Practical Notes Of MYSQL

```
mysql> CREATE DATABASE DB2;
Query OK, 1 row affected (0.00 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| cyber_cafe         |
| db1                |
| db2                |
| mysql              |
| students           |
| test               |
+--------------------+
7 rows in set (0.00 sec)

mysql> CREATE TABLE STU(RNO  INT, NAME CHAR(20));
ERROR 1050 (42S01): Table 'stu' already exists
mysql> USE DB2;
Database changed
mysql> CREATE TABLE STU(RNO  INT, NAME CHAR(20));
Query OK, 0 rows affected (0.13 sec)

mysql> INSERT INTO STU VALUES(4,'SAKSHAM');
Query OK, 1 row affected (0.02 sec)


mysql> #values / value BOTH WORKS IN INSERT COMMAND
#HOWEVER VALUES IS BETTER AND UNIVERSAL

mysql> INSERT INTO STU VALUES(6,'DARSHIL');
Query OK, 1 row affected (0.11 sec)

mysql> SELECT * FROM STU;
+------+---------+
| RNO  | NAME    |
+------+---------+
|    4 | SAKSHAM |
|    6 | DARSHIL |
+------+---------+
2 rows in set (0.00 sec)

mysql> select database();
+------------+
| database() |
+------------+
| NULL       |
+------------+
1 row in set (0.00 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| cyber_cafe         |
```

```
| db1                |
| db2                |
| mysql              |
| students           |
| test               |
+--------------------+
7 rows in set (0.00 sec)

mysql> notee
mysql> use db2;
Database changed
mysql> show tables;
+---------------+
| Tables_in_db2 |
+---------------+
| stu           |
+---------------+
1 row in set (0.46 sec)

mysql> select * from stu;
+------+---------+
| RNO  | NAME    |
+------+---------+
|    4 | SAKSHAM |
|    6 | DARSHIL |
+------+---------+
2 rows in set (0.00 sec)

mysql> insert into stu values(8,'anuj');
Query OK, 1 row affected (0.11 sec)

mysql> insert into stu values(1,'ayush');
Query OK, 1 row affected (0.12 sec)

mysql> insert into stu values(18,'vivek');
Query OK, 1 row affected (0.02 sec)

mysql> insert into stu values(3,'aditya');
Query OK, 1 row affected (0.11 sec)

mysql> insert into stu values(9,'ankit');
Query OK, 1 row affected (0.02 sec)

mysql> insert into stu values(15,'harsh');
Query OK, 1 row affected (0.02 sec)

mysql> select * from stu;
+------+---------+
| RNO  | NAME    |
+------+---------+
|    4 | SAKSHAM |
|    6 | DARSHIL |
|    8 | anuj    |
|    1 | ayush   |
|   18 | vivek   |
|    3 | aditya  |
|    9 | ankit   |
|   15 | harsh   |
+------+---------+
8 rows in set (0.00 sec)
```

```
mysql> select name from stu;
+---------+
| name    |
+---------+
| SAKSHAM |
| DARSHIL |
| anuj    |
| ayush   |
| vivek   |
| aditya  |
| ankit   |
| harsh   |
+---------+
8 rows in set (0.00 sec)

mysql> select name,rno from stu;
+---------+------+
| name    | rno  |
+---------+------+
| SAKSHAM |    4 |
| DARSHIL |    6 |
| anuj    |    8 |
| ayush   |    1 |
| vivek   |   18 |
| aditya  |    3 |
| ankit   |    9 |
| harsh   |   15 |
+---------+------+
8 rows in set (0.00 sec)

mysql>
mysql> select sum(rno) from stu;
+----------+
| sum(rno) |
+----------+
|       64 |
+----------+
1 row in set (0.13 sec)

mysql> alter table stu add column marks int;
Query OK, 8 rows affected (0.17 sec)
Records: 8  Duplicates: 0  Warnings: 0

mysql> describe stu;
+-------+----------+------+-----+---------+-------+
| Field | Type     | Null | Key | Default | Extra |
+-------+----------+------+-----+---------+-------+
| RNO   | int(11)  | YES  |     | NULL    |       |
| NAME  | char(20) | YES  |     | NULL    |       |
| marks | int(11)  | YES  |     | NULL    |       |
+-------+----------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql> desc stu;
+-------+----------+------+-----+---------+-------+
| Field | Type     | Null | Key | Default | Extra |
+-------+----------+------+-----+---------+-------+
| RNO   | int(11)  | YES  |     | NULL    |       |
| NAME  | char(20) | YES  |     | NULL    |       |
```

```
| marks | int(11)  | YES  |     | NULL    |       |
+-------+----------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql> #rno name and marks are the name of the attributes

mysql> select * from stu;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    4 | SAKSHAM |  NULL |
|    6 | DARSHIL |  NULL |
|    8 | anuj    |  NULL |
|    1 | ayush   |  NULL |
|   18 | vivek   |  NULL |
|    3 | aditya  |  NULL |
|    9 | ankit   |  NULL |
|   15 | harsh   |  NULL |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> update stu set marks=99 where rno = 4;
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from stu;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    4 | SAKSHAM |    99 |
|    6 | DARSHIL |  NULL |
|    8 | anuj    |  NULL |
|    1 | ayush   |  NULL |
|   18 | vivek   |  NULL |
|    3 | aditya  |  NULL |
|    9 | ankit   |  NULL |
|   15 | harsh   |  NULL |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> update stu set marks=89 where rno = 15;
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from stu;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    4 | SAKSHAM |    99 |
|    6 | DARSHIL |  NULL |
|    8 | anuj    |  NULL |
|    1 | ayush   |  NULL |
