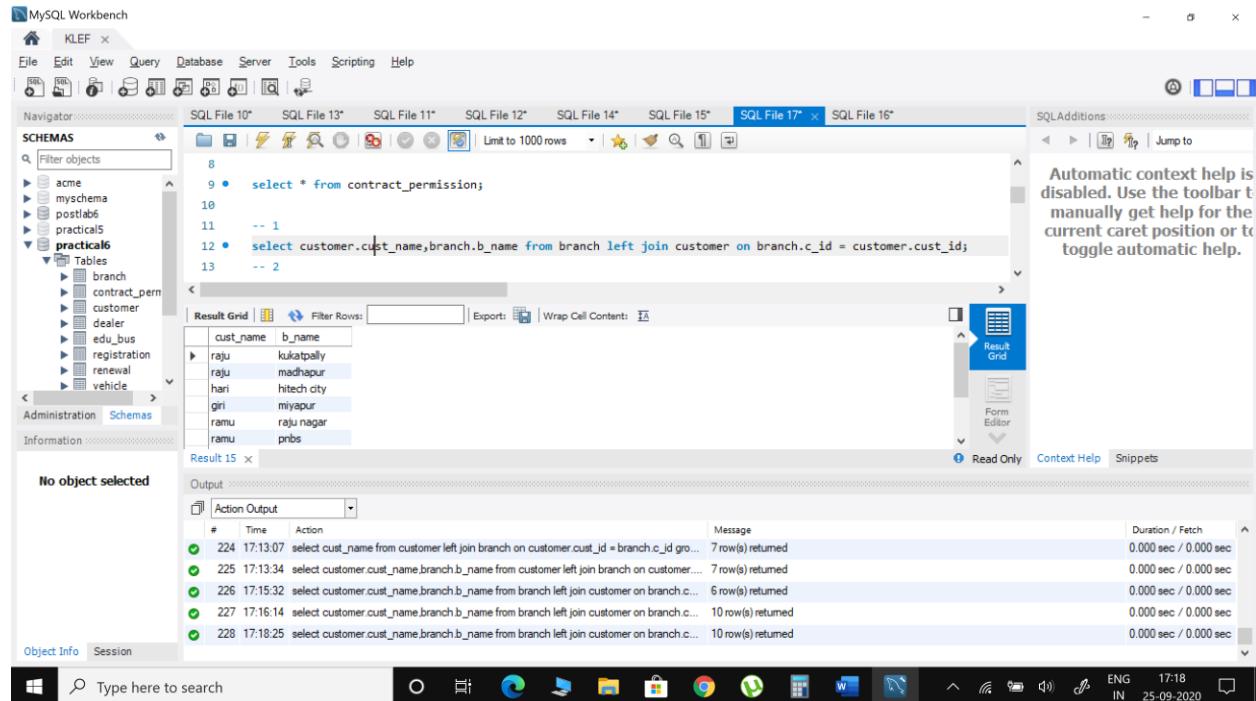


## IN-LAB

Use the tables and data in Experiment – 5, In-Lab section and work on the following queries  
**Case Study 1 - Transport Department**

- Display the list of customers available in a branch.



```

8
9 •   select * from contract_permission;
10
11 -- 1
12 •   select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id;
13 -- 2

```

cust_name	b_name
raju	kukatpally
raju	madhapur
hari	hitech city
giri	miyapur
ramu	raju nagar
ramu	prbs

Result 15 x

Output

#	Time	Action	Message	Duration / Fetch
224	17:13:07	select cust_name from customer left join branch on customer.cust_id = branch.c_id gro...	7 row(s) returned	0.000 sec / 0.000 sec
225	17:13:34	select customer.cust_name,branch.b_name from customer left join branch on customer....	7 row(s) returned	0.000 sec / 0.000 sec
226	17:15:32	select customer.cust_name,branch.b_name from branch left join customer on branch.c...	6 row(s) returned	0.000 sec / 0.000 sec
227	17:16:14	select customer.cust_name,branch.b_name from branch left join customer on branch.c...	10 row(s) returned	0.000 sec / 0.000 sec
228	17:18:25	select customer.cust_name,branch.b_name from branch left join customer on branch.c...	10 row(s) returned	0.000 sec / 0.000 sec

- Create a mysql query to know the older of all the customers

```

MySQL Workbench
File Edit View Query Database Server Tools Scripting Help
Navigator Schemas SQL File 10* SQL File 13* SQL File 11* SQL File 12* SQL File 14* SQL File 15* SQL File 17* SQL File 16*
SCHEMAS Filter objects acme myschema postlab6 practical5 practical6
Tables branch contract_perm customer dealer edu_bus registration renewal vehicle
Result Grid Filter Rows: Edit Export/Import Wrap Cell Content: Fetch rows: Result Grid Form Editor
customer 16 x
Output Action Output
# Time Action Message Duration / Fetch
225 17:13:34 select customer.cust_name,branch.b_name from customer left join branch on customer.cust_id = branch.c_id 7 row(s) returned 0.000 sec / 0.000 sec
226 17:15:32 select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id 6 row(s) returned 0.000 sec / 0.000 sec
227 17:16:14 select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id 10 row(s) returned 0.000 sec / 0.000 sec
228 17:18:25 select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id 10 row(s) returned 0.000 sec / 0.000 sec
229 17:18:43 select cust_id,cust_name from customer order by dob asc limit 1 1 row(s) returned 0.000 sec / 0.000 sec
Object Info Session

```

3. Write mysql query to calculate the total amount generated by giving contract permission for amount per seat

```

MySQL Workbench
File Edit View Query Database Server Tools Scripting Help
Navigator Schemas SQL File 10* SQL File 13* SQL File 11* SQL File 12* SQL File 14* SQL File 15* SQL File 16* SQL File 17*
SCHEMAS Filter objects acme myschema postlab6 practical5 practical6
Tables branch contract_perm customer dealer edu_bus registration renewal vehicle
Result Grid Filter Rows: Export Wrap Cell Content: Result Grid Form Editor
customer 16 x
Output Action Output
# Time Action Message Duration / Fetch
225 17:13:34 select customer.cust_name,branch.b_name from customer left join branch on customer.cust_id = branch.c_id 7 row(s) returned 0.000 sec / 0.000 sec
226 17:15:32 select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id 6 row(s) returned 0.000 sec / 0.000 sec
227 17:16:14 select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id 10 row(s) returned 0.000 sec / 0.000 sec
228 17:18:25 select customer.cust_name,branch.b_name from branch left join customer on branch.c_id = customer.cust_id 10 row(s) returned 0.000 sec / 0.000 sec
229 17:18:43 select cust_id,cust_name from customer order by dob asc limit 1 1 row(s) returned 0.000 sec / 0.000 sec
230 17:18:55 select veh_id from contract_permission where sum(amount_per_seat) LIMIT 0, 1000 Error Code: 1111. Invalid use of group function 0.000 sec
231 17:19:25 select * from contract_permission LIMIT 0, 1000 3 row(s) returned 0.000 sec / 0.000 sec
232 17:19:52 select sum(amount_per_seat) from contract_permission LIMIT 0, 1000 1 row(s) returned 0.000 sec / 0.000 sec
Object Info Session

```

4. Create a query to display all the type of vehicles present

MySQL Workbench Screenshot:

```

SQL File 10* SQL File 13* SQL File 11* SQL File 12* SQL File 14* SQL File 15* SQL File 16* SQL File 17*
13 -- 2
14 • select cust_id,cust_name from customer order by dob asc limit 1;
15 -- 3
16 • select sum(amount_per_seat) from contract_permission;
17 -- 4
18 • select distinct veh_type from vehicle;

