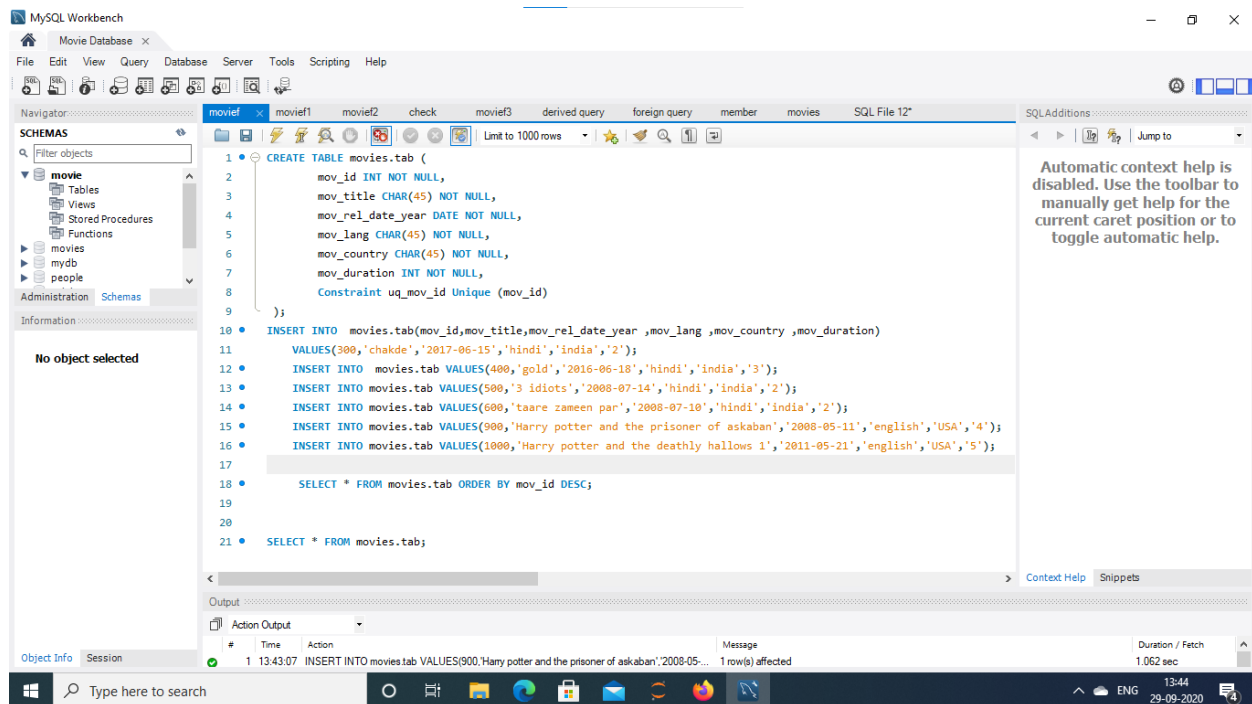


DBMS

ASSIGNMENT-4

1.Order by Clause



Output:

The screenshot shows the MySQL Workbench interface with a query window containing several INSERT statements into the 'movies' table. The query is executed, and the output is displayed in the 'Result Grid' and 'Output' panels.

Query:

```
Constraint uq_mov_id Unique (mov_id)
);
INSERT INTO movies.tab(mov_id,mov_title,mov_rel_date_year ,mov_lang ,mov_country ,mov_duration)
VALUES(300,'chakde','2017-06-15','hindi','india','2');
INSERT INTO movies.tab VALUES(400,'gold','2016-06-18','hindi','india','3');
INSERT INTO movies.tab VALUES(500,'3 idiots','2008-07-14','hindi','india','2');
INSERT INTO movies.tab VALUES(600,'taare zameen par','2008-07-10','hindi','india','2');
INSERT INTO movies.tab VALUES(900,'Harry potter and the prisoner of askaban','2008-05-11','english','USA','4');
INSERT INTO movies.tab VALUES(1000,'Harry potter and the deathly hallows 1','2011-05-21','english','USA','5');
```

