

## PROGRAM NO: 1

DATE:

### IMPLEMENT DDL COMMAND

**AIM:** To implement DCL command

#### PROGRAM CODE:

```
mysql> create database S1_MCA;  
Query OK, 1 row affected (0.12 sec)
```

```
mysql> use S1_MCA;  
Database changed
```

```
mysql> create table student(stud_id integer(10),stud_name varchar(20),class  
varchar(20),course varchar(10));  
Query OK, 0 rows affected (1.43 sec)
```

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
stud_id	int(10)	YES		NULL	
stud_name	varchar(20)	YES		NULL	
class	varchar(20)	YES		NULL	
course	varchar(10)	YES		NULL	

4 rows in set (0.18 sec)

```
mysql> alter table student modify stud_name varchar(25);  
Query OK, 0 rows affected (0.11 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> alter table student add(dept varchar(10));  
Query OK, 0 rows affected (0.91 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
stud_id	int(10)	YES		NULL	
stud_name	varchar(25)	YES		NULL	
class	varchar(20)	YES		NULL	
course	varchar(10)	YES		NULL	
dept	varchar(10)	YES		NULL	

5 rows in set (0.00 sec)

```
mysql> alter table student drop course;
```

Query OK, 0 rows affected (0.23 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
stud_id	int(10)	YES		NULL	
stud_name	varchar(25)	YES		NULL	
class	varchar(20)	YES		NULL	
dept	varchar(10)	YES		NULL	

4 rows in set (0.00 sec)

```
mysql> truncate table student;
```

Query OK, 0 rows affected (0.20 sec)

```
mysql> select * from student;
```

Empty set (0.10 sec)

```
mysql> alter table student rename to student1;
```

Query OK, 0 rows affected (0.21 sec)

```
mysql> desc student1;
```

Field	Type	Null	Key	Default	Extra
stud_id	int(10)	YES		NULL	
stud_name	varchar(25)	YES		NULL	
class	varchar(20)	YES		NULL	
dept	varchar(10)	YES		NULL	

4 rows in set (0.10 sec)

```
mysql> drop table student1;
```

```
Query OK, 0 rows affected (0.12 sec)
```

## PROGRAM NO: 2

DATE:

### IMPLEMENT DML COMMAND

**AIM:** To implement DML command.

#### PROGRAM:

```
mysql> create table employee(emp_id varchar(20),emp_name varchar(20),emp_add  
varchar(20));
```

Query OK, 0 rows affected (0.09 sec)

```
mysql> desc employee;
```

Field	Type	Null	Key	Default	Extra
emp_id	varchar(20)	YES		NULL	
emp_name	varchar(20)	YES		NULL	
emp_add	varchar(20)	YES		NULL	

3 rows in set (0.01 sec)

```
mysql> insert into employee(emp_id,emp_name,emp_add)  
values('101','reebath','infopark'),('102','nafle','technopark');
```

Query OK, 2 rows affected (0.06 sec)

Records: 2 Duplicates: 0 Warnings: 0

```
mysql> select * from employee;
```

emp_id	emp_name	emp_add
101	reebath	infopark
102	nafle	technopark

2 rows in set (0.00 sec)

```
mysql> update employee set emp_add='IBM' where emp_id='102';  
Query OK, 1 row affected (0.17 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from employee;
```

```
+-----+-----+-----+  
| emp_id | emp_name | emp_add |  
+-----+-----+-----+  
| 101    | reebath  | infopark |  
| 102    | nafle    | IBM      |  
+-----+-----+-----+  
2 rows in set (0.00 sec)
```

```
mysql> delete from employee where emp_id='101';  
Query OK, 1 row affected (0.08 sec)
```

```
mysql> select * from employee;
```

```
+-----+-----+-----+  
| emp_id | emp_name | emp_add |  
+-----+-----+-----+  
| 102    | nafle    | IBM      |  
+-----+-----+-----+  
1 row in set (0.00 sec)
```

## PROGRAM NO: 3

DATE:

### IMPLEMENT TCL COMMAND

**AIM:**To implement TCL command.

#### PROGRAM CODE:

```
mysql> create table student(id varchar(20),name varchar(20),class varchar(20));  
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
id	varchar(20)	YES		NULL	
name	varchar(20)	YES		NULL	
class	varchar(20)	YES		NULL	

3 rows in set (0.05 sec)

```
mysql> insert into  
student(id,name,class)values('a101','anu','MCA'),('a102','pachu','MCA'),('a103','remya','MCA');  
Query OK, 3 rows affected (0.05 sec)  
Records: 3 Duplicates: 0 Warnings: 0
```

```
mysql> select * from student;
```

id	name	class
a101	anu	MCA
a102	pachu	MCA
a103	remya	MCA

3 rows in set (0.00 sec)

```
mysql> start transaction;  
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> savepoint A;  
Query OK, 0 rows affected (0.13 sec)
```

```
mysql> update student set id='a106' where name='remya';  
Query OK, 1 row affected (0.00 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from student;
```

id	name	class
a101	anu	MCA
a102	pachu	MCA
a106	remya	MCA

3 rows in set (0.00 sec)

```
mysql> rollback to savepoint A;  
Query OK, 0 rows affected (0.09 sec)
```

```
mysql> select * from student;
```

id	name	class
a101	anu	MCA
a102	pachu	MCA
a103	remya	MCA

3 rows in set (0.00 sec)

```
mysql> update student set name='reebath' where id='a102';  
Query OK, 1 row affected (0.00 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```