|   18 | vivek   |  NULL |
|    3 | aditya  |  NULL |
|    9 | ankit   |  NULL |
|   15 | harsh   |    89 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> update stu set marks=75 where name='vivek';
```

```
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from stu;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    4 | SAKSHAM |    99 |
|    6 | DARSHIL |  NULL |
|    8 | anuj    |  NULL |
|    1 | ayush   |  NULL |
|   18 | vivek   |    75 |
|    3 | aditya  |  NULL |
|    9 | ankit   |  NULL |
|   15 | harsh   |    89 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> update stu set marks=66 where name='ayush';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from stu;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    4 | SAKSHAM |    99 |
|    6 | DARSHIL |  NULL |
|    8 | anuj    |  NULL |
|    1 | ayush   |    66 |
|   18 | vivek   |    75 |
|    3 | aditya  |  NULL |
|    9 | ankit   |  NULL |
|   15 | harsh   |    89 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> update stu set marks=80 where marks is null;
Query OK, 4 rows affected (0.11 sec)
Rows matched: 4  Changed: 4  Warnings: 0

mysql> select * from stu;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    4 | SAKSHAM |    99 |
|    6 | DARSHIL |    80 |
|    8 | anuj    |    80 |
|    1 | ayush   |    66 |
|   18 | vivek   |    75 |
|    3 | aditya  |    80 |
|    9 | ankit   |    80 |
|   15 | harsh   |    89 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> select * from stu order by marks;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
```

```
|    1 | ayush   |    66 |
|   18 | vivek   |    75 |
|    6 | DARSHIL |    80 |
|    8 | anuj    |    80 |
|    3 | aditya  |    80 |
|    9 | ankit   |    80 |
|   15 | harsh   |    89 |
|    4 | SAKSHAM |    99 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> select * from stu order by name
    -> ;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    3 | aditya  |    80 |
|    9 | ankit   |    80 |
|    8 | anuj    |    80 |
|    1 | ayush   |    66 |
|    6 | DARSHIL |    80 |
|   15 | harsh   |    89 |
|    4 | SAKSHAM |    99 |
|   18 | vivek   |    75 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> select * from stu order by name desc;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|   18 | vivek   |    75 |
|    4 | SAKSHAM |    99 |
|   15 | harsh   |    89 |
|    6 | DARSHIL |    80 |
|    1 | ayush   |    66 |
|    8 | anuj    |    80 |
|    9 | ankit   |    80 |
|    3 | aditya  |    80 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> select * from stu order by name asc;
+------+---------+-------+
| RNO  | NAME    | marks |
+------+---------+-------+
|    3 | aditya  |    80 |
|    9 | ankit   |    80 |
|    8 | anuj    |    80 |
|    1 | ayush   |    66 |
|    6 | DARSHIL |    80 |
|   15 | harsh   |    89 |
|    4 | SAKSHAM |    99 |
|   18 | vivek   |    75 |
+------+---------+-------+
8 rows in set (0.00 sec)

mysql> alter table stu add sec char;
Query OK, 8 rows affected (0.21 sec)
Records: 8  Duplicates: 0  Warnings: 0
```

```
mysql> ##column world after add is optional
mysql> #sdfdsf
mysql> #use # hash for comment in sql

mysql> select min(marks) , max (marks), sum(marks), avg(marks), count(*),
count(marks) from stu;
ERROR 1630 (42000): FUNCTION db2.max does not exist. Check the 'Function Name
Parsing and Resolution' section in the Reference Manual

mysql> #space between function name and ( is not allowed

mysql> select min(marks) , max(marks), sum(marks), avg(marks), count(*),
count(marks) from stu;
+------------+------------+------------+------------+----------+--------------+
| min(marks) | max(marks) | sum(marks) | avg(marks) | count(*) | count(marks) |
+------------+------------+------------+------------+----------+--------------+
|         66 |         99 |        649 |    81.1250 |        8 |            8 |
+------------+------------+------------+------------+----------+--------------+
1 row in set (0.00 sec)


mysql> #ie. max (marks) is invalid

mysql> insert into stu values(14,'ashish',null);
ERROR 1136 (21S01): Column count doesn't match value count at row 1


#value count means attributes are 4 and values are 3 -- mismatch

mysql> insert into stu values(14,'ashish',null,null);
Query OK, 1 row affected (0.10 sec)

mysql> select * from stu;
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    8 | anuj    |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
+------+---------+-------+------+
9 rows in set (0.00 sec)

mysql> select min(marks) , max(marks), sum(marks), avg(marks), count(*),
count(marks) from stu;
+------------+------------+------------+------------+----------+--------------+
| min(marks) | max(marks) | sum(marks) | avg(marks) | count(*) | count(marks) |
+------------+------------+------------+------------+----------+--------------+
|         66 |         99 |        649 |    81.1250 |        9 |            8 |
+------------+------------+------------+------------+----------+--------------+
1 row in set (0.00 sec)

mysql> #now count(*) is 9 total no of records and count(marks) is 8 ie. not null