```

**Result Grid:**

veh_type
2-Wheeler
3-Wheeler
4-Wheeler

**Output:**

#	Time	Action	Message	Duration / Fetch
229	17:18:43	select cust_id,cust_name from customer order by dob asc limit 1;	1 row(s) returned	0.000 sec / 0.000 sec
230	17:18:55	select veh_id from contract_permission where sum(amount_per_seat) LIMIT 0, 1000	Error Code: 1111. Invalid use of group function	0.000 sec
231	17:19:25	select * from contract_permission LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
232	17:19:52	select sum(amount_per_seat) from contract_permission LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
233	17:20:16	select distinct veh_type from vehicle LIMIT 0, 1000	3 row(s) returned	0.016 sec / 0.000 sec

5. Write mysql query to display all the cities present in a given state.

MySQL Workbench Screenshot:

```

SQL File 10* SQL File 13* SQL File 11* SQL File 12* SQL File 14* SQL File 15* SQL File 16* SQL File 17*
16 • sum(amount_per_seat) from contract_permissions;
17
18 • distinct veh_type from vehicle;
19
20 • distinct customer.city,customer.state from customer inner join edu_bus inner join branch inner join Dealers

```

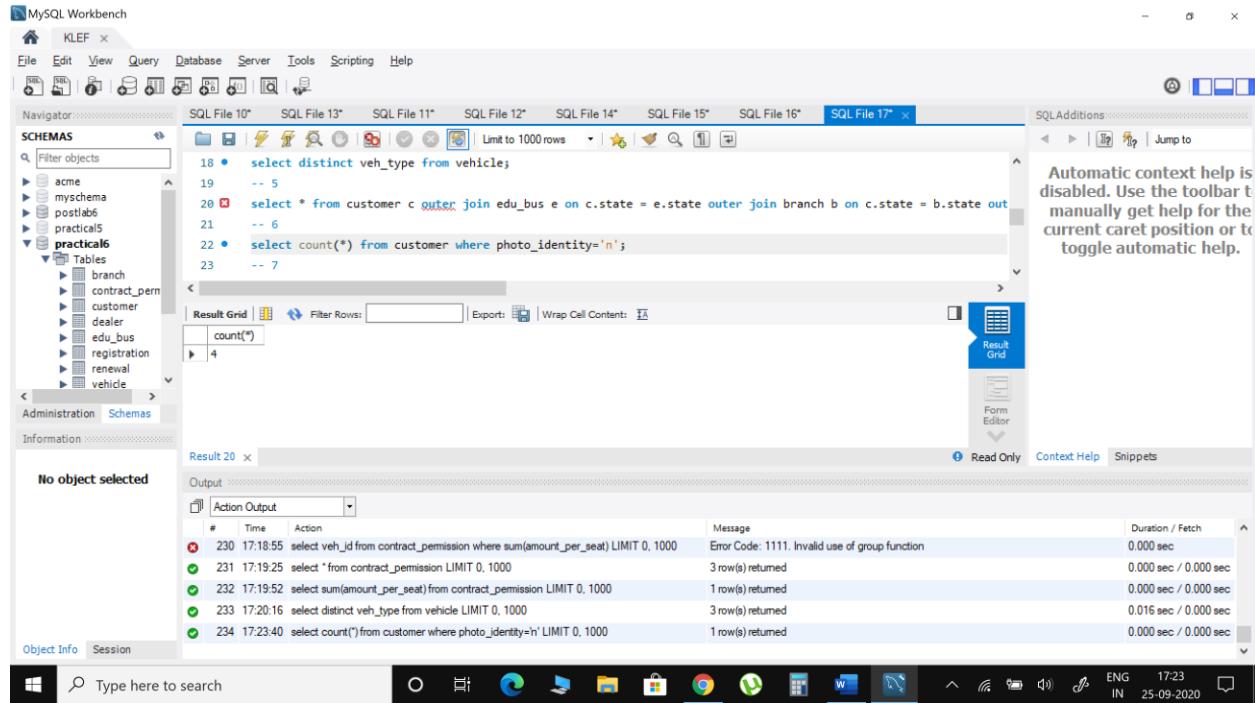
**Result Grid:**

city	state
Guntur	Andhra Pradesh
Perambur	Tamil Nadu
Hyderabad	Telangana
Vijayawada	Andhra Pradesh

**Output:**

#	Time	Action	Message	Duration / Fetch
247	17:26:32	select * from customer c join edu_bus e join dealer d group by c.state LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
248	17:27:08	select state.count(distinct c.city) from customer c join edu_bus e join dealer d group b...	3 row(s) returned	0.015 sec / 0.000 sec
249	17:27:18	Drop view Present_Customer	0 row(s) affected	0.015 sec
250	17:27:29	select * from Present_Customer LIMIT 0, 1000	Error Code: 1146. Table 'practical6.present_customer' doesn't exist	0.000 sec
251	17:29:07	select distinct customer.city,customer.state from customer inner join edu_bus inner join ...	4 row(s) returned	0.000 sec / 0.000 sec

6. Display the number of vehicles of customers who are not having photo identity.



MySQL Workbench Screenshot:

SQL File 17\* (Query Editor):

```

18 • select distinct veh_type from vehicle;
19 -- 5
20 □ select * from customer c outer join edu_bus e on c.state = e.state outer join branch b on c.state = b.state out
21 -- 6
22 • select count(*) from customer where photo_identity='n';
23 -- 7

```

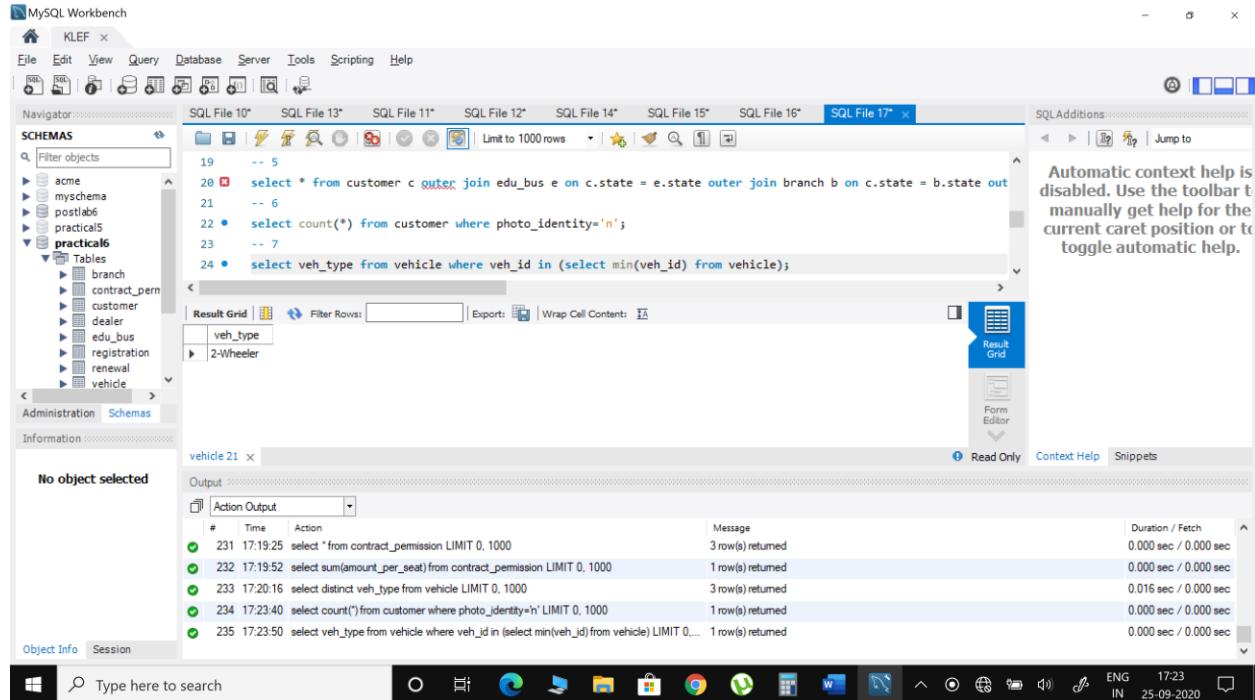
Result Grid (Output):

	count(*)
	4

Action Output (Logs):