Result Grid:

mov_id	mov_title	mov_rel_date_year	mov_lang	mov_country	mov_duration
1000	Harry potter and the deathly hallows 1	2011-05-21	english	USA	5
900	Harry potter and the prisoner of askaban	2008-05-11	english	USA	4
600	taare zameen par	2008-07-10	hindi	india	2
500	3 idiots	2008-07-14	hindi	india	2
400	gold	2016-06-18	hindi	india	3
300	chakde	2017-06-15	hindi	india	2

Output:

#	Time	Action	Message	Duration / Fetch
1	13:43:07	INSERT INTO movies.tab VALUES(900,'Harry potter and the prisoner of askaban','2008-05-11','english','USA','4');	1 row(s) affected	1.062 sec
2	13:43:08	INSERT INTO movies.tab VALUES(1000,'Harry potter and the deathly hallows 1','2011-05-21','english','USA','5');	1 row(s) affected	0.219 sec
3	13:43:14	SELECT * FROM movies.tab ORDER BY mov_id ASC LIMIT 0, 1000	6 row(s) returned	0.047 sec / 0.000 sec

2.Group by and Having.

The screenshot shows the MySQL Workbench interface with a query window containing a SELECT statement with a GROUP BY and HAVING clause. The query is executed, and the output is displayed in the 'Result Grid' and 'Output' panels.

Query:

```
SELECT * FROM movies.tab GROUP BY mov_id,mov_rel_date_year HAVING mov_id = 600;
```

Result Grid:

mov_id	mov_title	mov_rel_date_year	mov_lang	mov_country	mov_duration
600	taare zameen par	2008-07-10	hindi	india	2

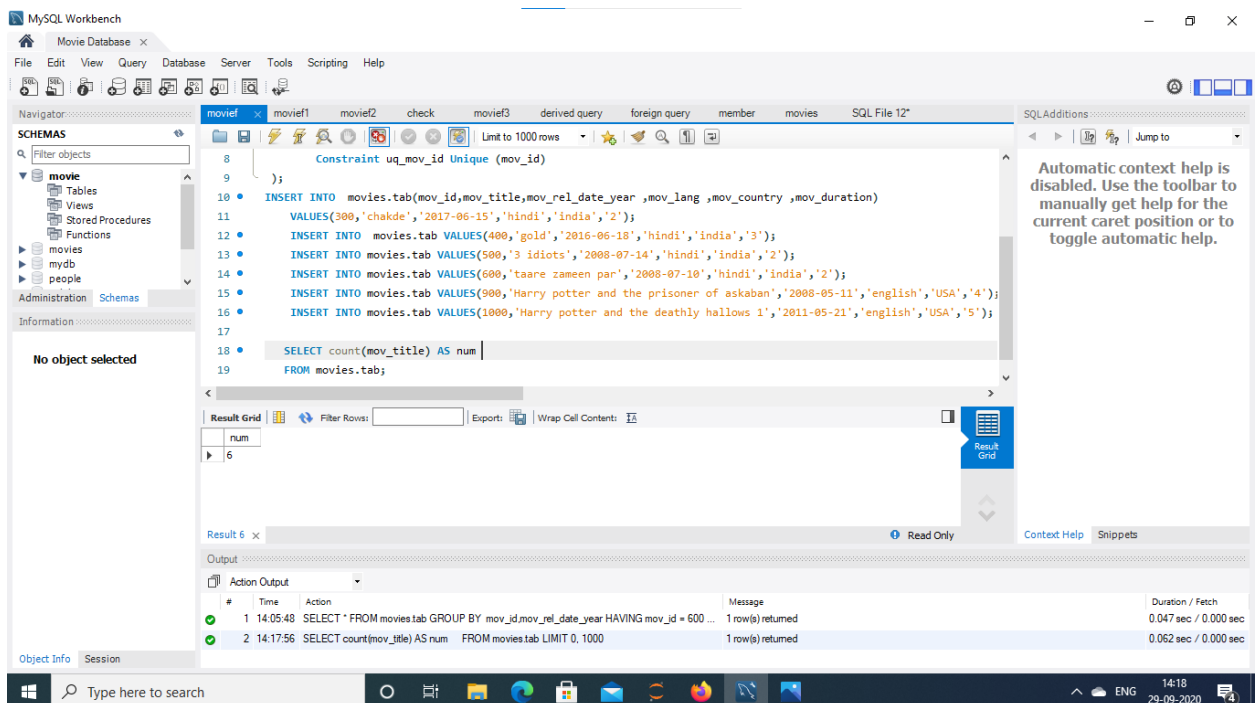
Output:

#	Time	Action	Message	Duration / Fetch
1	14:05:48	SELECT * FROM movies.tab GROUP BY mov_id,mov_rel_date_year HAVING mov_id = 600	1 row(s) returned	0.047 sec / 0.000 sec

3. Aggregate functions.

All the five aggregate functions are used here which are listed with the queries in pictures as follows:

(a) Count



The screenshot displays the MySQL Workbench interface. The SQL editor contains the following query:

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(b) Maximum

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
INSERT INTO movies.tab(mov_id,mov_title,mov_rel_date_year,mov_lang,mov_country,mov_duration)
VALUES(300,'chakde','2017-06-15','hindi','india','2');
INSERT INTO movies.tab VALUES(400,'gold','2016-06-18','hindi','india','3');
INSERT INTO movies.tab VALUES(500,'3 idiots','2008-07-14','hindi','india','2');
INSERT INTO movies.tab VALUES(600,'taare zameen par','2008-07-10','hindi','india','2');
INSERT INTO movies.tab VALUES(900,'Harry potter and the prisoner of askaban','2008-05-11','english','USA','4');
INSERT INTO movies.tab VALUES(1000,'Harry potter and the deathly hallows 1','2011-05-21','english','USA','5');

SELECT max(mov_id) AS maximum FROM movies.tab;
```

The Result Grid shows the output of the query:

maximum
1000

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
3	14:20:33	SELECT SUM(mov_id) AS sum FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec
4	14:20:32	SELECT AVG(mov_id) AS average FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
5	14:25:37	SELECT min(mov_id) AS minimum FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.031 sec / 0.000 sec
6	14:27:33	SELECT max(mov_id) AS maximum FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

(c) Minimum

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
INSERT INTO movies.tab(mov_id,mov_title,mov_rel_date_year,mov_lang,mov_country,mov_duration)
VALUES(300,'chakde','2017-06-15','hindi','india','2');
INSERT INTO movies.tab VALUES(400,'gold','2016-06-18','hindi','india','3');
INSERT INTO movies.tab VALUES(500,'3 idiots','2008-07-14','hindi','india','2');
INSERT INTO movies.tab VALUES(600,'taare zameen par','2008-07-10','hindi','india','2');
INSERT INTO movies.tab VALUES(900,'Harry potter and the prisoner of askaban','2008-05-11','english','USA','4');
INSERT INTO movies.tab VALUES(1000,'Harry potter and the deathly hallows 1','2011-05-21','english','USA','5');

SELECT min(mov_id) AS minimum FROM movies.tab;
```

The Result Grid shows the output of the query:

minimum
300

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
2	14:17:56	SELECT count(mov_title) AS num FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.062 sec / 0.000 sec
3	14:20:33	SELECT SUM(mov_id) AS sum FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec
4	14:23:32	SELECT AVG(mov_id) AS average FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
5	14:25:37	SELECT min(mov_id) AS minimum FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.031 sec / 0.000 sec