```
mysql> select * from student;
```

```
+-----+-----+-----+
| id    | name   | class |
+-----+-----+-----+
| a101  | anu    | MCA   |
| a102  | reebath| MCA   |
| a103  | remya  | MCA   |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> commit;
```

```
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> select * from student;
```

```
+-----+-----+-----+
| id    | name   | class |
+-----+-----+-----+
| a101  | anu    | MCA   |
| a102  | reebath| MCA   |
| a103  | remya  | MCA   |
+-----+-----+-----+
3 rows in set (0.00 sec)
```



## PROGRAM NO: 4

DATE:

### IMPLEMENT PRIMARY KEY AND FOREIGN KEY

**AIM:**To implement primary key and foreign key.

#### PROGRAM CODE:

```
mysql> create table sailor(sid integer(10) primary key,sname varchar(20),rating integer(10),age integer(10));
```

Query OK, 0 rows affected (0.65 sec)

```
mysql> insert into sailor(sid,sname,rating,age) values(11,'binu',1000,20),(12,'sanu',10101,21);
```

Query OK, 2 rows affected (0.11 sec)

Records: 2 Duplicates: 0 Warnings: 0

```
mysql> desc sailor;
```

Field	Type	Null	Key	Default	Extra
sid	int(10)	NO	PRI	NULL	
sname	varchar(20)	YES		NULL	
rating	int(10)	YES		NULL	
age	int(10)	YES		NULL	

4 rows in set (0.06 sec)

```
mysql> select * from sailor;
```

sid	sname	rating	age
11	binu	1000	20
12	sanu	10101	21

2 rows in set (0.00 sec)

```
mysql> insert into sailor values(12,'banu',1011,22);
```

ERROR 1062 (23000): Duplicate entry '12' for key 'PRIMARY'

```
mysql> create table reserve(ssid integer(10),day varchar(20),foreign key(ssid) references
sailor(sid));
```

Query OK, 0 rows affected (0.23 sec)

```
mysql> desc reserve;
```

Field	Type	Null	Key	Default	Extra
ssid	int(10)	YES	MUL	NULL	
day	varchar(20)	YES		NULL	

2 rows in set (0.15 sec)

```
mysql> insert into reserve(ssid,day) values(11,'2-Oct-98'),(12,'4-oct-98');
```

Query OK, 2 rows affected (0.08 sec)

Records: 2 Duplicates: 0 Warnings: 0

```
mysql> select * from reserve;
```

ssid	day
11	2-Oct-98
12	4-oct-98

2 rows in set (0.00 sec)

## PROGRAM NO: 5

DATE:

### IMPLEMENT VIEW

**AIM:**To implement view.

#### PROGRAMCODE:

```
mysql> create table fixed_deposite(fdno varchar(10) primary key,name varchar(20),nominynome
varchar(20));
```

Query OK, 0 rows affected (0.25 sec)

```
mysql> desc fixed_deposite;
```

Field	Type	Null	Key	Default	Extra
fdno	varchar(10)	NO	PRI	NULL	
name	varchar(20)	YES		NULL	
nominynome	varchar(20)	YES		NULL	

3 rows in set (0.00 sec)

```
mysql> insert into fixed_deposite(fdno,name,nominynome)
values('a101','sanu','pathu'),('a102','vandana','siva'),('a103','arun','appu');
```

Query OK, 3 rows affected (0.11 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from fixed_deposite;
```

fdno	name	nominynome
a101	sanu	pathu
a102	vandana	siva
a103	arun	appu

3 rows in set (0.00 sec)

```
mysql> create view fixed_deposite_copy as select * from fixed_deposite;
```

Query OK, 0 rows affected (0.07 sec)

```
mysql> select * from fixed_deposite_copy;
```

fdno	name	nominynome
a101	sanu	pathu
a102	vandana	siva
a103	arun	appu

3 rows in set (0.02 sec)

```
mysql> create view fixed_deposite_car as select name,nominynome from fixed_deposite;  
Query OK, 0 rows affected (0.15 sec)
```

```
mysql> select * from fixed_deposite_car;
```

name	nominynome
sanu	pathu
vandana	siva
arun	appu

3 rows in set (0.02 sec)

**PROGRAM NO: 6**

**DATE:**

## **IMPLEMENT SEQUENCE**

**AIM:**To implement sequence.

### **PROGRAM CODE:**

```
mysql> create table employee2(empno integer(5)primary key auto_increment,name  
varchar(20),salary integer(5));  
Query OK, 0 rows affected (0.65 sec)
```

```
mysql> desc employee2;
```

Field	Type	Null	Key	Default	Extra
empno	int(5)	NO	PRI	NULL	auto_increment
name	varchar(20)	YES		NULL	
salary	int(5)	YES		NULL	

