Creation of databases:
mysql> show databases;
+--------------------+
| Database |
+--------------------+
| information_schema |
| mysql |
| test |
+--------------------+
3 rows in set (0.09 sec)
mysql> create database groupa;
Query OK, 1 row affected (0.01 sec)
mysql> use groupa;
Database changed

Creation of tables:
mysql> create table groupamem(rollno numeric(10),name varchar(15),phone numeric(
10),branch varchar(10));
Query OK, 0 rows affected (0.42 sec)

mysql> desc groupamem;
+--------+---------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+--------+---------------+------+-----+---------+-------+
rollno	decimal(10,0)	YES		NULL	
name	varchar(15)	YES		NULL	
phone	decimal(10,0)	YES		NULL	
branch	varchar(10)	YES		NULL	
+--------+---------------+------+-----+---------+-------+
4 rows in set (0.03 sec)

Altering the table:
mysql> alter table groupamem add gender char(3);
Query OK, 0 rows affected (0.36 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc groupamem;
+--------+---------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+--------+---------------+------+-----+---------+-------+
rollno	decimal(10,0)	YES		NULL	
name	varchar(15)	YES		NULL	
phone	decimal(10,0)	YES		NULL	
branch	varchar(10)	YES		NULL	
gender	char(3)	YES		NULL	
+--------+---------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
Dropping the table:

```
mysql> create table dd(name varchar(10));
Query OK, 0 rows affected (0.09 sec)

mysql> show tables;
+------------------+
| Tables_in_groupa |
+------------------+
| dd               |
| groupamem        |
+------------------+
2 rows in set (0.00 sec)

mysql> drop table dd;
Query OK, 0 rows affected (0.06 sec)
```

Dropping the database:

```
mysql> create database dbl;
Query OK, 1 row affected (0.01 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| dbl                |
| groupa             |
| mysql              |
| test               |
+--------------------+
6 rows in set (0.01 sec)

mysql> drop database dbl;
Query OK, 0 rows affected (0.00 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| groupa             |
| mysql              |
| test               |
+--------------------+
5 rows in set (0.00 sec)
```

Rename the tables:

```
mysql> rename table groupamem to ga;
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> show tables;
+------------------+
| Tables_in_groupa |
+------------------+
| ga               |
+------------------+
1 row in set (0.00 sec)
```

Truncate the table:

```
mysql> insert into ga values(1111,'ram',9885321456,'mbbs','m');
Query OK, 1 row affected (0.06 sec)
```

```
mysql> select * from ga;
+--------+------+------------+--------+--------+
| rollno | name | phone      | branch | gender |
+--------+------+------------+--------+--------+
|   1111 | ram  | 9885321456 | mbbs   | m      |
+--------+------+------------+--------+--------+
1 row in set (0.01 sec)
```

```
mysql> truncate table ga;
Query OK, 1 row affected (0.09 sec)
mysql> select * from ga;
Empty set (0.00 sec)
```

Creation of tables for Roadway Travels:

<u>Bus</u>
```
mysql> create table bus555(busno varchar(10),bustype varchar(10),primary key(bus
no));
Query OK, 0 rows affected (0.17 sec)
```

<u>Ticket</u>
```
mysql> create table ticket555(tic_no numeric(10),joudate date,source varchar(10)
,dest varchar(10),deptime time,reatime time,busnumber varchar(10),primary key(ti
c_no));
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> alter table ticket555 add constraint tic_fk foreign key(busnumber) refere
nces bus555(busno);
Query OK, 0 rows affected (0.16 sec)
Records: 0  Duplicates: 0  Warnings: 0
```
<u>Passenger</u>

```
mysql> create table passenger(pnrno numeric(10),ticnumber numeric(10),pname varc
har(15),age int(4),sex char(10),ppno varchar(15),primary key(pnrno));
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> alter table passenger add constraint pas_fk foreign key(ticnumber) refere
nces ticket555(tic_no);
```

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Query OK, 0 rows affected (0.14 sec)
Records: 0 Duplicates: 0 Warnings: 0

Reserve

mysql> create table reserve(pnrnumber numeric(10),noofseats int(8),address varch ar(50),phno numeric(10),status char(3));
Query OK, 0 rows affected (0.16 sec)

mysql> alter table reserve add constraint res_fk foreign key(pnrnumber) referenc es passenger(pnrno);
Query OK, 0 rows affected (0.17 sec)
Records: 0 Duplicates: 0 Warnings: 0

Cancel

mysql> create table cancel(pnrnumber numeric(10),noofseats int(8),address varcha r(50),phno numeric(10),status char(3));
Query OK, 0 rows affected (0.06 sec)

mysql> alter table cancel add constraint can_fk foreign key(pnrnumber) reference s passenger(pnrno);
Query OK, 0 rows affected (0.14 sec)
Records: 0 Duplicates: 0 Warnings: 0

Week 6:

Practicing DML commands:
DML commands are used to for managing data within the schema objects.

