**CO226 – Database Systems**

**Lab 06 – Answers**

**Lab Task:**

1.

(a).

mysql> select \* from Movie where director in (select RName from Reviewer);

+---------+-----------+------+---------------+

| movieId | title | year | director |

+---------+-----------+------+---------------+

| 105 | Titanic | 1997 | James Cameron |

| 107 | Avatar | 2009 | James Cameron |

+---------+-----------+------+---------------+

2 rows in set (0.00 sec)

(b).

mysql> select \* from movie where director not in (select reviewerName from reviewer);

+---------+-------------------------+------+------------------+

| movieId | title | year | director |

+---------+-------------------------+------+------------------+

| 101 | Gone With Thewind | 1939 | Victor Fleming |

| 102 | Star Wars | 1977 | George Lucas |

| 103 | The Sound of Music | 1965 | Robert Wise |

| 104 | E.T. | 1982 | Steven Spielberg |

| 106 | Snow White | 1937 | |

| 108 | Raiders of the lost Ark | 1981 | Steven Spielberg |

+---------+-------------------------+------+------------------+

6 rows in set (0.00 sec)

2.

(a).

mysql> select \* from rating where ratingId in (select reviewerId from reviewer where reviewerName="Sarah Martinez")

+----------+---------+-------+------------+

| ratingId | movieId | stars | ratingDate |

+----------+---------+-------+------------+

| 201 | 101 | 2 | 2011-01-22 |

| 201 | 101 | 4 | 2011-01-27 |

+----------+---------+-------+------------+

2 rows in set (0.00 sec)

(b).

mysql> select \* from rating where ratingId not in (select reviewerId from reviewer where reviewerName="Sarah Martinez");

+----------+---------+-------+------------+

| ratingId | movieId | stars | ratingDate |

+----------+---------+-------+------------+

| 202 | 106 | 4 | NULL |

| 203 | 103 | 3 | 2011-01-20 |

| 203 | 108 | 3 | 2011-01-30 |

| 203 | 108 | 5 | 2011-01-12 |

| 204 | 101 | 3 | 2011-01-09 |

| 205 | 103 | 3 | 2011-01-27 |

| 205 | 104 | 2 | 2011-01-22 |

| 205 | 108 | 4 | NULL |

| 206 | 106 | 5 | 2011-01-19 |

| 206 | 107 | 3 | 2011-01-15 |

| 207 | 107 | 5 | 2011-01-20 |

| 208 | 104 | 3 | 2011-01-02 |

+----------+---------+-------+------------+

12 rows in set (0.00 sec)

3.

(a).

mysql> select movieId from rating where stars < ANY (select stars from rating where movieId=103);

+---------+

| movieId |

+---------+

| 101 |

| 104 |

+---------+

2 rows in set (0.00 sec)

(b).

mysql> select movieId from rating where stars <= ANY (select stars from rating where movieId=103);

+---------+

| movieId |

+---------+

| 101 |

| 101 |

| 103 |

| 103 |

| 104 |

| 104 |

| 107 |

| 108 |

+---------+

8 rows in set (0.00 sec)

(c).

mysql> select movieId from rating where stars = ANY (select stars from rating where movieId=103);

+---------+

| movieId |

+---------+

| 101 |

| 103 |

| 103 |

| 104 |

| 107 |

| 108 |

+---------+

6 rows in set (0.00 sec)

(d).

mysql> select movieId from rating where stars > ANY (select stars from rating where movieId=103);

+---------+

| movieId |

+---------+

| 101 |

| 106 |

| 106 |

| 107 |

| 108 |

| 108 |

+---------+

6 rows in set (0.00 sec)

(e).

mysql> select movieId from rating where stars >= ANY (select stars from rating where movieId=103);

+---------+

| movieId |

+---------+

| 101 |

| 101 |

| 103 |

| 103 |

| 104 |

| 106 |

| 106 |

| 107 |

| 107 |

| 108 |

| 108 |

| 108 |

+---------+

12 rows in set (0.00 sec)

(f).

mysql> select movieId from rating where stars <> ANY (select stars from rating where movieId=103);

+---------+

| movieId |

+---------+

| 101 |

| 101 |

| 104 |

| 106 |

| 106 |

| 107 |

| 108 |

| 108 |

+---------+

8 rows in set (0.01 sec)

4.

mysql> select ratingId from Rating where movieId IN (select movieId from Rating where ratingDate="2011-01-12") AND stars IN(select stars from Rating where ratingDate="2011-01-12");

+----------+

| ratingId |

+----------+

| 203 |

| 205 |

+----------+

2 rows in set (0.00 sec)

5.