data;
```

```
mysql> notee
mysql> selecttttttt
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near
'selecttttttt' at line 1
mysql> notee
mysql> tee b:\mysqlteaching.txt
mysql> notee
mysql> SELECT DATABASE();
+------------+
| DATABASE() |
+------------+
| NULL       |
+------------+
1 row in set (0.00 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| cyber_cafe         |
| db1                |
| db2                |
| mysql              |
| students           |
| test               |
+--------------------+
7 rows in set (0.03 sec)

mysql> USE DB1;
Database changed
mysql> SHOW TABLES;
+---------------+
| Tables_in_db1 |
+---------------+
| stu           |
+---------------+
1 row in set (0.12 sec)

mysql> SELEC * FROM STU;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'SELEC
* FROM STU' at line 1
mysql> SELECT* FROM STU;
+------+---------+
| RNO  | NAME    |
+------+---------+
|    4 | SAKSHAM |
|    6 | DARSHIL |
+------+---------+
2 rows in set (0.06 sec)

mysql> C/*/**
   /*> ;
   /*> /
   /*> C
   /*> mysql> ALTER STU ADD COLUMN SEC CHAR;
```

```
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'STU
ADD COLUMN SEC CHAR' at line 1
mysql> ALTER TABLE STU ADD COLUMN SEC CHAR;
Query OK, 2 rows affected (0.15 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM STU;
+------+---------+------+
| RNO  | NAME    | SEC  |
+------+---------+------+
|    4 | SAKSHAM | NULL |
|    6 | DARSHIL | NULL |
+------+---------+------+
2 rows in set (0.00 sec)

mysql> UPDATE STU SET SEC='A';
Query OK, 2 rows affected (0.09 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> SELECT * FROM STU;
+------+---------+------+
| RNO  | NAME    | SEC  |
+------+---------+------+
|    4 | SAKSHAM | A    |
|    6 | DARSHIL | A    |
+------+---------+------+
2 rows in set (0.00 sec)

mysql> SHOW TABLES;
+---------------+
| Tables_in_db1 |
+---------------+
| stu           |
+---------------+
1 row in set (0.00 sec)

mysql> USE DB2;
Database changed
mysql> SHOW TABLES;
+---------------+
| Tables_in_db2 |
+---------------+
| stu           |
| stu2          |
+---------------+
2 rows in set (0.00 sec)

mysql> SELECT * FROM STU2;
+------+---------+-------+------+---------+
| RNO  | NAME    | marks | sec  | teacher |
+------+---------+-------+------+---------+
|    4 | SAKSHAM |    99 | NULL | NULL    |
|    6 | DARSHIL |    80 | NULL | NULL    |
|    8 | anuj    |    80 | NULL | NULL    |
|    1 | ayush   |    66 | NULL | NULL    |
|   18 | vivek   |    75 | NULL | NULL    |
|    3 | aditya  |    80 | NULL | NULL    |
|    9 | ankit   |    80 | NULL | NULL    |
|   15 | harsh   |    89 | NULL | NULL    |
```

```
|   14 | ashish  |  NULL | NULL | NULL     |
|    6 | DARSHIL |  NULL | NULL | NULL     |
|    6 | DARSHIL |  NULL | NULL | NULL     |
+------+---------+-------+------+----------+
11 rows in set (0.02 sec)

mysql> INSERT INTO STU2 VALUE(15,'AMIT',97,'G','SATPAL SINGH');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM STU2;
+------+---------+-------+------+--------------+
| RNO  | NAME    | marks | sec  | teacher      |
+------+---------+-------+------+--------------+
|    4 | SAKSHAM |    99 | NULL | NULL         |
|    6 | DARSHIL |    80 | NULL | NULL         |
|    8 | anuj    |    80 | NULL | NULL         |
|    1 | ayush   |    66 | NULL | NULL         |
|   18 | vivek   |    75 | NULL | NULL         |
|    3 | aditya  |    80 | NULL | NULL         |
|    9 | ankit   |    80 | NULL | NULL         |
|   15 | harsh   |    89 | NULL | NULL         |
|   14 | ashish  |  NULL | NULL | NULL         |
|    6 | DARSHIL |  NULL | NULL | NULL         |
|    6 | DARSHIL |  NULL | NULL | NULL         |
|   15 | AMIT    |    97 | G    | SATPAL SINGH |
+------+---------+-------+------+--------------+
12 rows in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE NAME LIKE 'A%';
+------+--------+-------+------+--------------+
| RNO  | NAME   | marks | sec  | teacher      |
+------+--------+-------+------+--------------+
|    8 | anuj   |    80 | NULL | NULL         |
|    1 | ayush  |    66 | NULL | NULL         |
|    3 | aditya |    80 | NULL | NULL         |
|    9 | ankit  |    80 | NULL | NULL         |
|   14 | ashish |  NULL | NULL | NULL         |
|   15 | AMIT   |    97 | G    | SATPAL SINGH |
+------+--------+-------+------+--------------+
6 rows in set (0.01 sec)

mysql> SELECT * FROM STU2 WHERE NAME = 'A%';
Empty set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE NAME = BINARY 'A%';
Empty set (0.16 sec)

mysql> SELECT * FROM STU2 WHERE NAME LIKE BINARY 'A%';
+------+------+-------+------+--------------+
| RNO  | NAME | marks | sec  | teacher      |
+------+------+-------+------+--------------+
|   15 | AMIT |    97 | G    | SATPAL SINGH |
+------+------+-------+------+--------------+
1 row in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE BINARY NAME LIKE BINARY 'A%';
+------+------+-------+------+--------------+
| RNO  | NAME | marks | sec  | teacher      |
+------+------+-------+------+--------------+
|   15 | AMIT |    97 | G    | SATPAL SINGH |
```