#	Time	Action	Message	Duration / Fetch
230	17:18:55	select veh_id from contract_permission where sum(amount_per_seat) LIMIT 0, 1000	Error Code: 1111. Invalid use of group function	0.000 sec
231	17:19:25	select * from contract_permission LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
232	17:19:52	select sum(amount_per_seat) from contract_permission LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
233	17:20:16	select distinct veh_type from vehicle LIMIT 0, 1000	3 row(s) returned	0.016 sec / 0.000 sec
234	17:23:40	select count(*) from customer where photo_identity='n' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

7. Write mysql statement to search for vehicle type which is having the vehicle id as the smallest number.



MySQL Workbench Screenshot:

SQL File 17\* (Query Editor):

```

19 -- 5
20 □ select * from customer c outer join edu_bus e on c.state = e.state outer join branch b on c.state = b.state out
21 -- 6
22 • select count(*) from customer where photo_identity='n';
23 -- 7
24 • select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle);

```

Result Grid (Output):

	veh_type
	2-Wheeler

Action Output (Logs):

#	Time	Action	Message	Duration / Fetch
231	17:19:25	select * from contract_permission LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
232	17:19:52	select sum(amount_per_seat) from contract_permission LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
233	17:20:16	select distinct veh_type from vehicle LIMIT 0, 1000	3 row(s) returned	0.016 sec / 0.000 sec
234	17:23:40	select count(*) from customer where photo_identity='n' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
235	17:23:50	select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

8. Create a mysql query to know the branch name and phone number of a customer who is having license period of 2 years .

MySQL Workbench Screenshot:

```

12 • insert into renewal values(217,49,7);
13 • insert into renewal values(217,50,8);

14
15 • select * from renewal;
-- 8
17 • select b.b_name,c.ph_no from branch b left join customer c on b.c_id=c.cust_id
  
```

**Result Grid:**

b_name	ph_no

**Action Output:**

#	Time	Action	Message	Duration / Fetch
260	17:34:29	select * from branch b left join customer c on b.c_id=c.cust_id where b.c_id in (select c...	10 row(s) returned	0.000 sec / 0.000 sec
261	17:34:57	select b.b_name,c.phone1 from branch b left join customer c on b.c_id=c.cust_id wher...	Error Code: 1054. Unknown column 'c.phone1' in field list'	0.000 sec
262	17:35:06	select b.b_name,c.ph_no from branch b left join customer c on b.c_id=c.cust_id where ...	10 row(s) returned	0.000 sec / 0.000 sec
263	17:35:20	select b.b_name,c.ph_no from branch b left join customer c on b.c_id=c.cust_id where ...	0 row(s) returned	0.000 sec / 0.000 sec
264	17:35:32	select b.b_name,c.ph_no from branch b left join customer c on b.c_id=c.cust_id where ...	0 row(s) returned	0.000 sec / 0.000 sec

9. Display the vehicle details for which maximum amount is paid per seat for contractpermission.

MySQL Workbench Screenshot:

```

21 -- 6
22 • select count(*) from customer where photo_identity='n';
23 -- 7
24 • select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle);
25 -- 9
26 • select * from vehicle where veh_id in (select veh_id from contract_permission where amount_per_seat = (select m...
  
```

**Result Grid:**

veh_id	veh_type	veh_name	veh_number
10	4-Wheeler	ambassador	AP3214
HULL	HULL	HULL	HULL

**Action Output:**

#	Time	Action	Message	Duration / Fetch
232	17:19:52	select sum(amount_per_seat) from contract_permission LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
233	17:20:16	select distinct veh_type from vehicle LIMIT 0, 1000	3 row(s) returned	0.016 sec / 0.000 sec
234	17:23:40	select count(*) from customer where photo_identity='n' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
235	17:23:50	select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
236	17:24:04	select * from vehicle where veh_id in (select veh_id from contract_permission where am...	1 row(s) returned	0.000 sec / 0.000 sec

10. Write Co-related nested subquery to know the customer name , phone number, city whose branch name is ‘Madhapur’

The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** practical6
- Tables:** customer
- Query:**

```

23 -- 7
24 • select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle);
25 -- 9
26 • select * from vehicle where veh_id in (select veh_id from contract_permission where amount_per_seat = (select min(amount_per_seat) from contract_permission));
27 -- 10
28 • select cust_name,ph_no,city from customer where cust_id in (select c_id from branch where b_name = 'madhapur');

```

- Result Grid:**

cust_name	ph_no	city
raju	9123456789	Guntur

- Output:**

#	Time	Action	Message	Duration / Fetch
233	17:20:16	select distinct veh_type from vehicle LIMIT 0, 1000	3 row(s) returned	0.016 sec / 0.000 sec
234	17:23:40	select count(*) from customer where photo_identity='n' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
235	17:23:50	select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
236	17:24:04	select * from vehicle where veh_id in (select veh_id from contract_permission where am...)	1 row(s) returned	0.000 sec / 0.000 sec
237	17:24:26	select cust_name,ph_no,city from customer where cust_id in (select c_id from branch w...)	1 row(s) returned	0.000 sec / 0.000 sec

11. Create a view “Present\_Customer” with customer name , phone number, state and city of customer and display the view.

The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** practical6
- Tables:** customer
- Query:**

```

26 • select * from vehicle where veh_id in (select veh_id from contract_permission where amount_per_seat = (select min(amount_per_seat) from contract_permission));
27 -- 10
28 • select cust_name,ph_no,city from customer where cust_id in (select c_id from branch where b_name = 'madhapur');
29 -- 11
30 • create view Present_Customer as select cust_name,ph_no,state,city from customer;
31 • select * from Present_Customer;

```

- Result Grid:**

cust_name	ph_no	state	city
raju	9123456789	Andhra Pradesh	Guntur
hari	1122334455	Tamil Nadu	Perambur
giri	8877665544	Telangana	Hyderabad
ramu	7654564321	Andhra Pradesh	Vijayawada
rahul	9999999998	Andhra Pradesh	Guntur
gopi	787777775	Telangana	Hyderabad

- Output:**

#	Time	Action	Message	Duration / Fetch
235	17:23:50	select veh_type from vehicle where veh_id in (select min(veh_id) from vehicle) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
236	17:24:04	select * from vehicle where veh_id in (select veh_id from contract_permission where am...)	1 row(s) returned	0.000 sec / 0.000 sec
237	17:24:26	select cust_name,ph_no,city from customer where cust_id in (select c_id from branch w...)	1 row(s) returned	0.000 sec / 0.000 sec
238	17:24:48	create view Present_Customer as select cust_name,ph_no,state,city from customer	0 row(s) affected	0.063 sec
239	17:24:49	select * from Present_Customer LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec

12. Write mysql query to show indexes on customer table.

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the database 'practical6' is selected. The left sidebar displays the schema structure under 'practical6'. The main area contains a SQL editor window titled 'SQL File 17\*' with the following SQL code:

```

28 • select cust_name,ph_no,city from customer where cust_id in (select c_id from branch where b_name = 'madhapur');
29 -- 11
30 • create view Present_Customer as select cust_name,ph_no,state,city from customer;
31 • select *from Present_Customer;
32 -- 12
33 • show indexes from customer;

```

Below the SQL editor is a 'Result Grid' table showing index details for the 'customer' table:

Table	Non_unique	Key_name	Seq_in_Index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
customer	0	PRIMARY	1	cust_id	A	10				BTREE	
customer	1	v_id	1	v_id	A	10			YES	BTREE	

The bottom section shows the 'Output' pane with the following log entries:

#	Time	Action	Message	Duration / Fetch
236	17:24:04	select *from vehicle where veh_id in (select veh_id from contract_permission where am...	1 row(s) returned	0.000 sec / 0.000 sec
237	17:24:26	select cust_name,ph_no,city from customer where cust_id in (select c_id from branch w...	1 row(s) returned	0.000 sec / 0.000 sec
238	17:24:48	create view Present_Customer as select cust_name,ph_no,state,city from customer	0 row(s) affected	0.063 sec
239	17:24:49	select *from Present_Customer LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
240	17:24:59	show indexes from customer	2 row(s) returned	0.000 sec / 0.000 sec