3 rows in set (0.07 sec)

```
mysql> select * from employee2;
```

empno	name	salary
1	arun	30000
2	achu	40000
3	arjun	50000
4	anu	60000
5	allu	20000

5 rows in set (0.00 sec)

**PROGRAM NO: 7**

**DATE:**

## **IMPLEMENT AGGREGATE FUNCTION**

**AIM:**To implement Aggregate functions.

### **PROGRAM CODE:**

```
mysql> create table acc_master(acc_no integer(10),acc_type varchar(20),opendate
DATE,curr_balance integer(10));
Query OK, 0 rows affected (0.47 sec)
```

```
mysql> desc acc_master;
```

Field	Type	Null	Key	Default	Extra
acc_no	int(10)	YES		NULL	
acc_type	varchar(20)	YES		NULL	
opendate	date	YES		NULL	
curr_balance	int(10)	YES		NULL	

4 rows in set (0.08 sec)

```
mysql> insert into acc_master(acc_no,acc_type,opendate,curr_balance)
values(101,'savings','2009-10-12',4000),(102,'current','2009-10-13',5000),(103,'savings','2009-
10-14',6000),(104,'current','2009-10-15',3000),(105,'current','2009-10-
16',2000),(106,'savings','2009-10-17',1000);
Query OK, 6 rows affected (0.07 sec)
Records: 6 Duplicates: 0 Warnings: 0
```

```
mysql> select * from acc_master;
```

acc_no	acc_type	opendate	curr_balance
101	savings	2009-10-12	4000
102	current	2009-10-13	5000
103	savings	2009-10-14	6000
104	current	2009-10-15	3000
105	current	2009-10-16	2000
106	savings	2009-10-17	1000

6 rows in set (0.01 sec)

```
mysql> select avg(curr_balance)from acc_master;
```

avg(curr_balance)
3500.0000

1 row in set (0.15 sec)

```
mysql> select min(acc_no)from acc_master;
```

min(acc_no)
101

1 row in set (0.09 sec)

```
mysql> select max(curr_balance)from acc_master;
```

max(curr_balance)
6000

1 row in set (0.05 sec)



```
mysql> select sum(curr_balance)from acc_master;
```

```
+-----+  
| sum(curr_balance) |  
+-----+  
|           21000 |  
+-----+  
1 row in set (0.01 sec)
```

```
mysql> select count(acc_no) from acc_master;
```

```
+-----+  
| count(acc_no) |  
+-----+  
|             6 |  
+-----+  
1 row in set (0.00 sec)
```

**PROGRAM NO: 8**

**DATE:**

## **IMPLEMENT NUMERIC FUNCTIONS**

**AIM:**To implement numeric functions

### **PROGRAM CODE:**

mysql> select abs(-20) from dual;

```
+-----+  
| abs(-20) |  
+-----+  
|          20 |  
+-----+  
1 row in set (0.43 sec)
```

mysql> select power(5,2) from dual;

```
+-----+  
| power(5,2) |  
+-----+  
|          25 |  
+-----+  
1 row in set (0.06 sec)
```

mysql> select sqrt(81) from dual;

```
+-----+  
| power(5,2) |  
+-----+  
|          25 |  
+-----+  
1 row in set (0.06 sec)
```

mysql> select round(15.19,1) from dual;

```
+-----+
| round(15.19,1) |
+-----+
|           15.2 |
+-----+
1 row in set (0.02 sec)
```

mysql> select greatest(2,3,5) from dual;

```
+-----+
| greatest(2,3,5) |
+-----+
|                5 |
+-----+
1 row in set (0.07 sec)
```

mysql> select least (2,10,6) from dual;

```
+-----+
| least (2,10,6) |
+-----+
|                2 |
+-----+
1 row in set (0.00 sec)
```

mysql> select mod(12,4) from dual;

```
+-----+
| mod(12,4) |
+-----+
|          0 |
+-----+
1 row in set (0.01 sec)
```

mysql> select truncate(128.345,2)from dual;

```
+-----+
| truncate(128.345,2) |
+-----+
|           128.34 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select floor(128.345) from dual;
```

```
+-----+  
| floor(128.345) |  
+-----+  
|           128 |  
+-----+  
1 row in set (0.05 sec)
```

```
mysql> select ceil(128.345) from dual;
```

```
+-----+  
| ceil(128.345) |  
+-----+  
|           129 |  
+-----+  
1 row in set (0.01 sec)
```