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

mysql> SELECT * FROM STU2 WHERE BINARY NAME LIKE 'A%';
+------+------+-------+------+-------------+
| RNO  | NAME | marks | sec  | teacher     |
+------+------+-------+------+-------------+
|   15 | AMIT |    97 | G    | SATPAL SINGH |
+------+------+-------+------+-------------+
1 row in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE BINARY NAME LIKE 'a%';
+------+--------+-------+------+---------+
| RNO  | NAME   | marks | sec  | teacher |
+------+--------+-------+------+---------+
|    8 | anuj   |    80 | NULL | NULL    |
|    1 | ayush  |    66 | NULL | NULL    |
|    3 | aditya |    80 | NULL | NULL    |
|    9 | ankit  |    80 | NULL | NULL    |
|   14 | ashish |  NULL | NULL | NULL    |
+------+--------+-------+------+---------+
5 rows in set (0.00 sec)

mysql> # the world binary makes the comparision case sensitive.
mysql> # the world "binary" makes the comparision case sensitive.
mysql> SELECT * FROM STU2;
+------+---------+-------+------+-------------+
| RNO  | NAME    | marks | sec  | teacher     |
+------+---------+-------+------+-------------+
|    4 | SAKSHAM |    99 | NULL | NULL        |
|    6 | DARSHIL |    80 | NULL | NULL        |
|    8 | anuj    |    80 | NULL | NULL        |
|    1 | ayush   |    66 | NULL | NULL        |
|   18 | vivek   |    75 | NULL | NULL        |
|    3 | aditya  |    80 | NULL | NULL        |
|    9 | ankit   |    80 | NULL | NULL        |
|   15 | harsh   |    89 | NULL | NULL        |
|   14 | ashish  |  NULL | NULL | NULL        |
|    6 | DARSHIL |  NULL | NULL | NULL        |
|    6 | DARSHIL |  NULL | NULL | NULL        |
|   15 | AMIT    |    97 | G    | SATPAL SINGH |
+------+---------+-------+------+-------------+
12 rows in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE NAME LIKE '_a%';
+------+---------+-------+------+---------+
| RNO  | NAME    | marks | sec  | teacher |
+------+---------+-------+------+---------+
|    4 | SAKSHAM |    99 | NULL | NULL    |
|    6 | DARSHIL |    80 | NULL | NULL    |
|   15 | harsh   |    89 | NULL | NULL    |
|    6 | DARSHIL |  NULL | NULL | NULL    |
|    6 | DARSHIL |  NULL | NULL | NULL    |
+------+---------+-------+------+---------+
5 rows in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE NAME LIKE '%h';
+------+--------+-------+------+---------+
| RNO  | NAME   | marks | sec  | teacher |
+------+--------+-------+------+---------+
```