(d) Sum

The screenshot shows the MySQL Workbench interface with a query window containing the following SQL code:

```
10 • INSERT INTO movies.tab(mov_id,mov_title,mov_rel_date_year ,mov_lang ,mov_country ,mov_duration)
11 • VALUES(300,'chakde','2017-06-15','hindi','india','2');
12 • INSERT INTO movies.tab VALUES(400,'gold','2016-06-18','hindi','india','3');
13 • INSERT INTO movies.tab VALUES(500,'3 idiots','2008-07-14','hindi','india','2');
14 • INSERT INTO movies.tab VALUES(600,'taare zameen par','2008-07-10','hindi','india','2');
15 • INSERT INTO movies.tab VALUES(900,'Harry potter and the prisoner of askaban','2008-05-11','english','USA','4');
16 • INSERT INTO movies.tab VALUES(1000,'Harry potter and the deathly hallows 1','2011-05-21','english','USA','5');
17
18 • SELECT SUM(mov_id) AS num FROM movies.tab;
19
20
```

The result grid shows a single row with the value 3700.

num
3700

The output window shows the following actions:

#	Time	Action	Message	Duration / Fetch
1	14:05:48	SELECT * FROM movies.tab GROUP BY mov_id,mov_rel_date_year HAVING mov_id = 600 ...	1 row(s) returned	0.047 sec / 0.000 sec
2	14:17:56	SELECT count(mov_title) AS num FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.062 sec / 0.000 sec
3	14:20:33	SELECT SUM(mov_id) AS num FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec

(e) Average

The screenshot shows the MySQL Workbench interface with a query window containing the following SQL code:

```
9 • );
10 • INSERT INTO movies.tab(mov_id,mov_title,mov_rel_date_year ,mov_lang ,mov_country ,mov_duration)
11 • VALUES(300,'chakde','2017-06-15','hindi','india','2');
12 • INSERT INTO movies.tab VALUES(400,'gold','2016-06-18','hindi','india','3');
13 • INSERT INTO movies.tab VALUES(500,'3 idiots','2008-07-14','hindi','india','2');
14 • INSERT INTO movies.tab VALUES(600,'taare zameen par','2008-07-10','hindi','india','2');
15 • INSERT INTO movies.tab VALUES(900,'Harry potter and the prisoner of askaban','2008-05-11','english','USA','4');
16 • INSERT INTO movies.tab VALUES(1000,'Harry potter and the deathly hallows 1','2011-05-21','english','USA','5');
17
18 • SELECT AVG(mov_id) AS average FROM movies.tab;
19
```

The result grid shows a single row with the value 616.6667.

average
616.6667

The output window shows the following actions:

#	Time	Action	Message	Duration / Fetch
1	14:05:48	SELECT * FROM movies.tab GROUP BY mov_id,mov_rel_date_year HAVING mov_id = 600 ...	1 row(s) returned	0.047 sec / 0.000 sec
2	14:17:56	SELECT count(mov_title) AS num FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.062 sec / 0.000 sec
3	14:20:33	SELECT SUM(mov_id) AS num FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec
4	14:23:32	SELECT AVG(mov_id) AS average FROM movies.tab LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

4. Logical Operators:

(a) Operators AND and OR used with like:

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL statement:

```
SELECT * FROM movie.tab WHERE ( mov_title LIKE 'k%' OR mov_title LIKE '%k') AND mov_duration > 2;
```

The Result Grid displays the following data:

mov_id	mov_title	mov_rel_date_year	mov_lang	mov_country	mov_duration
100	Kai po che	2013-07-09	hindi	india	3
200	kirk party	2017-01-23	kannada	india	3
1400	Kal Ho Naa Ho	2003-09-27	hindi	india	4

The Output pane shows the execution log with the following messages:

- 7 07:48:21 INSERT INTO movie.tab VALUES(1300,'The Lion, the Witch and the Wardrobe','2005-12-09','english','USA','4') 1 row(s) affected 0.109 sec
- 8 07:51:06 INSERT INTO movie.tab VALUES(1400,'Kal Ho Naa Ho','2003-09-27','hindi','india','4') 1 row(s) affected 0.094 sec
- 9 08:04:02 SELECT * FROM tab WHERE your mov_rel_date_year >= '2010-01-01' mov_title LIKE '%k%' Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
- 10 08:04:36 SELECT * FROM tab WHERE your mov_rel_date_year >= '2010-01-01' AND mov_title LIKE '%k%' Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
- 11 08:27:33 SELECT * FROM movie.tab WHERE (LIKE mov_title '%k%' OR mov_title LIKE '%k%') AND mov_duration > 2 Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
- 12 08:30:35 SELECT * FROM movie.tab WHERE (mov_title LIKE '%k%' OR mov_title LIKE '%k%') AND mov_duration > 2 U... 3 row(s) returned 0.062 sec / 0.000 sec