**PROGRAM NO: 9**

**DATE:**

## **IMPLEMENT STRING HANDLING FUNCTIONS**

**AIM:**To implement string handling functions.

### **PROGRAM:**

```
mysql> create table student2(name varchar(20),rollno integer(5)primary key auto_increment);
Query OK, 0 rows affected (0.81 sec)
```

```
mysql> desc student2;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(20)   | YES  |     | NULL    |                |
| rollno | int(5)        | NO   | PRI | NULL    | auto_increment |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.10 sec)
```

```
mysql> insert into student2(name,rollno)
values('anupama',NULL),('binu',NULL),('farisa',NULL),('supriya',NULL);
Query OK, 4 rows affected (0.07 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> select * from student2
```

```
+-----+-----+
| name  | rollno |
+-----+-----+
| anupama | 1 |
| binu    | 2 |
| farisa  | 3 |
| supriya | 4 |
+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> select upper(name) from student2;
```

```
+-----+  
| upper(name) |  
+-----+  
| ANUPAMA    |  
| BINU       |  
| FARISA     |  
| SUPRIYA    |  
+-----+
```

```
mysql> select upper(name) from student2 where name='farisa';
```

```
+-----+  
| upper(name) |  
+-----+  
| FARISA      |  
+-----+  
1 row in set (0.19 sec)
```

```
mysql> select lower(name) from student2 where name='binu';
```

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

```
mysql> select lower(name) from student2;
```

```
+-----+  
| lower(name) |  
+-----+  
| anupama    |  
| binu       |  
| farisa     |  
| supriya    |  
+-----+  
4 rows in set (0.00 sec)
```

```
mysql> select substr(name,4,6)from student2 where name ='farisa';
```

```
+-----+  
| substr(name,4,6) |  
+-----+  
| isa              |  
+-----+  
1 row in set (0.04 sec)
```

```
mysql> select ascii('a') from dual;
```

```
+-----+  
| ascii('a') |  
+-----+  
|          97 |  
+-----+  
1 row in set (0.00 sec)
```

```
mysql> select ascii('A')from dual;
```

```
+-----+  
| ascii('A') |  
+-----+  
|          65 |  
+-----+  
1 row in set (0.00 sec)
```

```
mysql> select length(name)from student2 where name='supriya';
```

```
+-----+  
| length(name) |  
+-----+  
|           7 |  
+-----+  
1 row in set (0.00 sec)
```



mysql> select trim(trailing 'a' from name)from student2;

```
+-----+
| trim(trailing 'a' from name) |
+-----+
| anupam                       |
| binu                         |
| faris                        |
| supriy                       |
+-----+
4 rows in set (0.00 sec)
```

mysql> select trim(trailing 'a' from name) from student2 where name='supriya';

```
+-----+
| trim(trailing 'a' from name) |
+-----+
| supriy                       |
+-----+
1 row in set (0.00 sec)
```

mysql> select bin(12)from dual;

```
+-----+
| bin(12) |
+-----+
| 1100    |
+-----+
1 row in set (0.00 sec)
```

mysql> select bit\_length('text')from dual;

```
+-----+
| bit_length('text') |
+-----+
|                    32 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select rpad(name,10,'?') from student2 where name='anupama';
```

```
+-----+  
| rpad(name,10,'?') |  
+-----+  
| anupama???       |  
+-----+  
1 row in set (0.00 sec)
```

```
mysql> select strcmp('anuja','jini');
```

```
+-----+  
| strcmp('anuja','jini') |  
+-----+  
| -1 |  
+-----+  
1 row in set (0.05 sec)
```

**PROGRAM NO: 10**

**DATE:**

## **IMPLEMENT DATE FUNCTIONS**

**AIM:**To implement Date functions.

### **PROGRAM:**

mysql> select sysdate();

```
+-----+
| sysdate()          |
+-----+
| 2021-11-15 11:01:39 |
+-----+
1 row in set (0.03 sec)
```

mysql> select date\_add('1998-01-02',INTERVAL 31 DAY);

```
+-----+
| date_add('1998-01-02',INTERVAL 31 DAY) |
+-----+
| 1998-02-02                             |
+-----+
1 row in set (0.00 sec)
```

mysql> select curdate();

```
+-----+
| curdate() |
+-----+
| 2021-11-15 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select curtime();
```

```
+-----+  
| curtime() |  
+-----+  
| 11:03:25 |  
+-----+  
1 row in set (0.00 sec)
```

```
mysql> select date_format('1997-10-04 22:23:00','%W % M %Y');
```

```
+-----+  
| date_format('1997-10-04 22:23:00','%W % M %Y') |  
+-----+  
| Saturday M 1997 |  
+-----+  
1 row in set (0.00 sec)
```

```
mysql> select dayname('2019-08-07');
```

```
+-----+  
| dayname('2019-08-07') |  
+-----+  
| Wednesday |  
+-----+  
1 row in set (0.13 sec)
```

```
mysql> select monthname('2019-08-07');
```

```
+-----+  
| monthname('2019-08-07') |  
+-----+  
| August |  
+-----+  
1 row in set (0.00 sec)
```

## PROGRAM NO: 11

DATE:

### IMPLEMENT JOIN OPERATION

**AIM:** To implement Join operations.

#### PROGRAM CODE

```
mysql> create table loan(branch_name varchar(20),loan_number varchar(20),amount integer(10));
```

Query OK, 0 rows affected (0.18 sec)

```
mysql> desc loan;
```

Field	Type	Null	Key	Default	Extra
branch_name	varchar(20)	YES		NULL	
loan_number	varchar(20)	YES		NULL	
amount	int(10)	YES		NULL	

3 rows in set (0.00 sec)

```
mysql> insert into loan(branch_name,loan_number,amount)
```

```
values('edappally','l_150',50000),('kochi','l_250',10000),('palarivattom','l_100',25000);
```

