

## IT252 Database Systems Mid Sem Lab Exam Questions and Solution

Q: 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.

### **Table Creation**

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

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

```
CREATE TABLE MOVIES (  
  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 (DIR_ID) REFERENCES DIRECTOR (DIR_ID));
```



DESC MOVIE\_CAST;

```
SQL> DESC MOVIE_CAST;
Name                                     Null?    Type
-----
ACT_ID                                 NOT NULL NUMBER(3)
MOV_ID                                 NOT NULL NUMBER(4)
ROLE                                            VARCHAR2(10)
```

DESC RATING;

```
SQL> DESC RATING;
Name                                     Null?    Type
-----
MOV_ID                                 NOT NULL NUMBER(4)
REV_STARS                                      VARCHAR2(25)
```

### Insertion of Values to Tables

INSERT INTO ACTOR VALUES (301,'ANUSHKA','F');

INSERT INTO ACTOR VALUES (302,'PRABHAS','M');

INSERT INTO ACTOR VALUES (303,'PUNITH','M');

INSERT INTO ACTOR VALUES (304,'JERMY','M');

INSERT INTO DIRECTOR VALUES (60,'RAJAMOULI', 8751611001);

INSERT INTO DIRECTOR VALUES (61,'HITCHCOCK', 7766138911);

INSERT INTO DIRECTOR VALUES (62,'FARAN', 9986776531);

INSERT INTO DIRECTOR VALUES (63,'STEVEN SPIELBERG', 8989776530);

INSERT INTO MOVIES VALUES (1001,'BAHUBALI-2', 2017, 'TELAGU', 60);

INSERT INTO MOVIES VALUES (1002,'BAHUBALI-1', 2015, 'TELAGU', 60);

INSERT INTO MOVIES VALUES (1003,'AKASH', 2008, 'KANNADA', 61);

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

INSERT INTO MOVIE\_CAST VALUES (301, 1002, 'HEROINE');

INSERT INTO MOVIE\_CAST VALUES (301, 1001, 'HEROINE');

INSERT INTO MOVIE\_CAST VALUES (303, 1003, 'HERO');

INSERT INTO MOVIE\_CAST VALUES (303, 1002, 'GUEST');

INSERT INTO MOVIE\_CAST VALUES (304, 1004, 'HERO');

INSERT INTO RATING VALUES (1001, 4);

INSERT INTO RATING VALUES (1002, 2);

INSERT INTO RATING VALUES (1003, 5);  
INSERT INTO RATING VALUES (1004, 4);

SELECT \* FROM ACTOR;

SQL> SELECT \* FROM ACTOR;

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

SELECT \* FROM DIRECTOR;

SQL> SELECT \* FROM DIRECTOR;

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

SELECT \* FROM MOVIES;

SQL> SELECT \* FROM MOVIES;

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

SELECT \* FROM MOVIE\_CAST;

SQL> SELECT \* FROM MOVIE\_CAST;

ACT_ID	MOV_ID	ROLE
301	1002	HEROINE
301	1001	HEROINE
303	1003	HERO
303	1002	GUEST
304	1004	HERO

```
SELECT * FROM RATING;
```

```
SQL> SELECT * FROM RATING;
```

MOV_ID	REV_STARS
1001	4
1002	2
1003	5
1004	4

### Queries:

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');
```

MOV_TITLE
AKASH

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;
```

MOV_TITLE
BAHUBALI-1

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

```
SELECT ACT_NAME, MOV_TITLE, MOV_YEAR
```

```

FROM ACTOR A
JOIN MOVIE_CAST C
    ON A.ACT_ID=C.ACT_ID
JOIN MOVIES M
    ON C.MOV_ID=M.MOV_ID
WHERE M.MOV_YEAR NOT BETWEEN 2000 AND 2015;

```

OR

```

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;

```

ACT_NAME	MOV_TITLE	MOV_YEAR
ANUSHKA	BAHUBALI-2	2017

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;

```

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

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

```
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'));
```

```
SQL> SELECT * FROM RATING;
```

MOV_ID	REV_STARS
1001	4
1002	2
1003	5
1004	5

---