

```
# Experiment No. 4
# SQL DML queries: Use of SQL DML queries to retrieve, insert, delete and
update the database.
```

```
show databases;
use RMS_2;
select database();
desc Ticket;
```

```
# Inserting Records
```

```
insert into Ticket
values(308123905,596,'20:04:15','20:07:19',21673,420,70,'CNF');
insert into Ticket
values(1265577771,136,'12:47:10','12:50:10',22154,376,15,'CNF');
insert into Ticket
values(1975364587,245,'07:40:15','07:45:58',19134,298,63,'CNF');
insert into Ticket
values(2110755678,169,'16:20:38','16:24:34',27139,380,37,'CNF');
insert into Ticket
values(2120017791,101,'04:35:10','04:40:10',12139,289,12,'CNF');
select* from Ticket;
```

```
insert into Passenger values(201,'John',21,'Male',596,308123905);
insert into Passenger values(217,'Mark',24,'Male',136,1265577771);
insert into Passenger values(239,'Alice',29,'Female',245,1975364587);
insert into Passenger values(340,'Jenny',32,'Female',169,2110755678);
insert into Passenger values(367,'Tony',24,'Male',101,2120017791);
select * from Passenger;
```

```
insert into Train values(11071, 'Kamyani Express','Superfast', 'Sleeper',
233, 'S2');
insert into Train values(12178, 'Gitanjali Express','Superfast', 'Sleeper',
193, 'S7');
insert into Train values(12124, 'Rajdhani Express','Express', 'AC', 233,
'A1');
insert into Train values(21353, 'Pungab Mail','Superfast', 'AC', 193,
'A2');
insert into Train values(12139, 'Sewagram Express','Express', 'Sleeper',
255, 'S5');
select * from train;
```

```
# Retrieval
```

```
select P_ID,P_name from Passenger where
Gender='Male';
```

```
select P_ID,P_name from Passenger where  
Gender='Female';
```

```
select P_ID,P_name from Passenger where Age between 25 and 35;  
select P_ID,P_name, Age from Passenger where Age < 24 and Gender='Male';  
select * from Passenger;
```

use of distinct clause

```
select Age from Passenger;  
select distinct Age from Passenger;  
select P_name, Age from Passenger;  
select distinct P_name, Age from Passenger;
```

use of order by clause

```
select * from Passenger;  
select * from Passenger order by Age;  
select * from Passenger order by Age asc;  
select * from Passenger order by Age desc;  
select * from Passenger order by Age asc, P_ID desc;
```

use of between operator

```
select * from Passenger  
where Age between 25 and 35;
```

use of like operator

```
select * from Passenger where Gender like 'M%';  
select * from Passenger where Gender like 'F%';
```

use of IN operator

```
select * from ticket;  
select * from ticket  
where Trainno in(21673,12139, 19134);
```

use of is null

```
select * from ticket  
where Ticket_ID is null;  
select * from ticket  
where Ticket_ID is not null;
```

Update

```
update Passenger set P_name='Barry' where P_ID=201;  
update Passenger set P_name='Natasha' where P_ID=340;  
select * from Passenger;
```

```
# Deletion
insert into Ticket
values(2146865786,199,'11:20:38','11:24:34',29123,478,65,'CNF');
select * from Ticket;
insert into Passenger values(822,'Pepper',28,'Female',543,2146865786);
select* from Passenger;
delete from Passenger where P_ID=822; select * from Passenger;
```

```
#-----
-----
```

#Output:

Enter password: ****

Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL connection id is 30

Server version: 8.0.27 MySQL Community Server - GPL Copyright (c) 2000, 2021, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;

```
+-----+
| Database          |
+-----+
| b1_db1            |
| b2_db1            |
| information_schema|
| mysql             |
| performance_schema|
| rms_2             |
| sys               |
+-----+
```

7 rows in set (0.0056 sec)

mysql> use RMS_2; Database changed mysql> select database();

```
+      + | database() |
+      + | rms_2    |
```

+ + 1 row in

set (0.00 sec) mysql> desc Ticket;

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

Field	Type	Null	Key	Default	Extra
PNR	int	NO	PRI	NULL	
Ticket_ID	int	YES		NULL	
Arvertime	time	YES		NULL	
Deptime	time	YES		NULL	
Trainno	int	YES		NULL	
Tktamt	int	YES		NULL	
Seat_no	int	YES		NULL	
Reserve_status	char(10)	YES		NULL	

mysql> insert into Ticket

-> values(308123905,596,'20:04:15','20:07:19',21673,420,70,'CNF');

Query OK, 1 row affected (0.01 sec) mysql> insert into Ticket

-> values(1265577771,136,'12:47:10','12:50:10',22154,376,15,'CNF');

Query OK, 1 row affected (0.01 sec) mysql> insert into Ticket

-> values(1975364587,245,'07:40:15','07:45:58',19134,298,63,'CNF');