13. Create a query to display the count of dealers from “Andhra Pradesh”

The screenshot shows the MySQL Workbench interface. In the top navigation bar, the database 'practical6' is selected. The left sidebar displays the schema structure under 'practical6'. The main area contains a SQL editor window titled 'SQL File 17\*' with the following SQL code:

```

28 • create view Present_Customer as select cust_name,ph_no,state,city from customer;
29 -- 12
30 • show indexes from customer;
31 -- 13
32
33 • select count(deal_id) from dealer where state = "Andhra Pradesh";

```

Below the SQL editor is a 'Result Grid' table showing the result of the query:

count(deal_id)
4

The bottom section shows the 'Output' pane with the following log entries:

#	Time	Action	Message	Duration / Fetch
237	17:24:26	select cust_name,ph_no,city from customer where cust_id in (select c_id from branch w...	1 row(s) returned	0.000 sec / 0.000 sec
238	17:24:48	create view Present_Customer as select cust_name,ph_no,state,city from customer	0 row(s) affected	0.063 sec
239	17:24:49	select *from Present_Customer LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
240	17:24:59	show indexes from customer	2 row(s) returned	0.000 sec / 0.000 sec
241	17:25:07	select count(deal_id) from dealer where state = "Andhra Pradesh" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

14. Display the number of cities in each state

MySQL Workbench Screenshot:

**SQL File 17\***

```

32 -- 12
33 • show indexes from customer;
34 -- 13
35 • select count(deal_id) from dealer where state = "Andhra Pradesh";
36 -- 14
37 • select c.state,count(distinct c.city) from customer c join edu_bus e join dealer d group by c.state;

```

**Result Grid**

state	count(distinct c.city)
Andhra Pradesh	2
Tamil Nadu	1
Telangana	1

**Action Output**

#	Time	Action	Message	Duration / Fetch
244	17:25:49	select c.state,count(distinct c.city) from customer c join edu_bus e left join dealer d on c.state=e.state group by c.state;	3 row(s) returned	0.015 sec / 0.000 sec
245	17:26:10	select c.state,count(distinct c.city) from customer c join edu_bus e join dealer d group by c.state;	3 row(s) returned	0.000 sec / 0.000 sec
246	17:26:22	select * from customer c join edu_bus e left join dealer d on c.state=e.state group by c.state;	3 row(s) returned	0.000 sec / 0.000 sec
247	17:26:32	select * from customer c join edu_bus e join dealer d group by c.state LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
248	17:27:08	select c.state,count(distinct c.city) from customer c join edu_bus e join dealer d group by c.state;	3 row(s) returned	0.015 sec / 0.000 sec

## 15. Drop the view “Present\_Customer”

MySQL Workbench Screenshot:

**SQL File 17\***

```

27 -- 10
28 • select cust_name,ph_no,city from customer where cust_id in (select c_id from branch where b_name = 'madhapur');
29 -- 11
30 • create view Present_Customer as select cust_name,ph_no,state,city from customer;
31 • select *from Present_Customer;
32 -- 12
33 • show indexes from customer;
34 -- 13
35 • select count(deal_id) from dealer where state = "Andhra Pradesh";
36 -- 14
37 • select c.state,count(distinct c.city) from customer c join edu_bus e join dealer d group by c.state;
38 -- 15
39 • Drop view Present_Customer;
40 • select *from Present_Customer;

```

**Action Output**

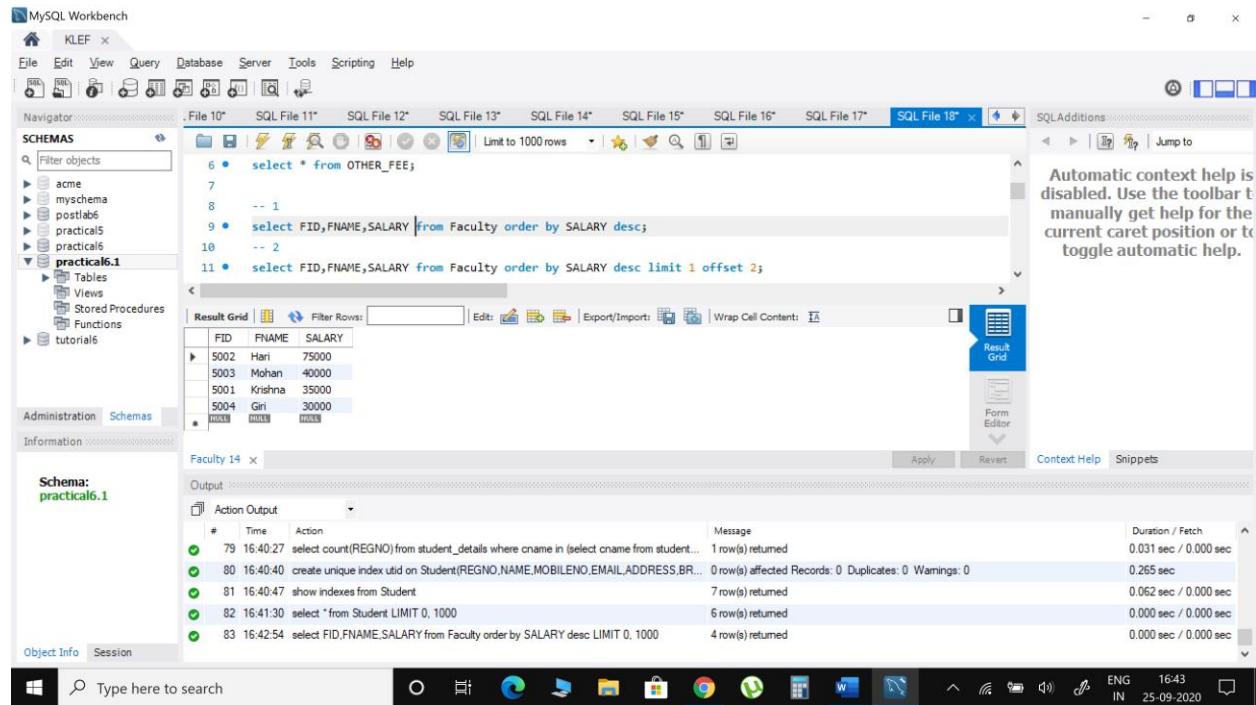
#	Time	Action	Message	Duration / Fetch
246	17:26:22	select * from customer c join edu_bus e left join dealer d on c.state=e.state group by c.state;	3 row(s) returned	0.000 sec / 0.000 sec
247	17:26:32	select * from customer c join edu_bus e join dealer d group by c.state LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
248	17:27:08	select c.state,count(distinct c.city) from customer c join edu_bus e join dealer d group by c.state;	3 row(s) returned	0.015 sec / 0.000 sec
249	17:27:18	Drop view Present_Customer	0 row(s) affected	0.015 sec
250	17:27:29	select * from Present_Customer LIMIT 0, 1000	Error Code: 1146. Table 'practical6.present_customer' doesn't exist	0.000 sec

Select \*from Present\_Customer; // gives error because we dropped the view

Use the tables and data in Experiment – 5, In-Lab section and work on the following queries

#### Case Study 4 – KL University ERP

- 1) Write a query to display the names, annual salary of all the faculty based on decreasing order of their annual salary.