```
|    1 | ayush  |    66 | NULL | NULL    |
|   15 | harsh  |    89 | NULL | NULL    |
|   14 | ashish |  NULL | NULL | NULL    |
+------+--------+-------+------+---------+
3 rows in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE NAME LIKE 's_';
Empty set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE NAME LIKE '%s_';
+------+--------+-------+------+---------+
| RNO  | NAME   | marks | sec  | teacher |
+------+--------+-------+------+---------+
|    1 | ayush  |    66 | NULL | NULL    |
|   15 | harsh  |    89 | NULL | NULL    |
|   14 | ashish |  NULL | NULL | NULL    |
+------+--------+-------+------+---------+
3 rows in set (0.00 sec)

mysql> #   _ and  % are known as wild card charactes
mysql> #  _ means any one character
mysql> #  % means any number of any characters
mysql> # % also denotes zero character
mysql> SELECT * FROM STU2;
+------+---------+-------+------+--------------+
| RNO  | NAME    | marks | sec  | teacher      |
+------+---------+-------+------+--------------+
|    4 | SAKSHAM |    99 | NULL | NULL         |
|    6 | DARSHIL |    80 | NULL | NULL         |
|    8 | anuj    |    80 | NULL | NULL         |
|    1 | ayush   |    66 | NULL | NULL         |
|   18 | vivek   |    75 | NULL | NULL         |
|    3 | aditya  |    80 | NULL | NULL         |
|    9 | ankit   |    80 | NULL | NULL         |
|   15 | harsh   |    89 | NULL | NULL         |
|   14 | ashish  |  NULL | NULL | NULL         |
|    6 | DARSHIL |  NULL | NULL | NULL         |
|    6 | DARSHIL |  NULL | NULL | NULL         |
|   15 | AMIT    |    97 | G    | SATPAL SINGH |
+------+---------+-------+------+--------------+
12 rows in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE BINARY NAME LIKE 'h%';
+------+-------+-------+------+---------+
| RNO  | NAME  | marks | sec  | teacher |
+------+-------+-------+------+---------+
|   15 | harsh |    89 | NULL | NULL    |
+------+-------+-------+------+---------+
1 row in set (0.00 sec)

mysql> SELECT * FROM STU2 WHERE BINARY NAME LIKE '%h%';
+------+--------+-------+------+---------+
| RNO  | NAME   | marks | sec  | teacher |
+------+--------+-------+------+---------+
|    1 | ayush  |    66 | NULL | NULL    |
|   15 | harsh  |    89 | NULL | NULL    |
|   14 | ashish |  NULL | NULL | NULL    |
+------+--------+-------+------+---------+
3 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM STU2;
+------+---------+-------+------+--------------+
| RNO  | NAME    | marks | sec  | teacher      |
+------+---------+-------+------+--------------+
|    4 | SAKSHAM |    99 | NULL | NULL         |
|    6 | DARSHIL |    80 | NULL | NULL         |
|    8 | anuj    |    80 | NULL | NULL         |
|    1 | ayush   |    66 | NULL | NULL         |
|   18 | vivek   |    75 | NULL | NULL         |
|    3 | aditya  |    80 | NULL | NULL         |
|    9 | ankit   |    80 | NULL | NULL         |
|   15 | harsh   |    89 | NULL | NULL         |
|   14 | ashish  |  NULL | NULL | NULL         |
|    6 | DARSHIL |  NULL | NULL | NULL         |
|    6 | DARSHIL |  NULL | NULL | NULL         |
|   15 | AMIT    |    97 | G    | SATPAL SINGH |
+------+---------+-------+------+--------------+
12 rows in set (0.00 sec)

mysql> update stu2 set name='hari datt' where name='DARshil' and marks is null;
Query OK, 2 rows affected (0.12 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> SELECT * FROM STU2;
+------+-----------+-------+------+--------------+
| RNO  | NAME      | marks | sec  | teacher      |
+------+-----------+-------+------+--------------+
|    4 | SAKSHAM   |    99 | NULL | NULL         |
|    6 | DARSHIL   |    80 | NULL | NULL         |
|    8 | anuj      |    80 | NULL | NULL         |
|    1 | ayush     |    66 | NULL | NULL         |
|   18 | vivek     |    75 | NULL | NULL         |
|    3 | aditya    |    80 | NULL | NULL         |
|    9 | ankit     |    80 | NULL | NULL         |
|   15 | harsh     |    89 | NULL | NULL         |
|   14 | ashish    |  NULL | NULL | NULL         |
|    6 | hari datt |  NULL | NULL | NULL         |
|    6 | hari datt |  NULL | NULL | NULL         |
|   15 | AMIT      |    97 | G    | SATPAL SINGH |
+------+-----------+-------+------+--------------+
12 rows in set (0.00 sec)

mysql> # use "is" or "is not" with null
mysql> alter table stu2 add sno auto_increment;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near
'auto_increment' at line 1
mysql> alter table stu2 add sno int;
Query OK, 12 rows affected (0.11 sec)
Records: 12  Duplicates: 0  Warnings: 0

mysql> no tee
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'no
tee' at line 1
mysql> note
```

```
SQL> CREATE TABLE STUDENT
( RNO NUMBER, NAME CHAR(9), SEX CHAR, MARKS NUMBER);

Table created.