Use of insert command:

Inserting values into *Bus* table:
mysql> insert into bus555 values('ap555','ac');
Query OK, 1 row affected (0.03 sec)
mysql> insert into bus555 values('ap501','ac');
Query OK, 1 row affected (0.03 sec)
mysql> insert into bus555 values('ap444','nonac');
Query OK, 1 row affected (0.03 sec)
mysql> insert into bus555 values('ap891','nonac');
Query OK, 1 row affected (0.03 sec)
mysql> insert into bus555 values('ap8830','metro');
Query OK, 1 row affected (0.03 sec)

Inserting values into *Ticket* table:

mysql> insert into ticket555 values(1111,'2010-08-05','srpt','hyd','09:00:05','1
9:15:00','ap555');
Query OK, 1 row affected (0.03 sec)
mysql> insert into ticket555 values(2222,'2010-08-05','srpt','hyd','10:00:05','2
0:15:00','ap501');
Query OK, 1 row affected (0.03 sec)
mysql> insert into ticket555 values(3333,'2010-08-15','hyd','srpt','09:00:05','2
0:15:00','ap444');
Query OK, 1 row affected (0.03 sec)
mysql> insert into ticket555 values(4444,'2010-08-18','hyd','srpt','09:30:05','2
0:15:00','ap891');
Query OK, 1 row affected (0.03 sec)
mysql> insert into ticket555 values(5555,'2010-08-8','hyd','vij','09:10:05','22:
15:00','ap8830');
Query OK, 1 row affected (0.03 sec)

Inserting values into *Passenger* table:

mysql> insert into passenger values(1001,1111,'subbu',31,'m','pp555');
Query OK, 1 row affected (0.05 sec)
mysql> insert into passenger values(1002,2222,'achaith',22,'m','pp8830');
Query OK, 1 row affected (0.03 sec)
mysql> insert into passenger values(1003,3333,'padma',25,'f','pp333');
Query OK, 1 row affected (0.05 sec)
mysql> insert into passenger values(1004,4444,'ravi',23,'m','pp444');
Query OK, 1 row affected (0.01 sec)

mysql> insert into passenger values(1005,5555,'nirma',42,'f','pp666');
Query OK, 1 row affected (0.03 sec)

Inserting values into *reserve* table:

mysql> insert into reserve values(1001,10,'hno:5-4,srpt,nlg',9492506282,'yes');
Query OK, 1 row affected (0.05 sec)
mysql> insert into reserve values(1001,5,'hno:5-4,srpt,nlg',9492506282,'yes');
Query OK, 1 row affected (0.03 sec)

mysql> insert into reserve values(1002,5,'hno:15-4,lbngr,hyd',9491653714,'yes');
Query OK, 1 row affected (0.01 sec)
mysql> insert into reserve values(1003,6,'hno:151-4,dsnr,hyd',9704613151,'yes');
Query OK, 1 row affected (0.03 sec)
mysql> insert into reserve values(1004,8,'hno:11-4,dsnr,hyd',9704613111,'yes');
Query OK, 1 row affected (0.02 sec)
mysql> insert into reserve values(1005,8,'hno:41-4,dsnr,hyd',9989503111,'no');
Query OK, 1 row affected (0.03 sec)
mysql> insert into reserve values(1005,5,'hno:41-4,dsnr,hyd',9989503111,'yes');
Query OK, 1 row affected (0.02 sec)