Query OK, 3 rows affected (0.09 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from loan;
```

branch_name	loan_number	amount
edappally	l_150	50000
kochi	l_250	10000
palarivattom	l_100	25000

3 rows in set (0.00 sec)

```
create table borrower(customer_name varchar(20),loan_number varchar(20));
Query OK, 0 rows affected (0.19 sec)
```

```
mysql> desc borrower;
```

Field	Type	Null	Key	Default	Extra
customer_name	varchar(20)	YES		NULL	
loan_number	varchar(20)	YES		NULL	

2 rows in set (0.10 sec)

```
mysql> insert into borrower values('jojn','l_50');
Query OK, 1 row affected (0.03 sec)
```

```
mysql> insert into borrower values('hari','l_250');
Query OK, 1 row affected (0.03 sec)
```

```
mysql> insert into borrower values('smitha','l_100');
Query OK, 1 row affected (0.03 sec)
```

```
mysql> select * from borrower;
```

customer_name	loan_number
jojn	l_50
hari	l_250
smitha	l_100

```
mysql> select loan.branch_name,loan.amount,borrower.customer_name from loan inner join
borrower where loan.loan_number=borrower.loan_number;
```

branch_name	amount	customer_name
kochi	10000	hari
palarivattom	25000	smitha

2 rows in set (0.49 sec)

## PROGRAM NO: 12

DATE:

### IMPLEMENT SUBQUERY

**AIM:** To implement subquery

#### PROGRAM CODE

```
mysql> create table sailors(sid integer(10),sname varchar(20),rating integer(10),age integer(2));  
Query OK, 0 rows affected (1.60 sec)
```

```
mysql> desc sailors;
```

Field	Type	Null	Key	Default	Extra
sid	int(10)	YES		NULL	
sname	varchar(20)	YES		NULL	
rating	int(10)	YES		NULL	
age	int(2)	YES		NULL	

4 rows in set (0.10 sec)

```
mysql> insert into
```

```
sailors(sid,sname,rating,age)values(22,'Dustin',7,45),(29,'Brutus',8,55),(31,'Lubber',1,33),(32,'An  
dy',8,25),(58,'Rusty',10,35);
```

```
Query OK, 5 rows affected (0.15 sec)
```

```
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> select * from sailors;
```

sid	sname	rating	age
22	Dustin	7	45
29	Brutus	8	55
31	Lubber	1	33
32	Andy	8	25
58	Rusty	10	35

5 rows in set (0.00 sec)



```
mysql> create table reservers(sid integer(10),bid integer(10),day date);
Query OK, 0 rows affected (0.18 sec)
```

```
mysql> desc reservers;
```

Field	Type	Null	Key	Default	Extra
sid	int(10)	YES		NULL	
bid	int(10)	YES		NULL	
day	date	YES		NULL	

3 rows in set (0.09 sec)

```
mysql> insert into reservers(sid,bid,day) values(22,101,'1998-10-10'),(22,102,'1998-10-10'),(22,103,'1998-08-10'),(22,104,'1998-07-10'),(31,102,'1998-10-11'),(31,103,'1998-06-11');
Query OK, 6 rows affected (0.06 sec)
Records: 6 Duplicates: 0 Warnings: 0
```

```
mysql> select * from reservers;
```

sid	bid	day
22	101	1998-10-10
22	102	1998-10-10
22	103	1998-08-10
22	104	1998-07-10
31	102	1998-10-11
31	103	1998-06-11

6 rows in set (0.00 sec)

```
mysql> create table boats(bid integer(10),bname varchar(10),color varchar(10));
Query OK, 0 rows affected (0.58 sec)
```

```
mysql> desc boats;
```

Field	Type	Null	Key	Default	Extra
bid	int(10)	YES		NULL	
bname	varchar(10)	YES		NULL	
color	varchar(10)	YES		NULL	

3 rows in set (0.52 sec)

```
mysql> insert into boats(bid,bname,color)
values(101,'interlake','blue'),(102,'interlake','red'),(103,'clipper','green'),(104,'marine','red');
Query OK, 4 rows affected (0.12 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> select * from boats;
```

bid	bname	color
101	interlake	blue
102	interlake	red
103	clipper	green
104	marine	red

4 rows in set (0.00 sec)

```
mysql> select sailors.sname from sailors where sailors.sid in(select reservers.sid from reservers
where reservers.bid = 103);
```

sname
Dustin
Lubber

2 rows in set (0.12 sec)

```
mysql> select sailors.sname from sailors where sailors.sid in
-> (select reservers.sid from reservers where reservers.bid in
-> (select boats.bid from boats where boats.color='red'));
```

```
+-----+
| sname |
+-----+
| Dustin |
| Lubber |
+-----+
2 rows in set (0.00 sec)
```

```
mysql> select sailors.sname from sailors where sailors.sid not in
-> (select reservers.sid from reservers where reservers.bid in
-> (select boats.bid from boats where boats.color='red'));
```

