.ACT_ID=MOVIE_CAST_21bce1163.ACT_ID JOIN
MOVIES_21bce1163 ON
MOVIE_CAST_21bce1163.MOV_ID=MOVIES_21bce1163.MOV_ID WHERE
MOV_YEAR <2000 and MOV_YEAR>2015;
```

no data found

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_21bce1163 INNER  
JOIN RATING_21bce1163 USING(MOV_ID) GROUP BY MOV_TITLE  
HAVING MAX(REV_STARS)>0 ORDER BY MOV_TITLE;
```

MOV_TITLE	MAX(REV_STARS)
AKASH	5
BAHUBALI-1	3
BAHUBALI-2	4
WAR HORSE	4

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

```
UPDATE RATING_21bce1163 set REV_STARS=5 WHERE MOV_ID  
IN (SELECT MOV_ID FROM MOVIES_21bce1163 WHERE DIR_ID  
IN (SELECT DIR_ID FROM DIRECTOR_21bce1163 WHERE  
DIR_NAME = 'STEVEN SPIELBERG'));
```

```
select * from RATING_21bce1163;
```

```
1 row(s) updated.
```

MOV_ID	REV_STARS
1001	4
1002	3
1003	5
1004	5

6. Create view “MovieDetails” to show the movie id, name, Movie language and its rating star released between Year 2015 to 2019.

```
CREATE VIEW MovieDetails as select MOVIES_21bce1163.MOV_ID
,MOVIES_21bce1163.MOV_TITLE,MOVIES_21bce1163.MOV_LAN
G, RATING_21bce1163.REV_STARS  from MOVIES_21bce1163
INNER JOIN RATING_21bce1163 ON
MOVIES_21bce1163.MOV_ID=RATING_21bce1163.MOV_ID
WHERE MOVIES_21bce1163.MOV_YEAR>=2015 AND
MOVIES_21bce1163.MOV_YEAR<=2019;
DESC MovieDetails;
```

```
SELECT * FROM MovieDetails;
```

View created.

VIEW MOVIEDetails

Column	Null?	Type
MOV_ID	NOT NULL	NUMBER(4,0)
MOV_TITLE	-	VARCHAR2(25)
MOV_LANG	-	VARCHAR2(12)
REV_STARS	-	VARCHAR2(25)

4 rows selected.

MOV_ID	MOV_TITLE	MOV_LANG	REV_STARS
1001	BAHUBALI-2	TELAGU	4
1002	BAHUBALI-1	ENGLISH	3

7. Update the view “MovieDetails” to change movie language from “English” to “Hindi”

```
UPDATE MovieDetails  
SET MOV_LANG='HINDI'  
WHERE MOV_LANG='ENGLISH';
```



```
SELECT * FROM MovieDetails;
```

```
1 row(s) updated.
```

MOV_ID	MOV_TITLE	MOV_LANG	REV_STARS
1001	BAHUBALI-2	TELAGU	4
1002	BAHUBALI-1	HINDI	3

8. Delete rows in the view “MovieDetails” where the rating is 3.

```
DELETE FROM MovieDetails WHERE REV_STARS=3;
```

```
SELECT * FROM MovieDetails;
```

```
1 row(s) deleted.
```

MOV_ID	MOV_TITLE	MOV_LANG	REV_STARS
1001	BAHUBALI-2	TELAGU	4

9. Drop the view “MovieDetails”

```
DROP VIEW MovieDetails;
```

```
SELECT * FROM MovieDetails;
```

```
View dropped.
```

```
ORA-00942: table or view does not exist
```

Schema Diagram

Actor

<u>Act_id</u>	Act_Name	Act_Gender
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Director

<u>Dir_id</u>	Dir_Name	Dir_Phone
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Movies