Inserting values into *cancel* table:

mysql> insert into cancel values(1001,5,'hno:5-4,srpt,nlg',9492506282,'yes');
Query OK, 1 row affected (0.05 sec)
mysql> insert into cancel values(1001,2,'hno:5-4,srpt,nlg',9492506282,'yes');
Query OK, 1 row affected (0.03 sec)
mysql> insert into cancel values(1002,2,'hno:15-4,lbngr,hyd',9491653714,'no');
Query OK, 1 row affected (0.05 sec)
mysql> insert into cancel values(1003,2,'hno:151-4,dsnr,hyd',9704613151,'yes');
Query OK, 1 row affected (0.01 sec)
mysql> insert into cancel values(1004,5,'hno:11-4,dsnr,hyd',9704613111,'yes');
Query OK, 1 row affected (0.03 sec)
mysql> insert into cancel values(1005,4,'hno:41-4,dsnr,hyd',9989503111,'yes');
Query OK, 1 row affected (0.03 sec)

Use of select command:

mysql> select *from bus555;

```
+--------+---------+
| busno  | bustype |
+--------+---------+
| ap444  | nonac   |
| ap501  | ac      |
| ap555  | ac      |
| ap8830 | metro   |
| ap891  | nonac   |
+--------+---------+
5 rows in set (0.00 sec)
```

mysql> select *from ticket555;

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

```
| tic_no | joudate    | source | dest | deptime  | reatime  | busnumber |
+--------+------------+--------+------+----------+----------+-----------+
|  1111  | 2010-08-05 | srpt   | hyd  | 09:00:05 | 19:15:00 | ap555     |
|  2222  | 2010-08-05 | srpt   | hyd  | 10:00:05 | 20:15:00 | ap501     |
|  3333  | 2010-08-15 | hyd    | srpt | 09:00:05 | 20:15:00 | ap444     |
|  4444  | 2010-08-18 | hyd    | srpt | 09:30:05 | 20:15:00 | ap891     |
|  5555  | 2010-08-08 | hyd    | vij  | 09:10:05 | 22:15:00 | ap8830    |
+--------+------------+--------+------+----------+----------+-----------+
```
5 rows in set (0.00 sec)set (0.00 sec)
mysql> select *from passenger;
```
+-------+-----------+---------+------+------+--------+
| pnrno | ticnumber | pname   | age  | sex  | ppno   |
+-------+-----------+---------+------+------+--------+
| 1001  |    1111   | subbu   |  31  | m    | pp555  |
| 1002  |    2222   | achaith |  22  | m    | pp8830 |
| 1003  |    3333   | padma   |  25  | f    | pp333  |
| 1004  |    4444   | ravi    |  23  | m    | pp444  |
| 1005  |    5555   | nirma   |  42  | f    | pp666  |
+-------+-----------+---------+------+------+--------+
```
5 rows in set (0.03 sec)
mysql> select *from reserve;
```
+-----------+-----------+-------------------+------------+--------+
| pnrnumber | noofseats | address           | phno       | status |
+-----------+-----------+-------------------+------------+--------+
|    1001   |      10   | hno:5-4,srpt,nlg  | 9492506282 | yes    |
|    1001   |       5   | hno:5-4,srpt,nlg  | 9492506282 | yes    |
|    1002   |       5   | hno:15-4,lbngr,hyd| 9491653714 | yes    |
|    1003   |       6   | hno:151-4,dsnr,hyd| 9704613151 | yes    |
|    1004   |       8   | hno:11-4,dsnr,hyd | 9704613111 | yes    |
|    1005   |       8   | hno:41-4,dsnr,hyd | 9989503111 | no     |
|    1005   |       5   | hno:41-4,dsnr,hyd | 9989503111 | yes    |
+-----------+-----------+-------------------+------------+--------+
```
7 rows in set (0.02 sec)
mysql> select *from cancel;
```
+-----------+-----------+-------------------+------------+--------+
| pnrnumber | noofseats | address           | phno       | status |
+-----------+-----------+-------------------+------------+--------+
|    1001   |       5   | hno:5-4,srpt,nlg  | 9492506282 | yes    |
|    1001   |       2   | hno:5-4,srpt,nlg  | 9492506282 | yes    |
|    1002   |       2   | hno:15-4,lbngr,hyd| 9491653714 | no     |
|    1003   |       2   | hno:151-4,dsnr,hyd| 9704613151 | yes    |
|    1004   |       5   | hno:11-4,dsnr,hyd | 9704613111 | yes    |
|    1005   |       4   | hno:41-4,dsnr,hyd | 9989503111 | yes    |
+-----------+-----------+-------------------+------------+--------+
```
6 rows in set (0.00 sec)