SQL> DESCRIBE STUDENT;
 Name                            Null?    Type
 ------------------------------- -------- ----
 RNO                                      NUMBER
 NAME                                     CHAR(9)
 SEX                                      CHAR(1)
 MARKS                                    NUMBER

SQL> DESC STUDENT;
 Name                            Null?    Type
 ------------------------------- -------- ----
 RNO                                      NUMBER
 NAME                                     CHAR(9)
 SEX                                      CHAR(1)
 MARKS                                    NUMBER

SQL> INSERT INTO STUDENT VALUES(3,'AJAY','M',80);
1 row created.

SQL> INSERT INTO STUDENT VALUES ( 7, 'RAHUL','M',77);
1 row created.

SQL> INSERT INTO STUDENT VALUES ( 8,'AYUSH','M',66);
1 row created.

SQL> INSERT INTO STUDENT VALUES (1,'CHARU','F',87);
1 row created.

SQL> INSERT INTO STUDENT VALUES (11,'NEETU','F',30);
1 row created.

SQL> INSERT INTO STUDENT VALUES (14,'NAKUL','M',23);
1 row created.

SQL> INSERT INTO STUDENT VALUES (17,'DEEPTI','F',60);
1 row created.

SQL> INSERT INTO STUDENT VALUES (21,NULL,null,91);
1 row created.
Null means absence of value.
Don’t use quotes over null.
‘null’ means null is a name of a student.

SQL> insert into student (sex,name) values('M','MOHIT');
1 row created.
```

*** means all of the attributes**

```
SQL> SELECT * FROM STUDENT;
      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPTI    F        60
       21                    91
          MOHIT     M

10 rows selected.
```

PROJECTION: TO DISPLAY FEW OF THE ATTRIBUTES ONLY.

```
SQL> SELECT NAME,RNO,MARKS FROM STUDENT;

NAME            RNO     MARKS
--------- --------- ---------
AJAY              3        80
PAWAN             5        50
RAHUL             7        77
AYUSH             8        66
CHARU             1        87
NEETU            11        30
NAKUL            14        23
DEEPTI           17        60
                 21        91
MOHIT

10 rows selected.
```

SELECTION: TO DISPLAY FEW OF THE TUPLES ONLY. IT IS FILTERING THE RECORDS

WHERE CLAUSE: IT CAN BE ACHIVED USING WHERE CLAUSE.

```
SQL> SELECT *
  2  FROM STUDENT
  3  WHERE
  4  MARKS > 50;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       17 DEEPTI    F        60
       21                    91

6 rows selected.
```

LIST OF RELATIONAL OPRATORS
<,>,<=,>=,=,
!= OR <> (BOTH MEANS SAME I.E. NOT EQULA TO)

DONT EVER USE = =

```
SQL> SELECT * FROM STUDENT WHERE SEX <> 'M';
          Or
SQL> SELECT * FROM STUDENT WHERE SEX != 'M';
          Or
SQL> SELECT * FROM STUDENT WHERE NOT (SEX = 'M');
```

All of above 3 statements shell be having the following output:

```
       RNO NAME      S     MARKS
---------- --------- - ---------
         1 CHARU     F        87
        11 NEETU     F        30
        17 DEEPTI    F        60
```

THERE ARE THREE LOGICAL OPERATORS **AND, OR, NOT**

AND means → that both (all) of the conditions should satisfy the same record.

```
SQL> SELECT * FROM STUDENT WHERE SEX='F' AND MARKS>50;

       RNO NAME      S     MARKS
---------- --------- - ---------
         1 CHARU     F        87
        17 DEEPTI    F        60
```

OR means → at least one of the condition should satisfy on the record.

```
SQL> SELECT * FROM STUDENT WHERE SEX='F' OR MARKS>50;

       RNO NAME      S     MARKS
---------- --------- - ---------
         3 AJAY      M        80
         7 RAHUL     M        77
         8 AYUSH     M        66
         1 CHARU     F        87
        11 NEETU     F        30
        17 DEEPTI    F        60
        21                    91

7 rows selected.
```

ORDER BY CLAUSE

In case of ascending order the NULL would appear at the bottom.
In case of descending order the NULL would appear at the top.

```
SQL> SELECT * FROM STUDENT ORDER BY NAME;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M         80
        8 AYUSH     M         66
        1 CHARU     F         87
       17 DEEPTI    F         60
          MOHIT     M
       14 NAKUL     M         23
       11 NEETU     F         30
        5 PAWAN     M         50
        7 RAHUL     M         77
       21                     91

10 rows selected.

SQL>  SELECT * FROM STUDENT ORDER BY MARKS DESC;

      RNO NAME      S     MARKS
--------- --------- - ---------
          MOHIT     M
       21                     91
        1 CHARU     F         87
        3 AJAY      M         80
        7 RAHUL     M         77
        8 AYUSH     M         66
       17 DEEPTI    F         60
        5 PAWAN     M         50
       11 NEETU     F         30
       14 NAKUL     M         23

10 rows selected.