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

```

6 • select * from OTHER_FEE;
7
8 -- 1
9 • select FID,FNAME,SALARY from Faculty order by SALARY desc;
10 -- 2
11 • select FID,FNAME,SALARY from Faculty order by SALARY desc limit 1 offset 2;

```

The Result Grid shows the following data:

FID	FNAME	SALARY
5002	Hari	75000
5003	Mohan	40000
5001	Krishna	35000
5004	Giri	30000

The Output pane shows the following log entries:

#	Time	Action	Message	Duration / Fetch
79	16:40:27	select count(REGNO) from student_details where cname in (select cname from student...	1 row(s) returned	0.031 sec / 0.000 sec
80	16:40:40	create unique index uid on Student(REGNO,NAME,MOBILENO,EMAIL,ADDRESS,BR...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.265 sec
81	16:40:47	show indexes from Student	7 row(s) returned	0.062 sec / 0.000 sec
82	16:41:30	select * from Student LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
83	16:42:54	select FID,FNAME,SALARY from Faculty order by SALARY desc LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec

- 2) Write a query to get the third highest salary of a faculty

```

6 • select * from OTHER_FEE;
7
8 -- 1
9 • select FID,FNAME,SALARY from Faculty order by SALARY desc;
10 -- 2
11 • select FID,FNAME,SALARY from Faculty order by SALARY desc limit 1 offset 2;

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: | Fetch rows: | Result Grid | Form Editor |
FID | FNAME | SALARY |
5001 | Krishna | 35000 |
NULL | NULL | NULL |

Faculty 15 x
Output
Action Output
# Time Action Message Duration / Fetch
80 16:40:40 create unique index utid on Student(REGNO,NAME,MOBILENO,EMAIL,ADDRESS,BR... 0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0 0.265 sec
81 16:40:47 show indexes from Student 7 row(s) returned 0.062 sec / 0.000 sec
82 16:41:30 select * from Student LIMIT 0, 1000 6 row(s) returned 0.000 sec / 0.000 sec
83 16:42:54 select FID,FNAME,SALARY from Faculty order by SALARY desc LIMIT 0, 1000 4 row(s) returned 0.000 sec / 0.000 sec
84 16:43:14 select FID,FNAME,SALARY from Faculty order by SALARY desc limit 1 offset 2 1 row(s) returned 0.000 sec / 0.000 sec

```

- 3) Write a query to display the total value of books available in the Library using aggregate function.

```

8 -- 1
9 • select FID,FNAME,SALARY from Faculty order by SALARY desc;
10 -- 2
11 • select FID,FNAME,SALARY from Faculty order by SALARY desc limit 1 offset 2;
12 -- 3
13 • select sum(PRICE*No_of_Copies) from library_books;

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Read Only | Result Grid | Form Editor |
sum(PRICE*No_of_Copies) |
38000 |

Result 17 x
Output
Action Output
# Time Action Message Duration / Fetch
83 16:42:54 select FID,FNAME,SALARY from Faculty order by SALARY desc LIMIT 0, 1000 4 row(s) returned 0.000 sec / 0.000 sec
84 16:43:14 select FID,FNAME,SALARY from Faculty order by SALARY desc limit 1 offset 2 1 row(s) returned 0.000 sec / 0.000 sec
85 16:43:34 select count(BTITLE) from Library_Books LIMIT 0, 1000 1 row(s) returned 0.015 sec / 0.000 sec
86 16:45:50 select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000 1 row(s) returned 0.000 sec / 0.000 sec
87 16:46:00 select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000 1 row(s) returned 0.000 sec / 0.000 sec

```

- 4) Write a query to display the Regd.no, name and the Average CGPA of each student for the entire 1st year using aggregate and group by clause

```

13 • select sum(PRICE*No_of_Copies) from library_books;
14 • -- 4
15 • select a.REGID,s.NAME,avg(CGPA) from Acad_Performance a,Student s
   where s.REGNO = a.REGID and a.YEAR=1 group by s.NAME;
16 • -- 5
17 • -- 18 • select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH having count(CCODE) >=2;

```

REGID	NAME	avg(CGPA)
1000	Hari	9.300000190734863
1001	Jaya	9.199999809265137
1002	Kiran	9.100000381469727
2000	Gopal	9.100000381469727
2001	Kalyan	9.300000190734863
3000	Suresh	9.199999809265137

Result 18 x Read Only Context Help Snippets

Action Output

#	Time	Action	Message	Duration / Fetch
84	16:43:14	select FID,FNAME,SALARY from Faculty order by SALARY desc limit 1 offset 2	1 row(s) returned	0.000 sec / 0.000 sec
85	16:43:34	select count(BTITLE) from Library_Books LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec
86	16:45:50	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
87	16:46:00	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
88	16:46:35	select a.REGID,s.NAME,avg(CGPA) from Acad_Performance a,Student s where s.RE... 6 row(s) returned	6 row(s) returned	0.109 sec / 0.000 sec
89	16:46:47	select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH havin... 1 row(s) returned	1 row(s) returned	0.016 sec / 0.000 sec

- 5) Write a query to display the number of courses available in 2nd year branch wise, that contains atleast two courses per branch using Aggregate Functions with GroupBy & Having Clauses

```

14 • -- 4
15 • select a.REGID,s.NAME,avg(CGPA) from Acad_Performance a,Student s
   where s.REGNO = a.REGID and a.YEAR=1 group by s.NAME;
16 • -- 5
17 • -- 18 • select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH having count(CCODE) >=2;
19 • -- 6

```

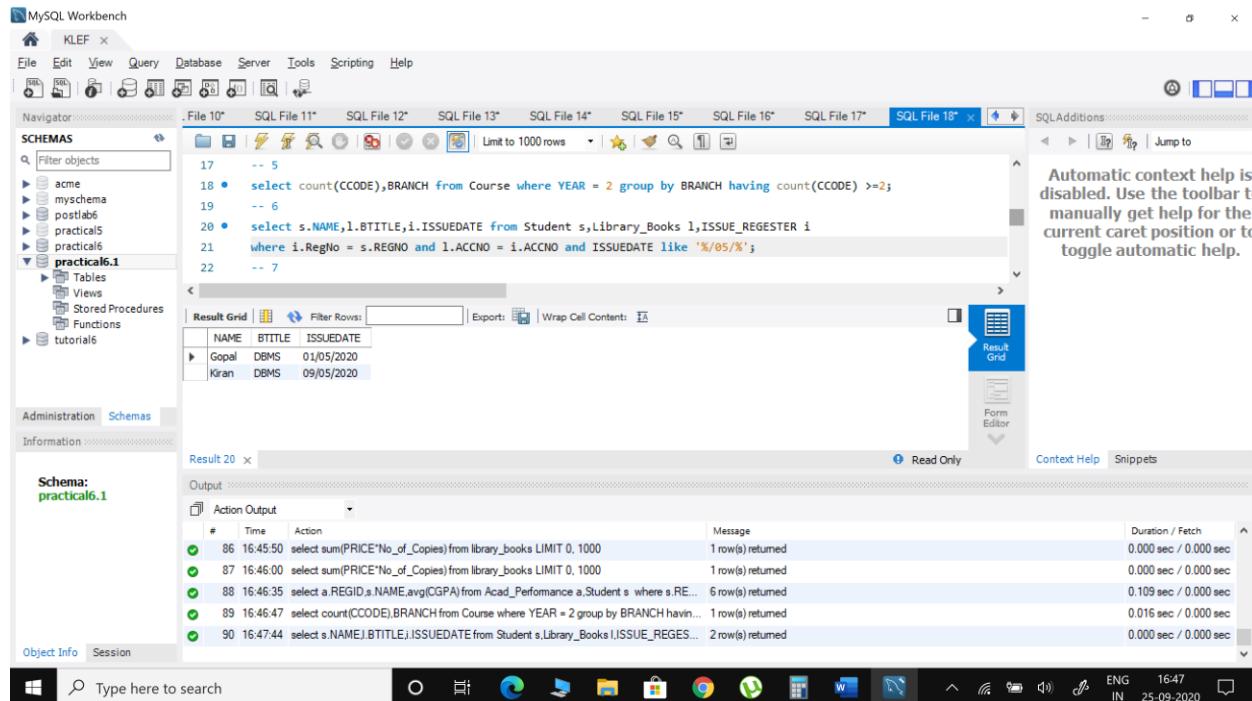
count(CCODE)	BRANCH
3	CSE

Result 19 x Read Only Context Help Snippets

Action Output

#	Time	Action	Message	Duration / Fetch
85	16:43:34	select count(BTITLE) from Library_Books LIMIT 0, 1000	1 row(s) returned	0.015 sec / 0.000 sec
86	16:45:50	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
87	16:46:00	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
88	16:46:35	select a.REGID,s.NAME,avg(CGPA) from Acad_Performance a,Student s where s.RE... 6 row(s) returned	6 row(s) returned	0.109 sec / 0.000 sec
89	16:46:47	select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH havin... 1 row(s) returned	1 row(s) returned	0.016 sec / 0.000 sec

- 6) Write a query to display the students and the book name issued to him/her in the month of May.