(b) NOT LIKE Used:

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL statement:

```
SELECT * FROM tab WHERE mov_lang NOT LIKE 'hindi';
```

The Result Grid displays the following data:

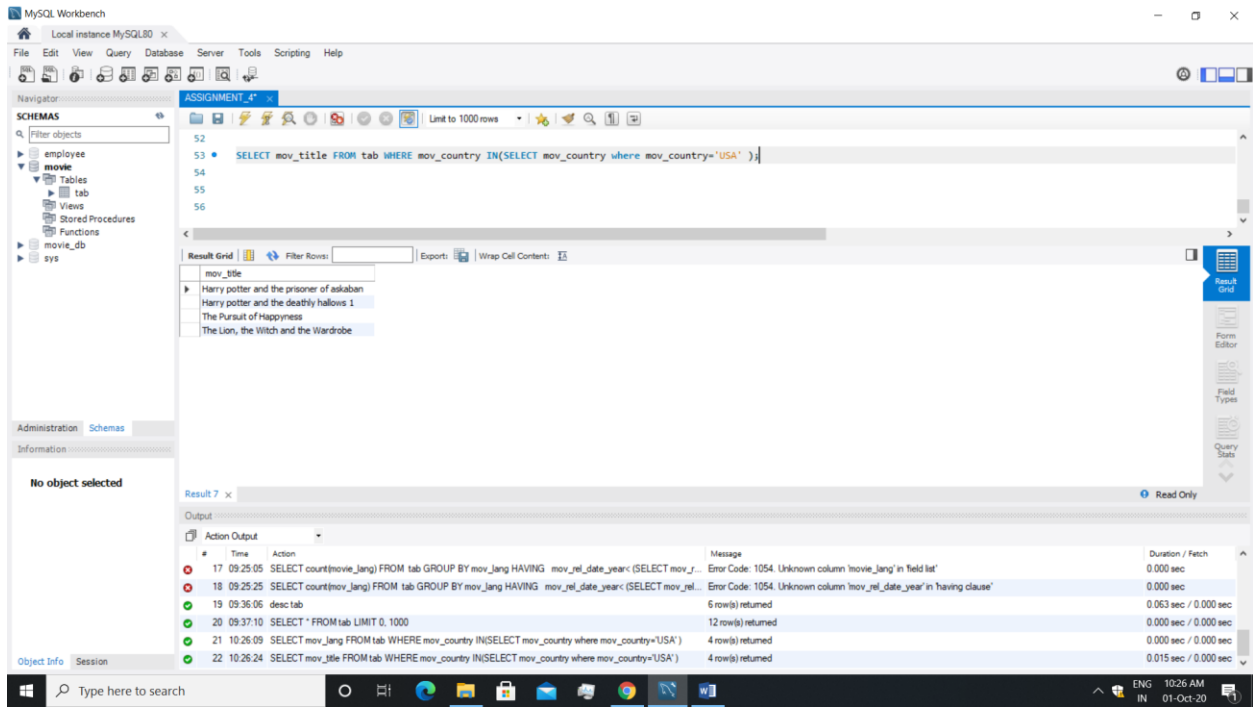
mov_id	mov_title	mov_rel_date_year	mov_lang	mov_country	mov_duration
200	kirk party	2017-01-23	kannada	india	3
900	Harry potter and the prisoner of askaban	2008-05-11	english	USA	4
1000	Harry potter and the deathly hallows 1	2011-05-21	english	USA	5
1100	The Pursuit of Happyness	2010-07-10	english	USA	3
1200	Nehemiah	2020-10-02	telugu	india	3
1300	The Lion, the Witch and the Wardrobe	2005-12-09	english	USA	4