SQL> SELECT NAME FROM STUDENT ORDER BY MARKS ASC;

NAME
---------
NAKUL
NEETU
PAWAN
DEEPTI
AYUSH
RAHUL
AJAY
CHARU

MOHIT

10 rows selected.
```

Aggregate functions: SUM(), MIN( ), MAX( ), AVG( ), COUNT(*), COUNT

```
SQL> SELECT * FROM STUDENT;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPTI    F        60
       21                    91
          MOHIT     M

10 rows selected.


SQL> SELECT SUM(MARKS) FROM STUDENT WHERE SEX='F';
SUM(MARKS)
----------
      177


SQL> SELECT MIN(RNO),MAX(MARKS),AVG(MARKS) FROM STUDENT;

 MIN(RNO) MAX(MARKS) AVG(MARKS)
--------- ---------- ----------
        1         91  62.666667

SQL> SELECT AVG(MARKS), COUNT(*) FROM STUDENT WHERE SEX ='F';

AVG(MARKS)  COUNT(*)
---------- ---------
        59         3

SQL> SELECT COUNT(*) FROM STUDENT;

 COUNT(*)
---------
       10

SQL>

SQL> SELECT COUNT(MARKS) FROM STUDENT WHERE SEX='M';

COUNT(MARKS)
------------
           5


SQL> SELECT COUNT(*) FROM STUDENT  WHERE SEX='M';

 COUNT(*)
---------
        6
```

There are two wild card characters (in the syllabus)
1. (underscore) _ (Any one character)
2. (Percentage) % (Any number of any characters.) (May be 0(zero)).

Always use **"like"** instead of **"="** while using wild card characters.

```
SQL> select * from student where name like '_A%';

      RNO NAME      S     MARKS
--------- --------- - ---------
        5 PAWAN     M        50
        7 RAHUL     M        77
       14 NAKUL     M        23

SQL> select * from student;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPTI    F        60
       21                    91
          MOHIT     M

10 rows selected.

SQL> select * from student where name like 'A%';

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        8 AYUSH     M        66

SQL> select * from student where name like '%s%';

no rows selected

//s is in lower case and in the table no lower case s is used.

SQL> select * from student where name like '%S%';

      RNO NAME      S     MARKS
--------- --------- - ---------
        8 AYUSH     M        66
```

% also refers to 0 (zero) character.

```
SQL> select * from student where name like '%U%';

       RNO NAME      S     MARKS
---------- --------- - ---------
         7 RAHUL     M        77
         8 AYUSH     M        66
         1 CHARU     F        87
        11 NEETU     F        30
        14 NAKUL     M        23

SQL>
```

BETWEEN - AND CLAUSE: THE BETWEEN CLAUSE ALWAYS CONSIDER THE VALUE INCLUSIVELY.

```
SQL> SELECT * FROM STUDENT WHERE MARKS BETWEEN 77 AND 88


       RNO NAME      S     MARKS
---------- --------- - ---------
         3 AJAY      M        80
         7 RAHUL     M        77
         1 CHARU     F        87

SQL>  SELECT * FROM STUDENT WHERE MARKS >=77 AND MARKS <=88;

       RNO NAME      S     MARKS
---------- --------- - ---------
         3 AJAY      M        80
         7 RAHUL     M        77
         1 CHARU     F        87
```

IN CLAUSE

It generates a logical result true ifs any of the value matches .

```
SQL> select * from student where name in ('AJAY', 'CHARU', 'DEEPTI');

       RNO NAME      S     MARKS
---------- --------- - ---------
         3 AJAY      M        80
         1 CHARU     F        87
        17 DEEPTI    F        60

SQL> SELECT * FROM STUDENT
  2  WHERE NAME = 'AJAY' OR NAME = 'CHARU' OR NAME='DEEPTI';

       RNO NAME      S     MARKS
---------- --------- - ---------
         3 AJAY      M        80
         1 CHARU     F        87
        17 DEEPTI    F        60
```

TO COPY AN EXISTING TABLE TO A NEW TABLE.

CREATE TABLE “NewTableName“ AS SELECT * FROM “ExisgingTableName”;

```
SQL> CREATE TABLE STUD AS SELECT * FROM STUDENT;

Table created.

SQL> SELECT * FROM STUD;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPTI    F        60
       21                    91
          MOHIT     M

10 rows selected.
```

UPDATE: THIS STATEMENT IS USED TO CHANGE THE VALUES (DATA) IN A TABLE (RELATION).

```
SQL> UPDATE STUDENT SET NAME ='DEEPA' WHERE NAME='DEEPTI';

1 row updated.

