

## **Group A: Lab Assignment No. 4**

**Title : Design at least 10 SQL queries for suitable database application using SQL DML statements: all types of Join, Sub-Query and View**

**mysql> show databases;**

```
+-----+  
| Database  
|  
+-----+  
| information_schema |  
| A |  
| Abhi |  
| COMPUTER |  
| H |  
| PVG |  
| RENUKA |  
| mysql |  
| nishant |  
| nishantl |  
| performance_schema |  
| renuka |  
| sys |  
| time |  
+-----+  
14 rows in set (0.21 sec)
```

**mysql> use Abhi;**

Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
Database changed

**mysql> show tables;**

```
+-----+  
| Tables_in_Abhi |  
+-----+  
| Employee |
```

```
| TE |
| auto |
| c_master |
| product_master |
+-----+
5 rows in set (0.00 sec)
```

```
mysql> create table _master(product_no int,description varchar(20),profit_per
float,unit_measure      varchar(10),quantity      int,reorder      int,sell_price
float,cost_price float,primary key(product_no));
```

Query OK, 0 rows affected (0.55 sec)

```
mysql> create table customer(cust_no  int,cust_name  varchar(20),cust_add
varchar(20),phone_no int,primary key(cust_no));
```

Query OK, 0 rows affected (0.28 sec)

```
mysql> create table capital(cap_no  int,cap_name  varchar(20),state_no
int,primary key(cap_no));
```

Query OK, 0 rows affected (0.27 sec)

```
mysql> create table state(state_no  int,state_name  varchar(20),state_code
int,capital varchar(20),primary key(state_no));
```

Query OK, 0 rows affected (0.28 sec)

```
mysql> insert into capital values('01','MH','01');
```

Query OK, 1 row affected (0.12 sec)

```
mysql> insert into capital values('02','RAJ','02');
```

Query OK, 1 row affected (0.04 sec)

```
mysql> insert into capital values('03','GOA','03');
```

Query OK, 1 row affected (0.05 sec)

```
mysql> insert into capital values('04','GUJ','04');
```

Query OK, 1 row affected (0.05 sec)

```
mysql> insert into capital values('05','KAR','05');
```

Query OK, 1 row affected (0.04 sec)

```
mysql> insert into state values('01','MH','01','MUM');
```

Query OK, 1 row affected (0.03 sec)

```
mysql> insert into state values('02','RAJ','02','JAI');
```

Query OK, 1 row affected (0.03 sec)

```
mysql> insert into state values('03','GOA','03','PAN');
```

Query OK, 1 row affected (0.04 sec)

```
mysql> insert into state values('04','GUJ','04','SUR');
```

Query OK, 1 row affected (0.04 sec)

```
mysql> insert into state values('05','KAR','05','BAN');
```

Query OK, 1 row affected (0.03 sec)

```
mysql> select * from capital;
```

cap_no	cap_name	state_no
1	MH	1
2	RAJ	2
3	GOA	3
4	GUJ	4
5	KAR	5

5 rows in set (0.01 sec)

```
mysql> select * from state;
```

state_no	state_name	state_code	capital
1	MH	1	MUM
2	RAJ	2	JAI
3	GOA	3	PAN
4	GUJ	4	SUR
5	KAR	5	BAN

```
+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> select capital.cap_no, state.state_no from capital inner join state on
capital.cap_no=state.state_no;
+-----+-----+
| cap_no | state_no |
+-----+-----+
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
+-----+
5 rows in set (0.06 sec)
```

```
mysql> UPDATE state SET state_no="78" where state_no='1';
```

Query OK, 1 row affected (0.04 sec)  
Rows matched: 1  
Changed: 1  
Warnings: 0

```
mysql> UPDATE state SET state_no="58" where state_no='2';
```

Query OK, 1 row affected (0.04 sec)  
Rows matched: 1  
Changed: 1  
Warnings: 0

```
mysql> UPDATE state SET state_no="46" where state_no='3';
```

Query OK, 1 row affected (0.03 sec)  
Rows matched: 1  
Changed: 1  
Warnings: 0

```
mysql> UPDATE state SET state_no="489" where state_no='4';
```

Query OK, 1 row affected (0.05 sec)  
Rows matched: 1  
Changed: 1  
Warnings: 0

```
mysql> UPDATE state SET state_no="458" where state_no='5';
```

Query OK, 1 row affected (0.03 sec)  
Rows matched: 1  
Changed: 1  
Warnings: 0

**mysql> insert into state values('05','MP','05','BHO');**

Query OK, 1 row affected (0.03 sec)