Query OK, 1 row affected (0.01 sec) mysql> insert into Ticket

-> values(2110755678,169,'16:20:38','16:24:34',27139,380,37,'CNF');

Query OK, 1 row affected (0.03 sec) mysql> insert into Ticket

-> values(2120017791,101,'04:35:10','04:40:10',12139,289,12,'CNF');

Query OK, 1 row affected (0.01 sec)

mysql> select * from Ticket;

PNR	Ticket_ID	Arvertime	Deptime	Trainno	Tktamt	Seat_no	Reserve_status
308123905	596	20:04:15	20:07:19	21673	420	70	CNF
1265577771	136	12:47:10	12:50:10	22154	376	15	CNF
1975364587	245	07:40:15	07:45:58	19134	298	63	CNF
2110755678	169	16:20:38	16:24:34	27139	380	37	CNF
2120017791	101	04:35:10	04:40:10	12139	289	12	CNF

5 rows in set (0.0037 sec)

```
mysql> insert into Passenger values(201,'John',21,'Male',596,308123905);
Query OK, 1 row affected (0.01 sec)
mysql> insert into Passenger values(217,'Mark',24,'Male',136,1265577771);
Query OK, 1 row affected (0.01 sec)
mysql> insert into Passenger
values(239,'Alice',29,'Female',245,1975364587);
Query OK, 1 row affected (0.01 sec) mysql> ^C
mysql> insert into Passenger
values(340,'Jenny',32,'Female',169,2110755678); Query OK, 1 row affected
(0.03 sec)
mysql> insert into Passenger values(367,'Tony',24,'Male',101,2120017791);
Query OK, 1 row affected (0.01 sec)
mysql> select * from Passenger;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
367	Tony	24	Male	101	2120017791

5 rows in set (0.0032 sec)

```
mysql> insert into Train values(11071, 'Kamyani Express','Superfast',
'Sleeper', 233, 'S2'); Query OK, 1 row affected (0.01 sec)
mysql> insert into Train values(12178, 'Gitanjali Express','Superfast',
'Sleeper', 193, 'S7'); Query OK, 1 row affected (0.03 sec)

mysql> insert into Train values(12124, 'Rajdhani Express','Express', 'AC',
233, 'A1'); Query OK, 1 row affected (0.01 sec)
mysql> insert into Train values(21353, 'Pungab Mail','Superfast', 'AC',
193, 'A2'); Query OK, 1 row affected (0.01 sec)
mysql> insert into Train values(12139, 'Sewagram Express','Express',
'Sleeper', 255, 'S5'); Query OK, 1 row affected (0.01 sec)
mysql> select * from train;
```

Trainno	Tname	Type	Class	Status_ID	Coach_ID
---------	-------	------	-------	-----------	----------

```

+-----+-----+-----+-----+-----+-----+
+
| 11071 | Kamyani Express | Superfast | Sleeper | 233 | S2
|
| 12124 | Rajdhani Express | Express | AC | 233 | A1
|
| 12139 | Sewagram Express | Express | Sleeper | 255 | S5
|
| 12178 | Gitanjali Express | Superfast | Sleeper | 193 | S7
|
| 21353 | Pungab Mail | Superfast | AC | 193 | A2
|
+-----+-----+-----+-----+-----+-----+
+
5 rows in set (0.0031 sec)

```

```
mysql> select P_ID,P_name from Passenger
where Gender='Male';
```

```

+-----+-----+
| P_ID | P_name |
+-----+-----+
| 201 | John |
| 217 | Mark |
| 367 | Tony |
+-----+-----+
3 rows in set (0.0025 sec)

```

```
mysql> select P_ID,P_name from Passenger where Gender='Female';
```

```

+-----+-----+
| P_ID | P_name |
+-----+-----+
| 239 | Alice |
| 340 | Jenny |
+-----+-----+
2 rows in set (0.0021 sec)

```

```
mysql> select P_ID,P_name from Passenger where Age between 25 and 35;
```

```

+-----+-----+
| P_ID | P_name |
+-----+-----+
| 239 | Alice |
| 340 | Jenny |
+-----+-----+

```

2 rows in set (0.0019 sec)

```
mysql> select P_ID,P_name, Age from Passenger where Age < 24 and Gender='Male';
```

P_ID	P_name	Age
201	John	21

1 row in set (0.0036 sec)

```
mysql> select * from Passenger;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
367	Tony	24	Male	101	2120017791

5 rows in set (0.0018 sec)

```
mysql> select Age from Passenger;
```

Age
21
24
29
32
24

5 rows in set (0.0017 sec)

```
mysql> select distinct Age from Passenger;
```

age
21

24
29
32

+-----+

4 rows in set (0.0034 sec)

```
mysql> select P_name, Age from Passenger;
```

P_name	Age
--------	-----

+-----+

John	21
Mark	24
Alice	29
Jenny	32
Tony	24

+-----+

5 rows in set (0.0032 sec)

```
mysql> select distinct P_name, Age from Passenger;
```