```
+-----+
| sname |
+-----+
| Brutus |
| Andy   |
| Rusty  |
+-----+
3 rows in set (0.02 sec)
```

## PROGRAM NO: 13

DATE:

### IMPLEMENT GROUP BY CLAUSE

**AIM:**To implement group by clause.

### PROGRAM CODE

```
mysql> select sailors.rating,MIN(sailors.age) from sailors group by sailors.rating;
```

rating	MIN(sailors.age)
1	33
7	45
8	25
10	35

4 rows in set (0.04 sec)

```
mysql> select sailors.rating,MIN(sailors.age)from sailors where sailors.age>=18 group by  
sailors.rating having count(*)>1;
```

rating	MIN(sailors.age)
8	25

1 row in set (0.00 sec)

## PROGRAM NO: 14

DATE:

### IMPLEMENT SORTING OF DATA

**AIM:**To implement sorting of data.

#### PROGRAM CODE

```
mysql> create table deposit(accno integer(10),cname varchar(10),bname varchar(10),amt integer(10));
```

Query OK, 0 rows affected (0.21 sec)

```
mysql> desc deposit;
```

Field	Type	Null	Key	Default	Extra
accno	int(10)	YES		NULL	
cname	varchar(10)	YES		NULL	
bname	varchar(10)	YES		NULL	
amt	int(10)	YES		NULL	

4 rows in set (0.12 sec)

```
mysql> insert into
```

```
deposit(accno,cname,bname,amt)values(10,'anu','sanu',10000),(11,'appu','banu',20000),(12,'ammu','pachu',30000);
```

Query OK, 3 rows affected (0.18 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from deposit;
```

accno	cname	bname	amt
10	anu	sanu	10000
11	appu	banu	20000
12	ammu	pachu	30000

3 rows in set (0.00 sec)

```
mysql> select * from deposit order by cname desc;
```

accno	cname	bname	amt
11	appu	banu	20000
10	anu	sanu	10000
12	ammu	pachu	30000

3 rows in set (0.09 sec)

```
mysql> select * from deposit order by cname;
```

accno	cname	bname	amt
12	ammu	pachu	30000
10	anu	sanu	10000
11	appu	banu	20000

3 rows in set (0.00 sec)

## PROGRAM NO: 15

DATE:

### IMPLEMENT SET OPERATION

**AIM:**To implement set operations

#### PROGRAM CODE

```
mysql> create table first(id integer(10),name varchar(20));
```

Query OK, 0 rows affected (0.21 sec)

```
mysql> desc first;
```

Field	Type	Null	Key	Default	Extra
id	int(10)	YES		NULL	
name	varchar(20)	YES		NULL	

2 rows in set (0.06 sec)

```
mysql> create table second(id integer(10),name varchar(20));
```

Query OK, 0 rows affected (0.16 sec)

```
mysql> desc second;
```

Field	Type	Null	Key	Default	Extra
id	int(10)	YES		NULL	
name	varchar(20)	YES		NULL	

2 rows in set (0.00 sec)



```
mysql> insert into first(id,name) values(1,'abhin'),(2,'adam');  
Query OK, 2 rows affected (0.08 sec)  
Records: 2 Duplicates: 0 Warnings: 0
```

```
mysql> select * from first;
```

```
+-----+-----+  
| id    | name  |  
+-----+-----+  
| 1     | abhin |  
| 2     | adam  |  
+-----+-----+  
2 rows in set (0.00 sec)
```

```
mysql> insert into second(id,name) values(2,'adam'),(2,'chester');  
Query OK, 2 rows affected (0.06 sec)  
Records: 2 Duplicates: 0 Warnings: 0
```

```
mysql> select * from second;
```

```
+-----+-----+  
| id    | name  |  
+-----+-----+  
| 2     | adam  |  
| 2     | chester |  
+-----+-----+  
2 rows in set (0.00 sec)
```

```
mysql> select * from first union select * from second;
```

```
+-----+-----+  
| id    | name  |  
+-----+-----+  
| 1     | abhin |  
| 2     | adam  |  
| 2     | chester |  
+-----+-----+  
3 rows in set (0.03 sec)
```

```
mysql> select * from first union all select * from second;
```

id	name
1	abhin
2	adam
2	adam
2	chester

4 rows in set (0.01 sec)

## PROGRAM NO: 16

DATE:

### IMPLEMENT USER DEFINED FUNCTIONS

**AIM:**To implement user defined functions.

#### PROGRAM CODE

PROGRAM TO ADD TWO NUMBERS

```
mysql> delimiter $$  
mysql> create function addtwo(a int,b int)  
-> returns int deterministic  
-> begin  
-> declare c int;  
-> set c=(a+b);  
-> return c;  
-> end $$
```

Query OK, 0 rows affected (0.82 sec)

```
mysql> delimiter ;
```

```
mysql> select addtwo(2,3);
```

```
+-----+  
| addtwo(2,3) |  
+-----+  
|          5 |  
+-----+  
1 row in set (0.53 sec)
```

## PROGRAM TO FIND AREA OF CIRCLE

```
mysql> delimiter $$
```

```
mysql> create function carea(r int)
```

```
-> returns int deterministic
```

```
-> begin
```

```
-> declare c int;
```

```
-> set c=(3.14*r*r);
```

```
-> return c;
```

```
-> end $$
```