**mysql> select capital.cap\_no, state.state\_no from capital inner join state on capital.cap\_no=state.state\_no;**

cap_no	state_no
5	5

1 row in set (0.00 sec)

**mysql> select capital.cap\_no, state.state\_no from capital left join state on capital.cap\_no=state.state\_no;**

cap_no	state_no
1	NULL
2	NULL
3	NULL
4	NULL
5	5

5 rows in set (0.00 sec)

**mysql> select capital.cap\_no, state.state\_no from capital left join state on capital.cap\_no=state.state\_name;**

cap_no	state_no
1	NULL
2	NULL
3	NULL
4	NULL
5	NULL

5 rows in set, 20 warnings (0.00 sec)

```
mysql> select capital.cap_no, state.state_no from capital right join state on capital.cap_no=state.state_no;
```

cap_no	state_no
5	
5	NULL
	46
	NULL
	58
	NULL
	78
	NULL
	458
	NULL
	489

6 rows in set (0.00 sec)

```
mysql> select * from capital;
```

cap_no	cap_name	state_no
1	MH	1
2	RAJ	2
3	GOA	3
4	GUJ	4
5	KAR	5

5 rows in set (0.00 sec)

```
mysql> select * from state;
```

state_no	state_name	state_code	capital
5	MP	5	BHO
46	GOA	3	PAN
58	RAJ	2	JAI
78	MH	1	MUM
458	KAR	5	BAN
489	GUJ	4	SUR

6 rows in set (0.00 sec)

```
mysql> select * from capital;
```

cap_no	cap_name	state_no
1	MH	1
2	RAJ	2
3	GOA	3

```
| 4 | GUJ | 4 |
| 5 | KAR | 5 |
+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select capital.cap_no, state.state_no from capital inner join state on capital.cap_no=state.state_no;
```

```
+-----+-----+
```

```
| cap_no | state_no |
```

```
+-----+-----+
```

```
|
```

```
5 |
```

```
5 |
```

```
+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> select capital.cap_no,capital.cap_name,state.capital,state.state_no from capital inner join state on capital.cap_no=state.state_no;
```

```
+-----+-----+-----+-----+
```

```
| cap_no | cap_name | capital | state_no |
```

```
+-----+-----+-----+-----+
```

```
|
```

```
5 | KAR
```

```
| BHO
```

```
|
```

```
5 |
```

```
+-----+-----+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> select capital.cap_no,capital.cap_name,state.capital,state.state_no from capital left join state on capital.cap_no=state.state_no;
```

```
+-----+-----+-----+-----+
```

```
| cap_no | cap_name | capital | state_no |
```

```
+-----+-----+-----+-----+
```

```
| 1 | MH | NULL | NULL |
```

```
| 2 | RAJ | NULL | NULL |
```

```
| 3 | GOA | NULL | NULL |
```

```
| 4 | GUJ | NULL | NULL |
```

```
| 5 | KAR | BHO | 5 |
```

```
+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select capital.cap_no,capital.cap_name,state.capital,state.state_no from capital right join state on capital.cap_no=state.state_no;
```

```
+-----+-----+-----+-----+
```

```
| cap_no | cap_name | capital | state_no |
```

```
+-----+-----+-----+-----+
```

```
|
```

```
5 | KAR  
| BHO | 5 | | |
| NULL | NULL | PAN | 46 |  
| NULL | NULL | JAI | 58 |  
| NULL | NULL | MUM | 78 |  
| NULL | NULL | BAN | 458 |  
| NULL | NULL | SUR | 489 |  
+-----+-----+-----+
```

6 rows in set (0.00 sec)

```
mysql> select capital.cap_no,capital.cap_name,state.capital,state.state_no from capital left join state on capital.cap_no=state.state_no union select capital.cap_no,capital.cap_name,state.capital,state.state_no from capital right join state on capital.cap_no=state.state_no;
```

```
+-----+-----+-----+  
| cap_no | cap_name | capital | state_no |  
+-----+-----+-----+  
| 1 | MH | NULL | NULL |  
| 2 | RAJ | NULL | NULL |  
| 3 | GOA | NULL | NULL |  
| 4 | GUJ | NULL | NULL |  
| 5 | KAR | BHO | 5 |  
| NULL | NULL | PAN | 46 |  
| NULL | NULL | JAI | 58 |  
| NULL | NULL | MUM | 78 |  
| NULL | NULL | BAN | 458 |  
| NULL | NULL | SUR | 489 |  
+-----+-----+-----+
```

