

CO226 – Database Systems

Lab 06 – Answers

Lab Task:

1.

(a).

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

moviId	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);
```

moviId	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
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	moviId	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	moviId	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 movied from rating where stars < ANY (select stars from rating where movied=103);

+-----+

| movied |

+-----+

| 101 |

| 104 |

+-----+

2 rows in set (0.00 sec)

(b).

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

+-----+

| movied |

+-----+

| 101 |

| 101 |

| 103 |

| 103 |

| 104 |

| 104 |

| 107 |

| 108 |

+-----+

8 rows in set (0.00 sec)

(c).

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

+-----+

| movied |

+-----+

| 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)
```

```
-----  
-----
```

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)

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)

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)

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)