The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the schema **practical6.1** with tables **acme**, **myschema**, **postlab6**, **practical5**, **practical6**, and **tutorial6**.
- SQL Editor:** Contains the following SQL query:
 

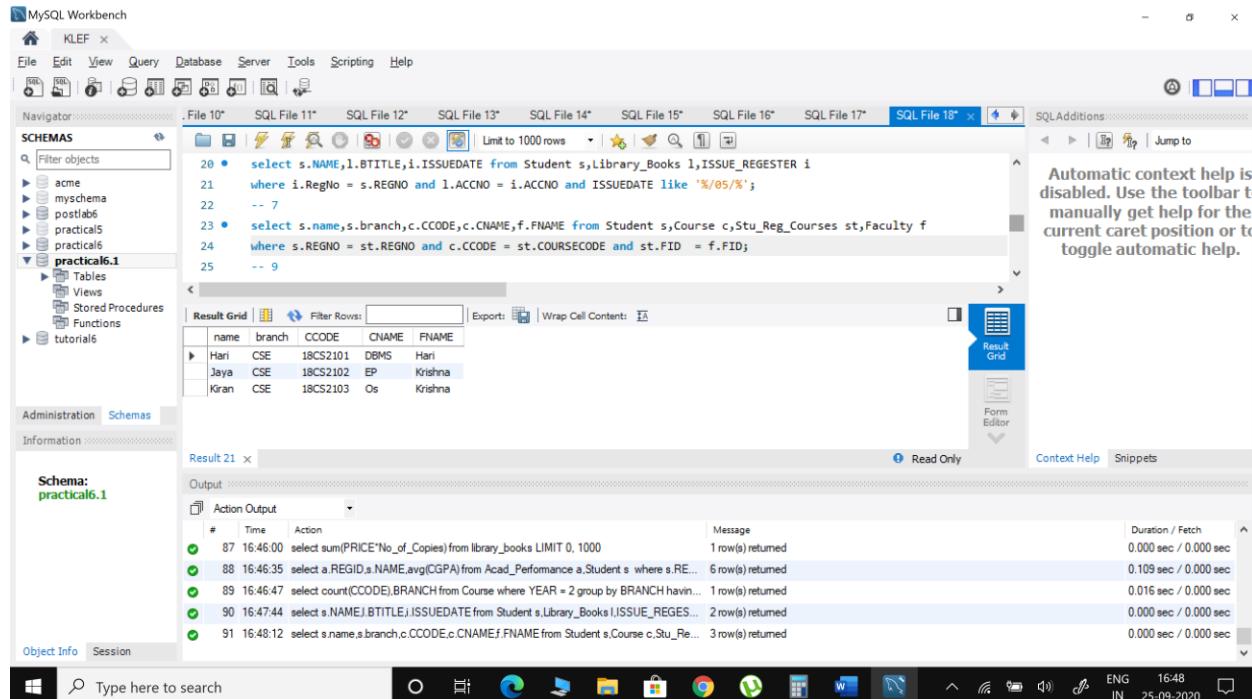
```

17 -- 5
18 • select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH having count(CCODE) >=2;
19 -- 6
20 • select s.NAME,i.BTITLE,i.ISSUEDATE from Student s,Library_Books l,ISSUE_REGESTER i
21 where i.RegNo = s.REGNO and l.ACCNO = i.ACCNO and ISSUEDATE like '%/05/%';
22 -- 7
      
```
- Result Grid:** Displays the results of the query:
 

NAME	BTITLE	ISSUEDATE
Gopal	DBMS	01/05/2020
Kiran	DBMS	09/05/2020
- Action Output:** Shows the execution log with the following entries:
 

#	Time	Action	Message	Duration / Fetch
86	16:45:50	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1row(s) returned	0.000 sec / 0.000 sec
87	16:46:00	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1row(s) returned	0.000 sec / 0.000 sec
88	16:46:35	select a.REGID,a.NAME,avg(CGPA) from Acad_Performance a,Student s where s.RE... 6 row(s) returned		0.109 sec / 0.000 sec
89	16:46:47	select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH havin... 1 row(s) returned		0.016 sec / 0.000 sec
90	16:47:44	select s.NAME,i.BTITLE,i.ISSUEDATE from Student s,Library_Books l,ISSUE_REGES... 2 row(s) returned		0.000 sec / 0.000 sec

- 7) Write an SQL query to display the names of students, their branch, the courses they have registered, and the faculty teaching the course.



The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the schema **practical6.1** with tables **acme**, **myschema**, **postlab6**, **practical5**, **practical6**, and **tutorial6**.
- SQL Editor:** Contains the following SQL query:
 

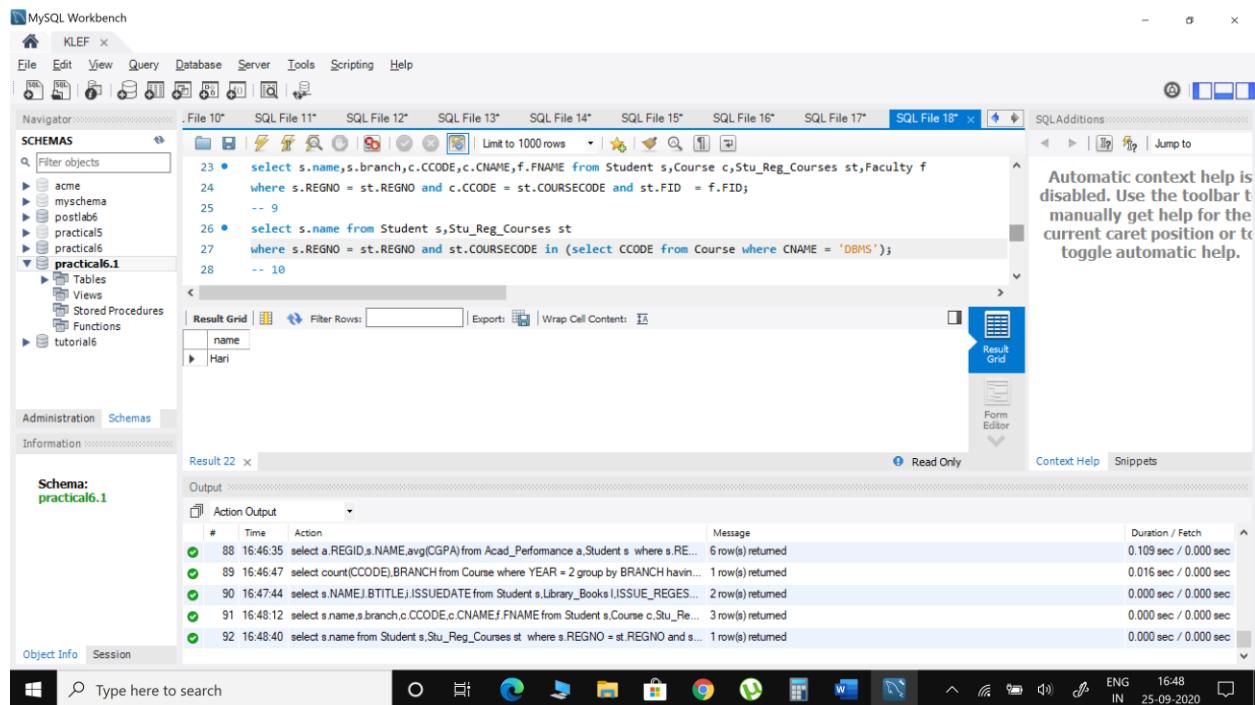
```

20 • select s.NAME,i.BTITLE,i.ISSUEDATE from Student s,Library_Books l,ISSUE_REGESTER i
21 where i.RegNo = s.REGNO and l.ACCNO = i.ACCNO and ISSUEDATE like '%/05/%';
22 -- 7
23 • select s.name,s.branch,c.CCODE,c.CNAME,f.FNAME from Student s,Course c,Stu_Reg_Courses st,Faculty f
24 where s.REGNO = st.REGNO and c.CCODE = st.COURSECODE and st.FID = f.FID;
25 -- 9
      
```
- Result Grid:** Displays the results of the query:
 

name	branch	CCODE	CNAME	FNAME
Hari	CSE	18CS2101	DBMS	Hari
Jaya	CSE	18CS2102	EP	Krishna
Kiran	CSE	18CS2103	Os	Krishna
- Action Output:** Shows the execution log with the following entries:
 