(a).

mysql> select distinct year from movie,rating

where movie.movieId=rating.movieId AND (rating.stars=4 OR rating.stars=5)

ORDER BY year ASC;

+------+

| year |

+------+

| 1937 |

| 1939 |

| 1981 |

| 2009 |

+------+

4 rows in set (0.00 sec)

(b).

mysql> SELECT year FROM movie

WHERE movieId IN(SELECT movieId from rating where stars=4 OR stars=5) ORDER BY year ASC;

+------+

| year |

+------+

| 1937 |

| 1939 |

| 1981 |

| 2009 |

+------+

4 rows in set (0.01 sec)

6.

(a).

mysql> SELECT title FROM movie WHERE movieId NOT IN (SELECT movieId from rating);

+-----------+

| title |

+-----------+

| Star Wars |

| Titanic |

+-----------+

2 rows in set (0.01 sec)

(b).

mysql> SELECT title FROM Movie t1

WHERE MId <>ALL(SELECT MvId from rating t2 where t1.MId=t2.MvId);

+-----------+

| title |

+-----------+

| Star Wars |

| Titanic |

+-----------+

2 rows in set (0.00 sec)

8.

(a).

mysql> SELECT reviewerName FROM reviewer,rating

WHERE rating.ratingId=reviewer.reviewerId AND rating.ratingDate IS NULL;

+-----------------+

| reviewerName |

+-----------------+

| Daniel Lewis |

| Chris Jackson |

+-----------------+

2 rows in set (0.02 sec)

(b).

mysql> SELECT reviewerName FROM reviewer

WHERE reviewerId IN(SELECT ratingId FROM rating WHERE ratingDate IS NULL);

+-----------------+

| reviewerName |

+-----------------+

| Daniel Lewis |

| Chris Jackson |

+-----------------+

2 rows in set (0.00 sec)

(c).

mysql> SELECT reviewerName FROM reviewer t1

WHERE reviewerId = ANY(

SELECT ratingId FROM rating t2 WHERE ratingDate IS NULL AND t1.reviewerId=t2.ratingId);

+-----------------+

| reviewerName |

+-----------------+

| Daniel Lewis |

| Chris Jackson |

+-----------------+

2 rows in set (0.00 sec)

9.

(a).

mysql> SELECT title,MAX(stars) FROM movie,rating

where movie.movieId=rating.movieId GROUP BY movie.movieId ORDER BY movie.title ASC;

+-------------------------+------------+

| title | MAX(stars) |

+-------------------------+------------+

| Avatar | 5 |

| E.T. | 3 |

| Gone With The wind | 4 |

| Raiders of the lost Ark | 4 |

| Snow White | 5 |

| The Sound of Music | 3 |

+-------------------------+------------+

6 rows in set (0.00 sec)

(b).

mysql> SELECT title,MIN(stars) FROM movie,rating

where movie.movieId=rating.movieId GROUP BY movie.movieId ORDER BY movie.title ASC;

+-------------------------+------------+

| title | MIN(stars) |

+-------------------------+------------+

| Avatar | 3 |

| E.T. | 2 |

| Gone With The wind | 2 |

| Raiders of the lost Ark | 3 |

| Snow White | 4 |

| The Sound of Music | 3 |

+-------------------------+------------+

6 rows in set (0.00 sec)

(c).

mysql> SELECT title,AVG(stars) FROM movie,rating where movie.movieId=rating.movieId GROUP BY movie.movieId ORDER BY movie.title ASC;

+-------------------------+------------+

| title | AVG(stars) |

+-------------------------+------------+

| Avatar | 4.0000 |

| E.T. | 2.5000 |

| Gone With Thewind | 3.0000 |

| Raiders of the lost Ark | 3.6667 |

| Snow White | 4.5000 |

| The Sound of Music | 3.0000 |

+-------------------------+------------+

6 rows in set (0.00 sec)

(d).

mysql> SELECT title,SUM(stars) FROM movie,rating where movie.movieId=rating.movieId GROUP BY movie.movieId ORDER BY movie.title ASC;

+-------------------------+------------+

| title | SUM(stars) |

+-------------------------+------------+

| Avatar | 8 |

| E.T. | 5 |

| Gone With Thewind | 9 |

| Raiders of the lost Ark | 11 |

| Snow White | 9 |

| The Sound of Music | 6 |

+-------------------------+------------+

6 rows in set (0.00 sec)

(e).

mysql> SELECT title,COUNT(\*) FROM movie,rating where movie.movieId=rating.movieId GROUP BY movie.movieId ORDER BY movie.title ASC;

+-------------------------+----------+

| title | COUNT(\*) |

+-------------------------+----------+

| Avatar | 2 |

| E.T. | 2 |

| Gone With Thewind | 3 |

| Raiders of the lost Ark | 3 |

| Snow White | 2 |

| The Sound of Music | 2 |

+-------------------------+----------+

6 rows in set (0.01 sec)

10.