Use of update command:
mysql> update passenger set ppno='pp888' where pnrno=1001;
Query OK, 1 row affected (0.03 sec)
Rows matched: 1 changed: 1 warnings: 0

Use of DELETE command:

mysql>delete from cancel where status='no';

Query OK, 1 row affected (0.03 sec)

mysql> select *from cancel;

pnrnumber	noofseats	address	phno	status
1001	5	hno:5-4,srpt,nlg	9492506282	yes
1001	2	hno:5-4,srpt,nlg	9492506282	yes
1003	2	hno:151-4,dsnr,hyd	9704613151	yes
1004	5	hno:11-4,dsnr,hyd	9704613111	yes
1005	4	hno:41-4,dsnr,hyd	9989503111	yes

6 rows in set (0.00 sec)

Week: 7

Querying: In this week you are going to practice the queries (along with sub queries) using ANY, ALL, IN, EXISTS, NOT EXISTS, UNION, INTERSECT, Constraints etc.

Practice the following queries:

1. Display unique PNR_no of all passengers.

```
mysql> select distinct pnrno from passenger;
+-------+
| pnrno |
+-------+
|  1001 |
|  1002 |
|  1003 |
|  1004 |
|  1005 |
+-------+
5 rows in set (0.01 sec)
```

2. Display all the names of male passengers.

```
mysql> select pname from passenger where sex='m';
+---------+
| pname   |
+---------+
| subbu   |
| achaith |
| ravi    |
+---------+
3 rows in set (0.00 sec)
```

3. Display ticket numbers and names of all the passengers.

```
mysql> select tic_no,pname from ticket555 t,passenger p where t.tic_no=p.ticnumber;
+--------+---------+
| tic_no | pname   |
+--------+---------+
|   1111 | subbu   |
|   2222 | achaith |
|   3333 | padma   |
|   4444 | ravi    |
|   5555 | nirma   |
+--------+---------+
5 rows in set (0.00 sec)
```

4. Display the source and destination having journey time more than 10 hours.

```
mysql> select source,dest from ticket555 where hour(timediff(reatime,deptime))>10;
+--------+------+
| source | dest |
+--------+------+
| hyd    | srpt |
| hyd    | vij  |
+--------+------+
2 rows in set (0.00 sec)
```

5. Find the ticket numbers of passengers whose name starts with 'A' and ends with 'H'.

```
mysql> select tic_no from ticket555 where tic_no=any (select ticnumber from passenger where pname like 'a%h');
+--------+
| tic_no |
+--------+
|   1111 |
|   2222 |
+--------+
2 rows in set (0.02 sec)
```

6. Find the name of passengers whose age is between 30 and 45.

```
mysql> select pname from passenger where age between 30 and 45;
+-------+
| pname |
+-------+
| subbu |
| nirma |
+-------+
2 rows in set (0.00 sec)
```

7. Display all the passengers names beginning with 'A'.

```
mysql> select all pname from passenger where pname like 'a%';
+---------+
| pname   |
+---------+
| subbu   |
| achaith |
+---------+
2 rows in set (0.00 sec)
```

8. Display the sorted list of passengers names.

```
mysql> select pname from passenger order by pname;
+---------+
| pname   |
+---------+
| subbu   |
| achaith |
| nirma   |
| padma   |
| ravi    |
+---------+
5 rows in set (0.02 sec)
```

9. Display the Bus numbers that travel on Sunday and Wednesday.

```
mysql> select busno from bus555 where busno in(select busnumber from ticket555 where
dayofweek(joudate)=1 or dayofweek(joudate)=4);
+--------+
| busno  |
+--------+
| ap444  |
| ap8830 |
| ap891  |
+--------+
3 rows in set (0.00 sec)
```

10. Display the details of passengers who are traveling either in AC or NON_AC.

```
mysql> select pname,pnrno,age,sex from passenger where ticnumber in(select tic_no from
ticket555 where busnumber in(select busno from bus555 where bustype='ac' or
bustype='nonac'));
+---------+-------+------+------+
| pname   | pnrno | age  | sex  |
+---------+-------+------+------+
| subbu   | 1001  | 31   | m    |
| achaith | 1002  | 22   | m    |
| padma   | 1003  | 25   | f    |
| ravi    | 1004  | 23   | m    |
+---------+-------+------+------+
4 rows in set (0.00 sec)
```