Query OK, 0 rows affected (1.47 sec)

```
mysql> delimiter ;
```

```
mysql> select carea(1);
```

```
+-----+
| carea(1) |
+-----+
|          3 |
+-----+
1 row in set (0.48 sec)
```

**PROGRAM NO: 17**

**DATE:**

## **IMPLEMENT TRIGGERS**

**AIM:** To implement triggers.

### **PROGRAM CODE**

```
mysql> create table customer1(acc_no integer(10) primary key,cust_name  
varchar(20),avail_balance decimal(10,2));  
Query OK, 0 rows affected (4.63 sec)
```

```
mysql> desc customer1;
```

Field	Type	Null	Key	Default	Extra
acc_no	int(10)	NO	PRI	NULL	
cust_name	varchar(20)	YES		NULL	
avail_balance	decimal(10,2)	YES		NULL	

3 rows in set (0.12 sec)

```
mysql> insert into customer1 values(1000,'fanny',7000);  
Query OK, 1 row affected (0.21 sec)
```

```
mysql> insert into customer1 values(1,'jhon',7);  
Query OK, 1 row affected (0.02 sec)
```

```
mysql> select * from customer1;
```

acc_no	cust_name	avail_balance
1	jhon	7.00
1000	fanny	7000.00

2 rows in set (0.10 sec)

```
mysql> create table mini_statement(acc_no integer(10),avail_balance decimal(10,2),foreign
key(acc_no)references customer1(acc_no)on delete cascade);
Query OK, 0 rows affected (0.47 sec)
```

```
mysql> desc mini_statement;
```

```
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| acc_no         | int(10)       | YES  | MUL | NULL    |       |
| avail_balance  | decimal(10,2) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.13 sec)
```

```
mysql> delimiter //
```

```
mysql> create trigger update_cus
```

```
-> before update on customer1 for each row
```

```
-> begin
```

```
-> insert into mini_statement values (old.acc_no,old.avail_balance);
```

```
-> end;
```

```
-> //
```

```
Query OK, 0 rows affected (0.34 sec)
```

```
mysql> delimiter ;
```

```
mysql> update customer1 set avail_balance=avail_balance+3000 where acc_no=1000;
```

```
Query OK, 1 row affected (0.28 sec)
```

```
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> select * from customer1;
```

```
+-----+-----+-----+
| acc_no | cust_name | avail_balance |
+-----+-----+-----+
|      1 | jhon      |          7.00 |
|    1000 | fanny     |        10000.00 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> update customer1 set avail_balance=avail_balance+3000 where acc_no=1;
```

```
Query OK, 1 row affected (0.11 sec)
```

```
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> select * from customer1;
```

acc_no	cust_name	avail_balance
1	jhon	3007.00
1000	fanny	10000.00

2 rows in set (0.00 sec)

```
mysql> select * from mini_statement;
```

acc_no	avail_balance
1000	7000.00
1	7.00

2 rows in set (0.00 sec)

## PROGRAM NO: 18

DATE:

### IMPLEMENT CURSOR

**AIM:** To implement cursor

#### PROGRAM CODE

```
mysql> create table table1(id integer(10),name varchar(10),department varchar(10));  
Query OK, 0 rows affected (0.17 sec)
```

```
mysql> desc table1;
```

Field	Type	Null	Key	Default	Extra
id	int(10)	YES		NULL	
name	varchar(10)	YES		NULL	
department	varchar(10)	YES		NULL	

3 rows in set (0.07 sec)

```
mysql> insert into table1 values(1,'anu','mca');  
Query OK, 1 row affected (0.09 sec)  
mysql> insert into table1 values(2,'sanu','mba');  
Query OK, 1 row affected (0.00 sec)  
mysql> insert into table1 values(3,'shanu','mba');  
Query OK, 1 row affected (0.03 sec)
```

```
mysql> select * from table1;
```

id	name	department
1	anu	mca
2	sanu	mba
3	shanu	mba

3 rows in set (0.05 sec)



```
mysql> delimiter //
mysql> create procedure list_name2(inout name_list varchar(200))
-> begin
-> declare is_done integer default 0;
-> declare s_name varchar(100)default "";
-> declare scursor cursor for
-> select name from table1;
-> declare continue handler for not found set is_done =1;
-> open scursor;
-> get_list:loop
-> fetch scursor into s_name;
-> if is_done=1 then leave get_list;
-> end if;
-> set name_list=concat(s_name,";",name_list);
-> end loop get_list;
-> close scursor;
-> end;
-> //
```

Query OK, 0 rows affected (0.25 sec)

```
mysql> delimiter //
mysql> set @name_list=""//
Query OK, 0 rows affected (0.07 sec)
```

```
mysql> call list_name2(@name_list)//
Query OK, 0 rows affected (0.17 sec)
```

```
mysql> select @name_list//
```

```
+-----+
| @name_list |
+-----+
| shanu;sanu;anu; |
+-----+
1 row in set (0.00 sec)
```