#	Time	Action	Message	Duration / Fetch
87	16:46:00	select sum(PRICE*No_of_Copies) from library_books LIMIT 0, 1000	1row(s) returned	0.000 sec / 0.000 sec
88	16:46:35	select a.REGID,a.NAME,avg(CGPA) from Acad_Performance a,Student s where s.RE... 6 row(s) returned		0.109 sec / 0.000 sec
89	16:46:47	select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH havin... 1 row(s) returned		0.016 sec / 0.000 sec
90	16:47:44	select s.NAME,i.BTITLE,i.ISSUEDATE from Student s,Library_Books l,ISSUE_REGES... 2 row(s) returned		0.000 sec / 0.000 sec
91	16:48:12	select s.name,s.branch,c.CCODE,c.CNAME,f.FNAME from Student s,Course c,Stu_Re... 3 row(s) returned		0.000 sec / 0.000 sec

- 8) Write a query to display the names of students who have joined the hostel using a Nested Query
- 9) Write a query to display the student name who has registered for DBMS Course using Nested Query



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

```

23 •    select s.name,s.branch,c.CCODE,c.CNAME,f.FNAME from Student s,Course c,Stu_Reg_Courses st,Faculty f
24 where s.REGNO = st.REGNO and c.CCODE = st.COURSECODE and st.FID = f.FID;
25 -- 9
26 •    select s.name from Student s,Stu_Reg_Courses st
27 where s.REGNO = st.REGNO and st.COURSECODE in (select CCODE from Course where CNAME = 'DBMS');
28 -- 10

```

The Result Grid shows a single row with the name 'Hari'.

The Output pane displays the Action Output log:

#	Time	Action	Message	Duration / Fetch
88	16:46:35	select a.REGID,a.NAME,avg(CGPA)from Acad_Performance a,Student s where s.RE... 6 row(s) returned		0.109 sec / 0.000 sec
89	16:46:47	select count(CODE),BRANCH from Course where YEAR = 2 group by BRANCH havin... 1 row(s) returned		0.016 sec / 0.000 sec
90	16:47:44	select s.NAME,BTITLE,ISSUEDATE from Student s,Library_Books l,ISSUE_REGES... 2 row(s) returned		0.000 sec / 0.000 sec
91	16:48:12	select s.name,s.branch,c.CCODE,c.CNAME,f.FNAME from Student s,Course c,Stu_Re... 3 row(s) returned		0.000 sec / 0.000 sec
92	16:48:40	select s.name from Student s,Stu_Reg_Courses st where s.REGNO = st.REGNO and s... 1 row(s) returned		0.000 sec / 0.000 sec

- 10) Write a query to display the titles of the three most expensive books available in the Library.

```

25 -- 9
26 • select s.name from Student s,Stu_Reg_Courses st
27 where s.REGNO = st.REGNO and st.COURSECODE in (select CCODE from Course where CNAME = 'DBMS');
28 -- 10
29 • select BTITLE,PRICE from Library_Books order by PRICE desc limit 3;
30 -- 11

```

BTITLE	PRICE
Let Us C	600
JavaCompleteReference	500
DBMS	350

Schema: practical6.1

Action Output

#	Time	Action	Message	Duration / Fetch
89	16:46:47	select count(CCODE),BRANCH from Course where YEAR = 2 group by BRANCH havin...	1 row(s) returned	0.016 sec / 0.000 sec
90	16:47:44	select s.NAME,BTITLE,ISSUEDATE from Student s,Library_Books l,ISSUE_REGES...	2 row(s) returned	0.000 sec / 0.000 sec
91	16:48:12	select s.name,s.branch,c.CCODE,c.CNAME,f.FNAME from Student s,Course c,Stu_Re...	3 row(s) returned	0.000 sec / 0.000 sec
92	16:48:40	select s.name from Student s,Stu_Reg_Courses st where s.REGNO = st.REGNO and s...	1 row(s) returned	0.000 sec / 0.000 sec
93	16:48:58	select BTITLE,PRICE from Library_Books order by PRICE desc limit 3	3 row(s) returned	0.000 sec / 0.000 sec

11) Write a query to create a View named Student\_Details with the following data: Registration No., Name, Mobile No., Branch, Registered Course Name, Faculty Name

```

29 • select BTITLE,PRICE from Library_Books order by PRICE desc limit 3;
30 -- 11
31 • create view Student_Details as select s.REGNO,s.NAME,s.MOBILENO,s.BRANCH,c.CNAME,f.FNAME
32 from Student s left join stu_Reg_Courses st on s.REGNO = st.REGNO
33 left join Course c on st.COURSECODE = c.CCODE left join Faculty f on st.FID = f.FID;
34 • select *from Student_Details;

```

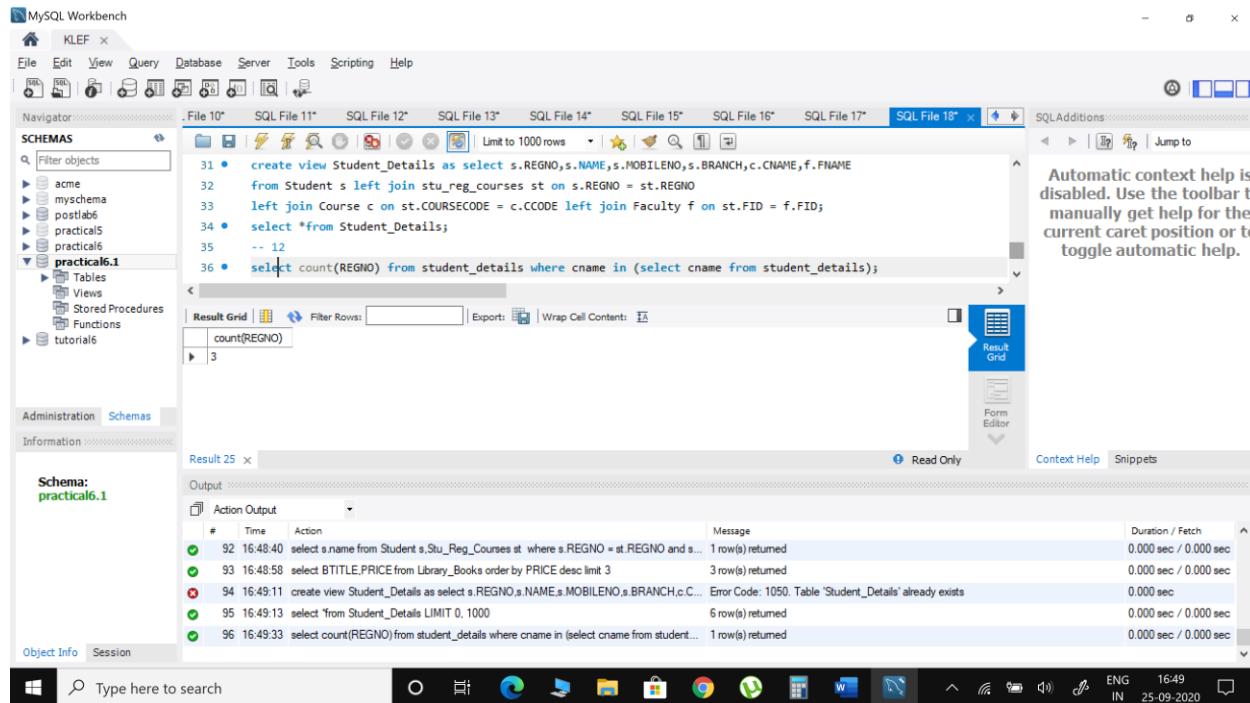
REGNO	NAME	MOBILENO	BRANCH	CNAME	FNAME
1000	Hari	998876655	CSE	DBMS	Hari
1001	Jaya	9876543246	CSE	EP	Krishna
1002	Kiran	7864569878	CSE	Os	Krishna
2000	Gopal	7654328998	ECE	NULL	NULL
2001	Kalyan	8765498755	ECE	NULL	NULL
3000	Suresh	8067543567	EEE	NULL	NULL