(a).

mysql> SELECT reviewerName FROM reviewer,rating WHERE rating.ratingId=reviewer.reviewerId GROUP BY rating.ratingId HAVING COUNT(\*) >= 3;

+-----------------+

| reviewerName |

+-----------------+

| Brittany Harris |

| Chris Jackson |

+-----------------+

2 rows in set (0.00 sec)

(b).

mysql> SELECT reviewerName FROM reviewer

WHERE reviewerID IN(SELECT ratingId FROM rating GROUP BY rating.ratingId HAVING COUNT(\*) >= 3);

+-----------------+

| reviewerName |

+-----------------+

| Brittany Harris |

| Chris Jackson |

+-----------------+

2 rows in set (0.01 sec)

(c).

mysql> SELECT reviewername FROM reviewer t1

WHERE 3 <= ANY(select count(\*) from rating t2 where t1.reviewerid = t2.ratingid);

+-----------------+

| reviewername |

+-----------------+

| Brittany Harris |

| Chris Jackson |

+-----------------+

2 rows in set (0.00 sec)

11.

mysql> SELECT title,AVG(stars) FROM movie,rating WHERE movie.movieid = rating.movieid GROUP BY movie.movieid ORDER BY AVG(stars) desc,title ASC;

+-------------------------+------------+

| title | AVG(stars) |

+-------------------------+------------+

| Snow White | 4.5000 |

| Avatar | 4.0000 |

| Raiders of the lost Ark | 3.6667 |

| Gone With Thewind | 3.0000 |

| The Sound of Music | 3.0000 |

| E.T. | 2.5000 |

+-------------------------+------------+

6 rows in set (0.00 sec)

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12.

mysql> delete from rating where MovieID in(select MovieID from movie where Year < 1970 or Year >2000);

Query OK, 9 rows affected (0.19 sec)

mysql> select \* from rating;

+----------+---------+-------+------------+

|ReviewerID| MovieID | Stars | RatingDate|

+----------+---------+-------+------------+

| 203 | 108 | 4 | 2011-01-12 |

| 203 | 108 | 2 | 2011-01-30 |

| 205 | 104 | 2 | 2011-01-22 |

| 205 | 108 | 4 | NULL |

| 208 | 104 | 3 | 2011-01-02 |

+----------+---------+-------+------------+

5 rows in set (0.00 sec)

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13.

mysql> delete from rating where RatingDate is null;

Query OK, 1 row affected (0.20 sec)

mysql> select \* from rating;

+----------+---------+-------+------------+

|ReviewerID| MovieID | Stars | RatingDate|

+----------+---------+-------+------------+

| 203 | 108 | 4 | 2011-01-12 |

| 203 | 108 | 2 | 2011-01-30 |

| 205 | 104 | 2 | 2011-01-22 |

| 208 | 104 | 3 | 2011-01-02 |

+----------+---------+-------+------------+

4 rows in set (0.00 sec)

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14.

mysql> update rating,movie set Stars=5 where Director='James Cameron' and rating.MovieID=movie.MovieID;

Query OK, 1 row affected (0.20 sec)

Rows matched: 2 Changed: 1 Warnings: 0

mysql> select \* from rating;

+----------+---------+-------+------------+

|ReviewerID| MovieID | Stars | RatingDate |

+----------+---------+-------+------------+

| 201 | 101 | 2 | 2011-01-22 |

| 201 | 101 | 4 | 2011-01-27 |

| 202 | 106 | 4 | NULL |

| 203 | 103 | 2 | 2011-01-20 |

| 203 | 108 | 4 | 2011-01-12 |

| 203 | 108 | 2 | 2011-01-30 |

| 204 | 101 | 3 | 2011-01-09 |

| 205 | 103 | 3 | 2011-01-27 |

| 205 | 104 | 2 | 2011-01-22 |

| 205 | 108 | 4 | NULL |

| 206 | 107 | 5 | 2011-01-15 |

| 206 | 106 | 5 | 2011-01-19 |

| 207 | 107 | 5 | 2011-01-20 |

| 208 | 104 | 3 | 2011-01-02 |

+----------+---------+-------+------------+

14 rows in set (0.05 sec)

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15.

mysql> update movie set Year=Year + 25 where MovieID in (select r.MovieID from rating r group by r.MovieID having avg(Stars) >= 4 );

Query OK, 2 rows affected (0.24 sec)

Rows matched: 2 Changed: 2 Warnings: 0

mysql> select \* from movie;

+---------+----------------------+------+------------------+

| MovieID | Title | Year | Director |

+---------+----------------------+------+------------------+

| 101 | Gone with the Wind | 1939 | Victor Fleming |

| 102 | Star Wars | 1977 | George Lucas |

| 103 | The Sound of Music | 1965 | Robert Wise |

| 104 | E.T | 1982 | Steven Spielberg |

| 105 | Titanic | 1997 | James Cameron |

| 106 | Snow White | 1962 | NULL |

| 107 | Avatar | 2034 | James Cameron |

| 108 | Raiders of the Lost | 1981 | Steven Spielberg |

+---------+----------------------+------+------------------+

8 rows in set (0.12 sec)