The Output pane shows the execution log with the following messages:

- 9 08:04:02 SELECT * FROM tab WHERE your mov_rel_date_year >= '2010-01-01' mov_title LIKE '%k%' Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
- 10 08:04:36 SELECT * FROM tab WHERE your mov_rel_date_year >= '2010-01-01' AND mov_title LIKE '%k%' Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
- 11 08:27:33 SELECT * FROM movie.tab WHERE (LIKE mov_title '%k%' OR mov_title LIKE '%k%') AND mov_duration > 2 Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se... 0.000 sec
- 12 08:30:35 SELECT * FROM movie.tab WHERE (mov_title LIKE '%k%' OR mov_title LIKE '%k%') AND mov_duration > 2 U... 3 row(s) returned 0.062 sec / 0.000 sec
- 13 08:38:23 SELECT * FROM tab WHERE mov_lang NOT LIKE 'hindi' LIMIT 0, 1000 Error Code: 1054. Unknown column 'mov_lang' in 'where clause' 0.000 sec
- 14 08:39:04 SELECT * FROM tab WHERE mov_lang NOT LIKE 'hindi' LIMIT 0, 1000 6 row(s) returned 0.016 sec / 0.000 sec

5. 4 Nested Queries.

(a)



MySQL Workbench interface showing a nested query execution. The query is:

```
SELECT mov_title FROM tab WHERE mov_country IN(SELECT mov_country where mov_country='USA' );
```

The result grid shows 7 rows of movie titles:

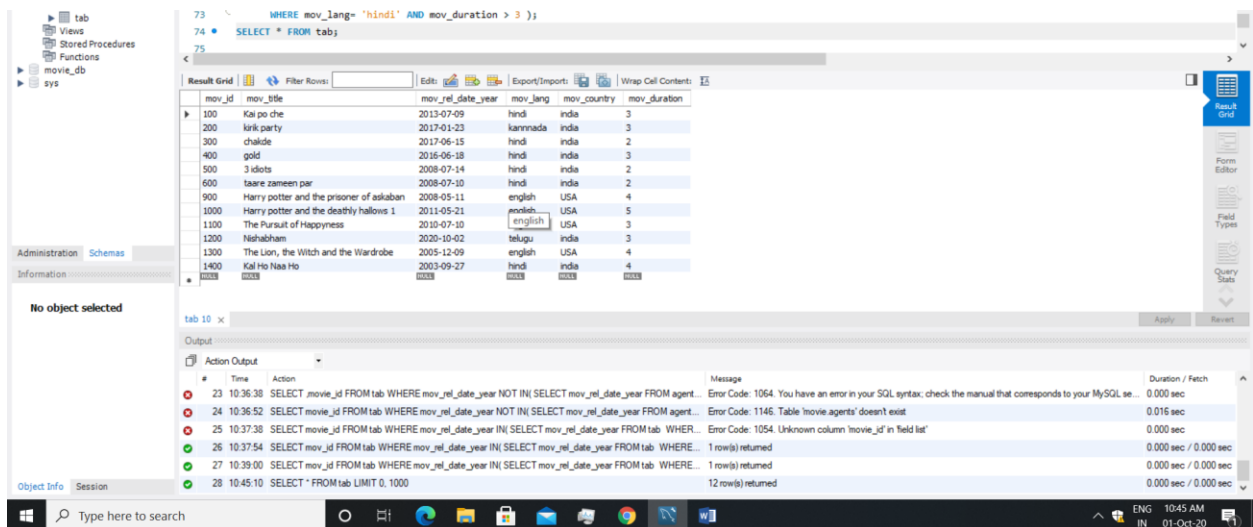
mov_title
Harry potter and the prisoner of askaban
Harry potter and the deathly hallows 1
The Pursuit of Happyness
The Lion, the Witch and the Wardrobe

The output pane shows the execution plan and messages:

#	Time	Action	Message	Duration / Fetch
17	09:25:05	SELECT count(movie_lang) FROM tab GROUP BY mov_lang HAVING mov_rel_date_year: (SELECT mov_r...	Error Code: 1054. Unknown column 'movie_lang' in field list	0.000 sec
18	09:25:25	SELECT count(movie_lang) FROM tab GROUP BY mov_lang HAVING mov_rel_date_year: (SELECT mov_r...	Error Code: 1054. Unknown column 'mov_rel_date_year' in having clause	0.000 sec
19	09:36:06	desc tab	6 row(s) returned	0.063 sec / 0.000 sec
20	09:37:10	SELECT * FROM tab LIMIT 0, 1000	12 row(s) returned	0.000 sec / 0.000 sec
21	10:26:09	SELECT mov_lang FROM tab WHERE mov_country IN(SELECT mov_country where mov_country='USA')	4 row(s) returned	0.000 sec / 0.000 sec
22	10:26:24	SELECT mov_title FROM tab WHERE mov_country IN(SELECT mov_country where mov_country='USA')	4 row(s) returned	0.015 sec / 0.000 sec

(b)

Table:



MySQL Workbench interface showing a table query execution. The query is:

```
WHERE mov_lang='hindi' AND mov_duration > 3 ;  
SELECT * FROM tab;
```

The result grid shows 10 rows of movie data:

mov_id	mov_title	mov_rel_date_year	mov_lang	mov_country	mov_duration
100	Kal po che	2013-07-09	hindi	india	3
200	kirki party	2017-01-23	kannada	india	3
300	chale	2017-06-15	hindi	india	2
400	gold	2016-06-18	hindi	india	3
500	3 idiots	2009-07-14	hindi	india	2
600	taare zameen par	2008-07-10	hindi	india	2
900	Harry potter and the prisoner of askaban	2008-05-11	english	USA	4
1000	Harry potter and the deathly hallows 1	2011-05-21	english	USA	5
1100	The Pursuit of Happyness	2010-07-10	english	USA	3
1200	Hishikam	2020-10-02	telugu	india	3
1300	The Lion, the Witch and the Wardrobe	2005-12-09	english	USA	4
1400	Kal Ho Naa Ho	2003-09-27	hindi	india	4

The output pane shows the execution plan and messages:

#	Time	Action	Message	Duration / Fetch
23	10:36:38	SELECT movie_id FROM tab WHERE mov_rel_date_year NOT IN(SELECT mov_rel_date_year FROM agent...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se...	0.000 sec
24	10:36:52	SELECT movie_id FROM tab WHERE mov_rel_date_year NOT IN(SELECT mov_rel_date_year FROM agent...	Error Code: 1146. Table 'movie agents' doesn't exist	0.016 sec
25	10:37:38	SELECT movie_id FROM tab WHERE mov_rel_date_year IN(SELECT mov_rel_date_year FROM tab. WHER...	Error Code: 1054. Unknown column 'movie_id' in field list	0.000 sec
26	10:37:54	SELECT mov_id FROM tab WHERE mov_rel_date_year IN(SELECT mov_rel_date_year FROM tab. WHER...	1 row(s) returned	0.000 sec / 0.000 sec
27	10:39:00	SELECT mov_id FROM tab WHERE mov_rel_date_year IN(SELECT mov_rel_date_year FROM tab. WHER...	1 row(s) returned	0.000 sec / 0.000 sec
28	10:45:10	SELECT * FROM tab LIMIT 0, 1000	12 row(s) returned	0.000 sec / 0.000 sec

Output:

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
64 SELECT mov_id
65 FROM tab
66 WHERE mov_rel_date_year IN(
67 SELECT mov_rel_date_year FROM tab
68 WHERE mov_title='Kal Ho Naa Ho');
69
```

The output pane shows the following error messages:

#	Time	Action	Message	Duration / Fetch
22	10:26:24	SELECT mov_title FROM tab WHERE mov_country IN(SELECT mov_country where mov_country='USA')	4 row(s) returned	0.015 sec / 0.000 sec
23	10:36:38	SELECT movie_id FROM tab WHERE mov_rel_date_year NOT IN(SELECT mov_rel_date_year FROM agent...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL se...	0.000 sec
24	10:36:52	SELECT movie_id FROM tab WHERE mov_rel_date_year NOT IN(SELECT mov_rel_date_year FROM agent...	Error Code: 1146. Table 'movie.agents' doesn't exist	0.016 sec
25	10:37:38	SELECT movie_id FROM tab WHERE mov_rel_date_year IN(SELECT mov_rel_date_year FROM tab WHERE...	Error Code: 1054. Unknown column 'movie_id' in field list	0.000 sec
26	10:37:54	SELECT mov_id FROM tab WHERE mov_rel_date_year IN(SELECT mov_rel_date_year FROM tab WHERE...	1 row(s) returned	0.000 sec / 0.000 sec
27	10:39:00	SELECT mov_id FROM tab WHERE mov_rel_date_year IN(SELECT mov_rel_date_year FROM tab WHERE...	1 row(s) returned	0.000 sec / 0.000 sec

(c)

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
68 WHERE mov_title='Kal Ho Naa Ho');
69
70 SELECT COUNT(mov_title) FROM tab
71 where mov_duration IN (SELECT mov_duration FROM tab
72 WHERE mov_duration > 3 );
73 SELECT * FROM tab;
```

The output pane shows the following result set:

COUNT(mov_title)
4

The output pane also shows the following error messages:

#	Time	Action	Message	Duration / Fetch
36	10:57:01	SELECT COUNT(mov_title),mov_rel_date_year FROM tab WHERE mov_rel_date_year IN (SELECT mov_rel...	1 row(s) returned	0.016 sec / 0.000 sec
37	10:57:44	SELECT COUNT(mov_title),mov_rel_date_year FROM tab HAVING mov_rel_date_year IN (SELECT mov_rel...	1 row(s) returned	0.000 sec / 0.000 sec
38	10:59:21	SELECT COUNT(mov_title) FROM tab GROUP BY movie_title HAVING mov_rel_date_year IN (SELECT mo...	Error Code: 1054. Unknown column 'movie_title' in 'group statement'	0.000 sec
39	11:01:11	SELECT COUNT(mov_title) FROM tab where mov_duration IN (SELECT mov_duration FROM tab WHE...	1 row(s) returned	0.000 sec / 0.000 sec
40	11:01:56	SELECT * FROM tab LIMIT 0, 1000	12 row(s) returned	0.000 sec / 0.000 sec
41	11:02:52	SELECT COUNT(mov_title) FROM tab where mov_duration IN (SELECT mov_duration FROM tab WHE...	1 row(s) returned	0.016 sec / 0.000 sec

(d)

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

employee

movie

Tables

tab

Views

Stored Procedures

Functions

movie_db

sys

Administration Schemas

Information

No object selected

tab 17

Output

Action Output

#	Time	Action	Message	Duration / Fetch
38	10:59:21	SELECT COUNT(mov_title) FROM tab GROUP BY mov_title HAVING mov_rel_date_year IN (SELECT mo...	Error Code: 1054. Unknown column 'mov_title' in 'group statement'	0.000 sec
39	11:01:11	SELECT COUNT(mov_title) FROM tab where mov_duration IN (SELECT mov_duration FROM tab WHE...	1 row(s) returned	0.000 sec / 0.000 sec
40	11:01:56	SELECT * FROM tab LIMIT 0, 1000	12 row(s) returned	0.000 sec / 0.000 sec
41	11:02:52	SELECT COUNT(mov_title) FROM tab where mov_duration IN (SELECT mov_duration FROM tab WHE...	1 row(s) returned	0.016 sec / 0.000 sec
42	11:09:49	SELECT COUNT(mov_title) FROM tab GROUP BY mov_lang HAVING mov_rel_date_year IN (SELECT mov_...	Error Code: 1054. Unknown column 'mov_rel_date_year' in 'IN/ALL/ANY subquery'	0.015 sec
43	11:18:21	SELECT * FROM tab WHERE mov_title = (SELECT mov_title FROM tab WHERE mov_rel_date_year = (SEL...	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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