10 rows in set (0.00 sec)

```
mysql> select * from capital c1, state s1 where c1.cap_no=s1.state_no;
```

```
+-----+-----+-----+-----+  
+-----+-----+  
| cap_no | cap_name | state_no | state_no | state_name |  
state_code | capital |  
+-----+-----+-----+-----+  
+-----+-----+  
|  
5 | KAR  
5 | BHO  
|  
|  
5 |  
5 | MP
```

```
|  
+-----+-----+-----+-----+  
+-----+-----+  
1 row in set (0.00 sec)
```

```
mysql> select * from capital c1, state s1 where c1.cap_no!=s1.state_no;
```

cap_no	cap_name	state_no	state_no	state_name
state_code	capital			
1	MH			
5	BHO			
	1   5   MP			
2	RAJ			
5	BHO			
	2   5   MP			
3	GOA			
5	BHO			
	3   5   MP			
4	GUJ			
5	BHO			
	4   5   MP			
1	MH			
3	PAN			
	1   46   GOA			
2	RAJ			
3	PAN			
	2   46   GOA			
3	GOA			
3	PAN			
	3   46   GOA			
4	GUJ			
3	PAN			
	4   46   GOA			

5 | KAR  
3 | PAN  
|| 5 | 46 | GOA |

|  
1 | MH  
2 | JAI  
|| 1 | 58 | RAJ |

|  
2 | RAJ  
2 | JAI  
|| 2 | 58 | RAJ |

|  
3 | GOA  
2 | JAI  
|| 3 | 58 | RAJ |

|  
4 | GUJ  
2 | JAI  
|| 4 | 58 | RAJ |

|  
5 | KAR  
2 | JAI  
|| 5 | 58 | RAJ |

|  
1 | MH  
1 | MUM  
|| 1 | 78 | MH |

|  
2 | RAJ  
1 | MUM  
|| 2 | 78 | MH ||

3 | GOA  
1 | MUM  
|| 3 | 78 | MH |

|  
4 | GUJ  
1 | MUM  
|| 4 | 78 | MH |

|  
5 | KAR  
1 | MUM  
|| 5 | 78 | MH |

|  
1 | MH  
5 | BAN

```

|| 1 | 458 | KAR |
|
2 | RAJ
5 | BAN
|| 2 | 458 | KAR |
|
3 | GOA
5 | BAN
|| 3 | 458 | KAR |
|
4 | GUJ
5 | BAN
|| 4 | 458 | KAR |
|
5 | KAR
5 | BAN
|| 5 | 458 | KAR |
|
1 | MH
4 | SUR
|| 1 | 489 | GUJ |
|
2 | RAJ
4 | SUR
|| 2 | 489 | GUJ |
|
3 | GOA
4 | SUR
|| 3 | 489 | GUJ |
|
4 | GUJ
4 | SUR
|| 4 | 489 | GUJ |
|
5 | KAR
4 | SUR
|| 5 | 489 | GUJ |
+-----+-----+-----+-----+
+-----+-----+
29 rows in set (0.00 sec)

```

```

mysql> select * from state where state_no=(select state_no from state where
state_name='MH');
+-----+-----+-----+-----+
| state_no | state_name | state_code | capital |

```

```
+-----+-----+-----+
| |
78 | MH
|
1 | MUM
|
+-----+-----+-----+
1 row in set (0.06 sec)
```

**mysql> select \* from state where state\_no=(select state\_no from state where state\_name='GUJ');**

```
+-----+-----+-----+
| state_no | state_name | state_code | capital |
+-----+-----+-----+
| |
489 | GUJ
|
4 | SUR
|
+-----+-----+-----+
1 row in set (0.00 sec)
```

**mysql> select \* from state where state\_no=(select capital.state\_no from capital where cap\_name='MH');**

Empty set (0.00 sec)

**mysql> select \* from state where state\_no=(select capital.state\_no from capital where cap\_name='GUJ');**

Empty set (0.00 sec)

**mysql> select \* from state where state\_no=(select capital.state\_no from capital where cap\_name='RAJ');**

Empty set (0.00 sec)

**mysql> select \* from state where state\_no=(select capital.state\_no from capital where cap\_name='KAR');**

```
+-----+-----+-----+
| state_no | state_name | state_code | capital |
+-----+-----+-----+
| |
5 | MP
|
```

5 | BHO

|

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

1 row in set (0.00 sec)