**PROGRAM NO: 19**

**DATE:**

## **JOB SEARCH SYSTEM (SAMPLE PROJECT)**

**AIM:**Sample projects

### **PROGRAM CODE**

```
mysql> create table WORKER(W_ID int primary key,W_NAME varchar(50) not null,ADDRESS varchar(50) not null,LOCATION varchar(30) not null,EMAIL varchar(30) not null,PASSWORD varchar(20) not null,TYPE varchar(30) not null,PHNO numeric(10) not null,WORKING_AND_OTHER_DETAILS varchar(100) not null);
```

Query OK, 0 rows affected (0.20 sec)

```
mysql> desc WORKER;
```

Field	Type	Null	Key	Default	Extra
W_ID	int	NO	PRI	NULL	
W_NAME	varchar(50)	NO		NULL	
ADDRESS	varchar(50)	NO		NULL	
LOCATION	varchar(30)	NO		NULL	
EMAIL	varchar(30)	NO		NULL	
PASSWORD	varchar(20)	NO		NULL	
TYPE	varchar(30)	NO		NULL	
PHNO	decimal(10,0)	NO		NULL	
WORKING_AND_OTHER_DETAILS	varchar(100)	NO		NULL	

```
mysql> Create table USER(U_ID int primary key,U_NAME int varchar(50) not null, ADDRESS varchar(50) not null,LOCATION varchar(50) not null,EMAIL varchar(30) not null,PASSWORD varchar(20) not null,PHNO numeric(10) not null);
```

Query OK, 0 rows affected (0.13 sec)

```
mysql> desc USER;
```

Field	Type	Null	Key	Default	Extra
U_ID	int	NO	PRI	NULL	
U_NAME	varchar(50)	NO		NULL	
ADDRESS	varchar(50)	NO		NULL	
LOCATION	varchar(30)	NO		NULL	
EMAIL	varchar(30)	NO		NULL	
PASSWORD	varchar(20)	NO		NULL	
PHNO	decimal(10,0)	NO		NULL	

```
mysql> create table LOGIN(ID int primary key,EMAIL varchar(50) not null,PASSWORD
varchar(20) not null,TYPE varchar(20) not null);
```

Query OK, 0 rows affected (0.13 sec)

```
mysql> desc LOGIN;
```

Field	Type	Null	Key	Default	Extra
ID	int	NO	PRI	NULL	
EMAIL	varchar(50)	NO		NULL	
PASSWORD	varchar(20)	NO		NULL	
TYPE	varchar(20)	NO		NULL	

```
mysql> create table REQUEST(R_ID int primary key,U_NAME varchar(50) not null,W_NAME
varchar(50) not null,STATUS varchar(20),U_ID int references USER(U_ID),W_ID INT
references WORKER(W_ID));
```

Query OK, 0 rows affected (0.11 sec)

```
mysql> desc REQUEST;
```

Field	Type	Null	Key	Default	Extra
R_ID	int	NO	PRI	NULL	
U_NAME	varchar(50)	NO		NULL	
W_NAME	varchar(50)	NO		NULL	
STATUS	varchar(20)	YES		NULL	
U_ID	int	YES		NULL	
W_ID	int	YES		NULL	

```
mysql>create table FEEDBACK(F_ID int primary key,W_NAME varchar(50) not
null,U_NAME varchar(50) not null,FEEDBACK varchar(30) not null,W_ID int references
WORKER(W_ID),U_ID int references USER(U_ID));
```

Query OK, 0 rows affected (0.11 sec)

```
mysql> desc FEEDBACK;
```

Field	Type	Null	Key	Default	Extra
F_ID	int	NO	PRI	NULL	
W_NAME	varchar(50)	NO		NULL	
U_NAME	varchar(50)	NO		NULL	
FEEDBACK	varchar(30)	NO		NULL	
W_ID	int	YES		NULL	
U_ID	int	YES		NULL	

```
mysql>SelectWORKER.W_ID,WORKER.W_NAME,WORKER.LOCATION,WORKER.PHNO,FEEDBACK.F_ID,FEEDBACK.W_ID,FEEDBACK.U_NAME,FEEDBACK.FEEDBACK
from WORKER join FEEDBACK on WORKER.W_ID=FEEDBACK.W_ID;
```

W_ID	W_NAME	LOCATION	PHNO	F_ID	W_ID	U_NAME	FEEDBACK
204	Tony	vypin	8953108654	500	204	Arun	Good worker
209	Alex	thrikkakara	9021347654	501	209	Surya	Nice worker

```
mysql>selectUSER.U_ID,USER.U_NAME,USER.LOCATION,USER.PHNO,FEEDBACK.F_ID,FEEDBACK.W_ID,FEEDBACK.W_NAME,FEEDBACK.FEEDBACK
from USER join FEEDBACK on USER.U_ID=FEEDBACK.U_ID;
```

U_ID	U_NAME	LOCATION	PHNO	F_ID	W_ID	W_NAME	FEEDBACK
300	Arun	Thoppumpady	9234515643	500	204	Tony	Good worker
306	Surya	Pallimuk	9045634563	501	209	Alex	Nice worker