P_name	Age
--------	-----

+-----+

John	21
Mark	24
Alice	29
Jenny	32
Tony	24

+-----+

5 rows in set (0.0026 sec)

```
mysql> select * from Passenger;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
------	--------	-----	--------	-----------	-----

+-----+

201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
367	Tony	24	Male	101	2120017791

+-----+

5 rows in set (0.0021 sec)

```
mysql> select * from
```


Passenger order by Age;

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678

5 rows in set (0.0028 sec)

```
mysql> select * from
Passenger order by Age asc;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678

5 rows in set (0.0023 sec)

```
mysql> select * from
Passenger order by Age desc;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
340	Jenny	32	Female	169	2110755678
239	Alice	29	Female	245	1975364587
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791
201	John	21	Male	596	308123905

5 rows in set (0.0023 sec)

```
mysql> select * from Passenger order by Age asc, P_ID desc;
```

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

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678

5 rows in set (0.0021 sec)

```
mysql> select * from Passenger where Age between 25 and 35;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678

2 rows in set (0.0022 sec)

```
mysql> select * from Passenger where Gender like 'M%';
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791

3 rows in set (0.0030 sec)

```
mysql> select * from Passenger where Gender like 'F%';
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678

2 rows in set (0.0021 sec)

```
mysql> select * from ticket;
```

PNR	Ticket_ID	Arvertime	Deptime	Trainno	Tktamt	Seat_no
-----	-----------	-----------	---------	---------	--------	---------

PNR	Ticket_ID	Arrrtime	Deptime	Trainno	Tktamt	Seat_no	Reserve_status
308123905		596	20:04:15	20:07:19	21673	420	70
CNF							
1265577771		136	12:47:10	12:50:10	22154	376	15
CNF							
1975364587		245	07:40:15	07:45:58	19134	298	63
CNF							
2110755678		169	16:20:38	16:24:34	27139	380	37
CNF							
2120017791		101	04:35:10	04:40:10	12139	289	12
CNF							

5 rows in set (0.0032 sec)

```
mysql> select * from ticket where Trainno in(21673,12139, 19134);
```

PNR	Ticket_ID	Arrrtime	Deptime	Trainno	Tktamt	Seat_no	Reserve_status
308123905		596	20:04:15	20:07:19	21673	420	70
CNF							
1975364587		245	07:40:15	07:45:58	19134	298	63
CNF							
2120017791		101	04:35:10	04:40:10	12139	289	12
CNF							

3 rows in set (0.0021 sec)

```
mysql> select * from ticket where Ticket_ID is null;
Empty set
(0.00 sec)
```

```
mysql> select * from ticket where Ticket_ID is not null;
```

PNR	Ticket_ID	Arrrtime	Deptime	Trainno	Tktamt	Seat_no	Reserve_status
-----	-----------	----------	---------	---------	--------	---------	----------------

308123905	596	20:04:15	20:07:19	21673	420	70
CNF						
1265577771	136	12:47:10	12:50:10	22154	376	15
CNF						
1975364587	245	07:40:15	07:45:58	19134	298	63
CNF						
2110755678	169	16:20:38	16:24:34	27139	380	37
CNF						
2120017791	101	04:35:10	04:40:10	12139	289	12
CNF						

5 rows in set (0.0028 sec)

mysql> update Passenger set P_name='Barry' where P_ID=201;

Query OK, 1 row affected (0.01 sec) Rows matched: 1 Changed: 1 Warnings: 0

mysql> update Passenger set P_name='Natasha' where P_ID=340;

Query OK, 1 row affected

(0.03 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from Passenger;

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
367	Tony	24	Male	101	2120017791

5 rows in set (0.0027 sec)

mysql> insert into Ticket

-> values(2146865786,199,'11:20:38','11:24:34',29123,478,65,'CNF');

Query OK, 1 row affected

(0.01 sec)

mysql> select * from Ticket;

PNR	Ticket_ID	Arvertime	Deptime	Trainno	Tktamt	Seat_no
308123905	596	20:04:15	20:07:19	21673	420	70
CNF						
1265577771	136	12:47:10	12:50:10	22154	376	15
CNF						
1975364587	245	07:40:15	07:45:58	19134	298	63
CNF						
2110755678	169	16:20:38	16:24:34	27139	380	37
CNF						
2120017791	101	04:35:10	04:40:10	12139	289	12
CNF						

5 rows in set (0.0020 sec)

```
mysql> insert into Passenger
values(822,'Pepper',28,'Female',543,2146865786);
Query OK, 1 row affected
(0.03 sec)
```

```
mysql> select * from Passenger;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
367	Tony	24	Male	101	2120017791

5 rows in set (0.0019 sec)

```
mysql> delete from Passenger where P_ID=822; Query OK, 1 row affected
(0.03 sec)
```

```
mysql> select * from Passenger;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587

	340		Jenny		32		Female		169		2110755678	
	367		Tony		24		Male		101		2120017791	
+-----+-----+-----+-----+-----+-----+												

5 rows in set (0.0019 sec)