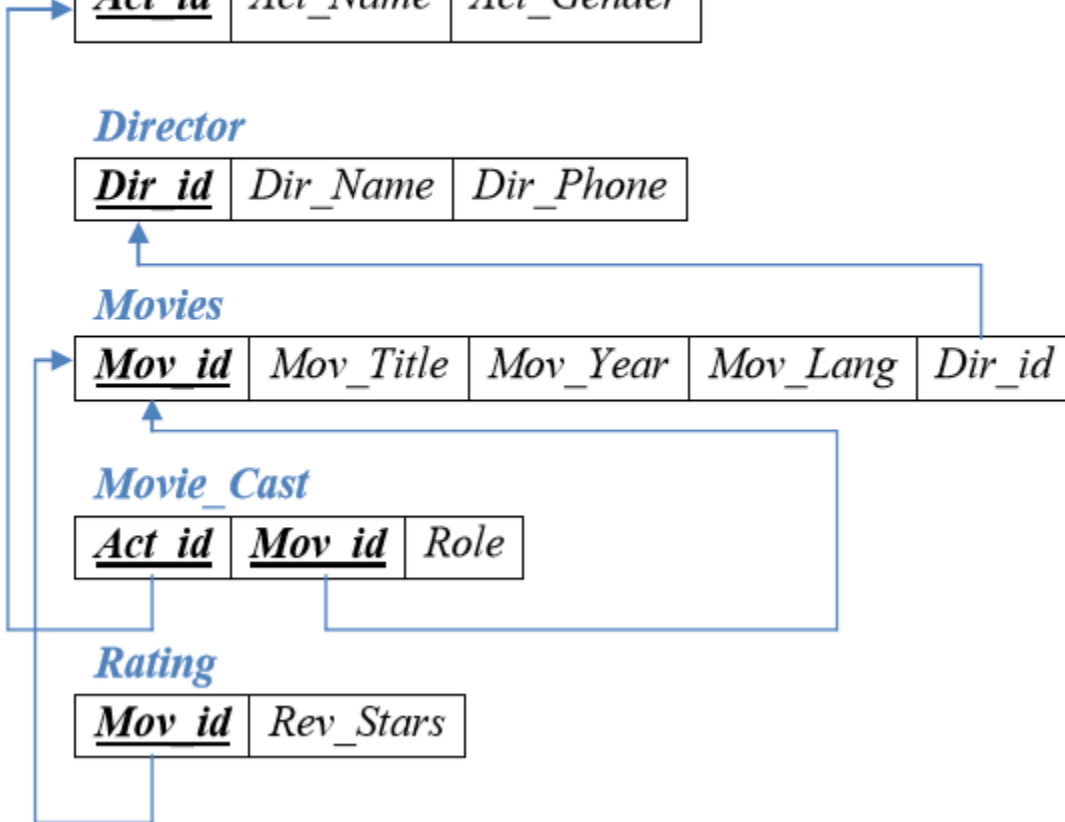
<u>Mov_id</u>	Mov_Title	Mov_Year	Mov_Lang	Dir_id
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Movie_Cast

<u>Act_id</u>	<u>Mov_id</u>	Role
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Rating