Schema: practical6.1

Action Output

#	Time	Action	Message	Duration / Fetch
91	16:48:12	select s.name,s.branch,c.CCODE,c.CNAME,f.FNAME from Student s,Course c,Stu_Re...	3 row(s) returned	0.000 sec / 0.000 sec
92	16:48:40	select s.name from Student s,Stu_Reg_Courses st where s.REGNO = st.REGNO and s...	1 row(s) returned	0.000 sec / 0.000 sec
93	16:48:58	select BTITLE,PRICE from Library_Books order by PRICE desc limit 3	3 row(s) returned	0.000 sec / 0.000 sec
94	16:49:11	create view Student_Details as select s.REGNO,s.NAME,s.MOBILENO,s.BRANCH,c.C...	Error Code: 1050. Table 'Student_Details' already exists	0.000 sec
95	16:49:13	select *from Student_Details LIMIT 0,1000	6 row(s) returned	0.000 sec / 0.000 sec

- 12) Write a query to find the number of students who have registered for at least one using the view named Student\_Details which already has the following columns: Registration No., Name, Mobile No., Branch, Registered Course Name, Faculty Name.



The screenshot shows the MySQL Workbench interface. In the SQL editor tab, the following code is run:

```

31 • create view Student_Details as select s.REGNO,s.NAME,s.MOBILENO,s.BRANCH,c.CNAME,f.FNAME
32   from Student s left join stu_Reg_Courses st on s.REGNO = st.REGNO
33   left join Course c on st.COURSECODE = c.CCODE left join Faculty f on st.FID = f.FID;
34 • select *from Student_Details;
35
36 • select count(REGNO) from student_details where cname in (select cname from student_details);
  
```

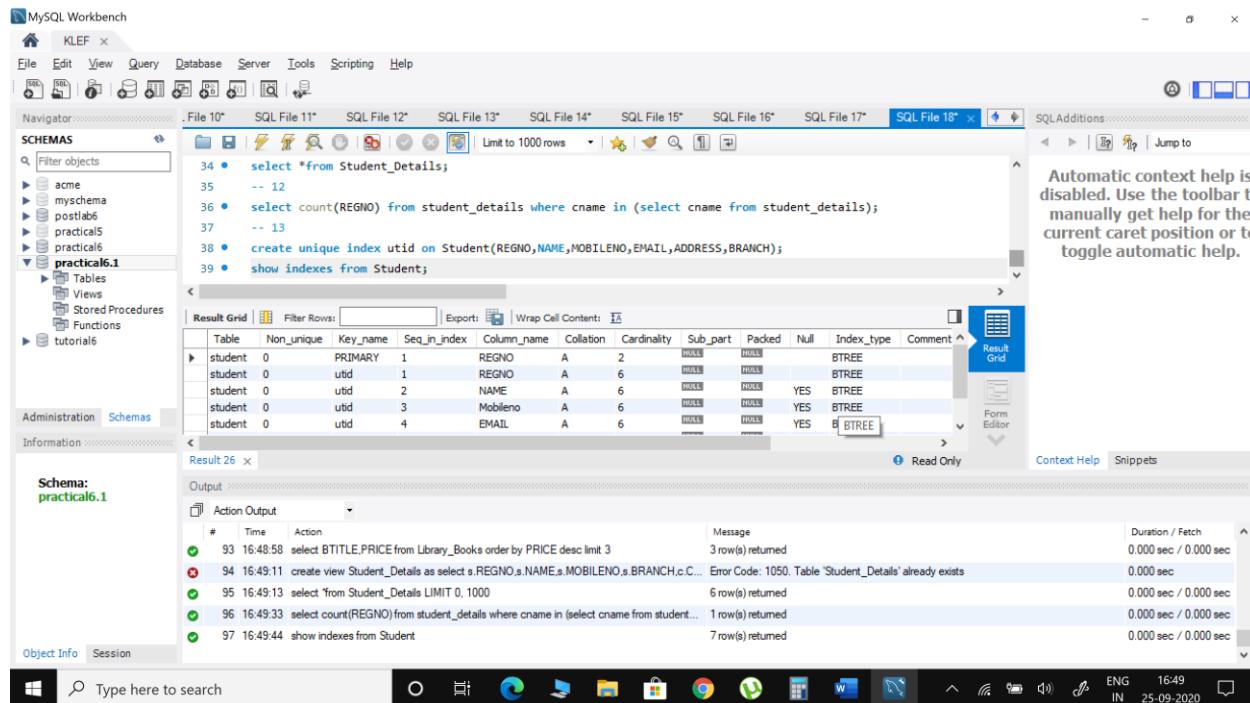
The Result Grid shows the output of the final query:

count(REGNO)
3

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
92	16:48:40	select s.name from Student s,Stu_Reg_Courses st where s.REGNO = st.REGNO and s...	1 row(s) returned	0.000 sec / 0.000 sec
93	16:48:58	select BTITLE,PRICE from Library_Books order by PRICE desc limit 3	3 row(s) returned	0.000 sec / 0.000 sec
94	16:49:11	create view Student_Details as select s.REGNO,s.NAME,s.MOBILENO,s.BRANCH,c.C...	Error Code: 1050. Table 'Student_Details' already exists	0.000 sec
95	16:49:13	select from Student_Details LIMIT 0,1000	6 row(s) returned	0.000 sec / 0.000 sec
96	16:49:33	select count(REGNO) from student_details where cname in (select cname from student...	1 row(s) returned	0.000 sec / 0.000 sec

- 13) Write a query to create a Unique Index value for the Students



The screenshot shows the MySQL Workbench interface. In the SQL editor tab, the following code is run:

```

34 • select *from Student_Details;
35
36 • select count(REGNO) from student_details where cname in (select cname from student_details);
37
38 • create unique index utid on Student(REGNO,NAME,MOBILENO,EMAIL,ADDRESS,BRANCH);
39 • show indexes from Student;
  
```

The Result Grid shows the output of the final query:

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
student	0	PRIMARY	1	REGNO	A	2		HULL		BTREE	
student	0	utid	1	REGNO	A	6		HULL		BTREE	
student	0	utid	2	NAME	A	6		HULL	YES	BTREE	
student	0	utid	3	Mobileno	A	6		HULL	YES	BTREE	
student	0	utid	4	EMAIL	A	6		HULL	YES	B_BTREE	

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
93	16:48:58	select BTITLE,PRICE from Library_Books order by PRICE desc limit 3	3 row(s) returned	0.000 sec / 0.000 sec
94	16:49:11	create view Student_Details as select s.REGNO,s.NAME,s.MOBILENO,s.BRANCH,c.C...	Error Code: 1050. Table 'Student_Details' already exists	0.000 sec
95	16:49:13	select from Student_Details LIMIT 0,1000	6 row(s) returned	0.000 sec / 0.000 sec
96	16:49:33	select count(REGNO) from student_details where cname in (select cname from student...	1 row(s) returned	0.000 sec / 0.000 sec
97	16:49:44	show indexes from Student	7 row(s) returned	0.000 sec / 0.000 sec