<u>Mov_id</u>	Rev_Stars
---------------	-----------



Whole Code:

```
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(20), ACT_GENDER CHAR (1), PRIMARY KEY (ACT_ID));
```

```
CREATE TABLE DIRECTOR_21bce1163 ( DIR_ID NUMBER (3), DIR_NAME
VARCHAR (20), DIR_PHONE NUMBER (10), PRIMARY KEY (DIR_ID), FOREIGN
KEY (DIR_ID) REFERENCES DIRECTOR_21bce1163 (DIR_ID));
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```
CREATE TABLE MOVIES_21bce1163 ( MOV_ID NUMBER (4), MOV_TITLE
VARCHAR (25), MOV_YEAR NUMBER (4), MOV_LANG VARCHAR (12) ,
DIR_ID NUMBER (3), PRIMARY KEY (MOV_ID), FOREIGN KEY (MOV_ID)
REFERENCES MOVIES_21bce1163 (MOV_ID));
```

```
CREATE TABLE MOVIE_CAST_21bce1163 ( ACT_ID NUMBER (3), MOV_ID
NUMBER (4), ROLE VARCHAR (10), PRIMARY KEY (ACT_ID, MOV_ID),
FOREIGN KEY (ACT_ID) REFERENCES ACTOR_21bce1163 (ACT_ID));
```

```
CREATE TABLE RATING_21bce1163 ( MOV_ID NUMBER (4), REV_STARS
VARCHAR (25), PRIMARY KEY (MOV_ID));
```

```
INSERT INTO ACTOR_21bce1163 VALUES (301,'ANUSHKA','F');
INSERT INTO ACTOR_21bce1163 VALUES (302,'PRABHAS','M');
INSERT INTO ACTOR_21bce1163 VALUES (303,'PUNITH','M');
INSERT INTO ACTOR_21bce1163 VALUES (304,'JERMY','M');
```

```
INSERT INTO DIRECTOR_21bce1163 VALUES (60,'RAJAMOULI',
8751611001);
INSERT INTO DIRECTOR_21bce1163 VALUES (61,'HITCHCOCK',
7766138911);
INSERT INTO DIRECTOR_21bce1163 VALUES (62,'FARAN', 9986776531);
INSERT INTO DIRECTOR_21bce1163 VALUES (63,'STEVEN SPIELBERG',
8989776530);
```

```
INSERT INTO MOVIES_21bce1163 VALUES (1001,'BAHUBALI-2', 2017,
'TELAGU', 60);
INSERT INTO MOVIES_21bce1163 VALUES (1002,'BAHUBALI-1', 2015,
'ENGLISH', 60);
INSERT INTO MOVIES_21bce1163 VALUES (1003,'AKASH', 2008,
'KANNADA', 61);
```

```
INSERT INTO MOVIES_21bce1163 VALUES (1004,'WAR HORSE', 2011,
'ENGLISH', 63);
```

```
INSERT INTO MOVIE_CAST_21bce1163 VALUES (301, 1002, 'HEROINE');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (301, 1001, 'HEROINE');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (303, 1003, 'HERO');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (303, 1002, 'GUEST');
INSERT INTO MOVIE_CAST_21bce1163 VALUES (304, 1004, 'HERO');
```

```
INSERT INTO RATING_21bce1163 VALUES (1001, 4);
INSERT INTO RATING_21bce1163 VALUES (1002, 3);
INSERT INTO RATING_21bce1163 VALUES (1003, 5);
INSERT INTO RATING_21bce1163 VALUES (1004, 4);
```

```
select MOV_TITLE from MOVIES_21bce1163 where DIR_ID=(select DIR_ID
from DIRECTOR_21bce1163 where DIR_NAME='HITCHCOCK');
```

```
SELECT MOV_TITLE FROM MOVIES_21bce1163 WHERE MOV_ID IN (SELECT
MOV_ID FROM MOVIE_CAST_21bce1163 WHERE ACT_ID IN (SELECT ACT_ID
FROM ACTOR_21bce1163 WHERE ACT_ID IN (SELECT ACT_ID FROM
MOVIE_CAST_21bce1163 GROUP BY ACT_ID HAVING COUNT(ACT_ID)>1)));
```

```
SELECT ACT_NAME FROM ACTOR_21bce1163 JOIN MOVIE_CAST_21bce1163 ON
ACTOR_21bce1163.ACT_ID=MOVIE_CAST_21bce1163.ACT_ID JOIN
MOVIES_21bce1163 ON
MOVIE_CAST_21bce1163.MOV_ID=MOVIES_21bce1163.MOV_ID WHERE
MOV_YEAR <2000 and MOV_YEAR>2015;
```

```
SELECT MOV_TITLE, MAX(rev_stars) FROM MOVIES_21bce1163 INNER JOIN
RATING_21bce1163 USING(MOV_ID) GROUP BY MOV_TITLE HAVING
MAX(REV_STARS)>0 ORDER BY MOV_TITLE;
```

```
UPDATE RATING_21bce1163 set REV_STARS=5 WHERE MOV_ID IN (SELECT
MOV_ID FROM MOVIES_21bce1163 WHERE DIR_ID IN (SELECT DIR_ID FROM
DIRECTOR_21bce1163 WHERE DIR_NAME = 'STEVEN SPIELBERG'));
select * from RATING_21bce1163;
```

```
CREATE VIEW MovieDetails as select MOVIES_21bce1163.MOV_ID
,MOVIES_21bce1163.MOV_TITLE,MOVIES_21bce1163.MOV_LANG,
RATING_21bce1163.REV_STARS from MOVIES_21bce1163 INNER JOIN
RATING_21bce1163 ON
```

```
MOVIES_21bce1163.MOV_ID=RATING_21bce1163.MOV_ID          WHERE
MOVIES_21bce1163.MOV_YEAR>=2015                          AND
MOVIES_21bce1163.MOV_YEAR<=2019;
DESC MovieDetails;
```

```
SELECT * FROM MovieDetails;
```

```
UPDATE MovieDetails
SET MOV_LANG='HINDI'
WHERE MOV_LANG='ENGLISH';
```

```
SELECT * FROM MovieDetails;
```

```
DELETE FROM MovieDetails WHERE REV_STARS=3;
```

```
SELECT * FROM MovieDetails;
```

```
DROP VIEW MovieDetails;
SELECT * FROM MovieDetails;
```