SQL> SELECT * FROM STUDENT;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPA     F        60
       21                    91
          MOHIT     M

10 rows selected.
```

ALWAYS USE “IS NULL” OR use “IS NOT NULL”
“= NULL” OR “<> NULL” IS NOT ALLOWED **IN THE CONDITION**

```
SQL> UPDATE STUDENT SET NAME ='VINAY'WHERE NAME IS NULL;

1 row updated.
```

```
SQL> SELECT * FROM STUDENT;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPA     F        60
       21 VINAY              91
          MOHIT     M

10 rows selected.


SQL> UPDATE STUDENT SET MARKS=MARKS+10 WHERE MARKS <35;

2 rows updated.

SQL> SELECT * FROM STUDENT;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        40
       14 NAKUL     M        33
       17 DEEPA     F        60
       21 VINAY              91
          MOHIT     M

10 rows selected.

SQL>  UPDATE STUDENT SET SEX='M' WHERE MARKS=91;

1 row updated.

SQL> SELECT * FROM STUDENT;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        40
       14 NAKUL     M        33
       17 DEEPA     F        60
       21 VINAY     M        91
          MOHIT     M

10 rows selected.
```

WE USE =NULL WHILE ASSIGNING THE NULL VALUE.

```
SQL> UPDATE STUDENT SET NAME=NULL WHERE NAME LIKE 'A%';

2 rows updated.

SQL> SELECT * FROM STUDENT;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3           M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8           M        66
        1 CHARU     F        87
       11 NEETU     F        40
       14 NAKUL     M        33
       17 DEEPA     F        60
       21 VINAY     M        91
          MOHIT     M

10 rows selected.
```

=NULL IS NOT ALLOWED IN THE CONDITION

```
SQL> SELECT * FROM STUDENT WHERE NAME = NULL;

no rows selected
```

=> DELETE FROM : DELETE FROM STATEMENT IS USED TO DELETE TUPLE(S) FORM A RELATION.

DON'T EVER USE DELETE *
ALWAYS USE DELETE FROM ……

IF WE WANT TO DELETE, THE WHOLE OF THE RECORD MAY BE DELETED, NOT THE PARTIAL ONE.

The SQL Statement "Delete from student;" would delete all of the records of the table student, but still the structure of the table student exist. That means you don't require to create the table student again (using statement create table student …) in order to insert the records into the table student.
You may simply use the insert into … to add record to the table student.

```
SQL> DELETE FROM STUDENT WHERE NAME IS NULL
2 rows deleted.

SQL> SELECT * FROM STUDENT;
      RNO NAME      S     MARKS
--------- --------- - ---------
        5 PAWAN     M        50
        7 RAHUL     M        77
        1 CHARU     F        87
       11 NEETU     F        40
       14 NAKUL     M        33
       17 DEEPA     F        60
       21 VINAY     M        91
          MOHIT     M

8 rows selected.
```

DROP

The drop command is used to delete the table or view permanently.
It deletes even the structure of the table. That means no data can be added later.

```
SQL> drop table student;
Table dropped.

SQL> create table student as select * from stud;
Table created.

SQL> select * from student;

      RNO NAME      S     MARKS
--------- --------- - ---------
        3 AJAY      M        80
        5 PAWAN     M        50
        7 RAHUL     M        77
        8 AYUSH     M        66
        1 CHARU     F        87
       11 NEETU     F        30
       14 NAKUL     M        23
       17 DEEPTI    F        60
       21                    91
          MOHIT     M

10 rows selected.
```

A DDL statement

Alter is used to modify the structure of the table.

```
SQL> alter table student modify (sex char(6));

Table altered.

SQL> desc student;
 Name                            Null?    Type
 ------------------------------- -------- ----
 RNO                                      NUMBER
 NAME                                     CHAR(9)
 SEX                                      CHAR(6)
 MARKS                                    NUMBER

SQL> update student set sex='MALE' WHERE SEX='M';

6 rows updated.

SQL> update student set sex='FEMALE' WHERE SEX='F';

3 rows updated.
```

```
SQL> SELECT * FROM STUDENT;

      RNO NAME      SEX        MARKS
--------- --------- ------ ---------
        3 AJAY      MALE          80
        5 PAWAN     MALE          50
        7 RAHUL     MALE          77
        8 AYUSH     MALE          66
        1 CHARU     FEMALE        87
       11 NEETU     FEMALE        30
       14 NAKUL     MALE          23
       17 DEEPTI    FEMALE        60
       21                         91
          MOHIT     MALE

10 rows selected.

SQL> ALTER TABLE STUDENT ADD(GRADE CHAR);

Table altered.

SQL> SELECT * FROM STUDENT;

      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        3 AJAY      MALE          80
        5 PAWAN     MALE          50
        7 RAHUL     MALE          77
        8 AYUSH     MALE          66
        1 CHARU     FEMALE        87
       11 NEETU     FEMALE        30
       14 NAKUL     MALE          23
       17 DEEPTI    FEMALE        60
       21                         91
          MOHIT     MALE

10 rows selected.


USE DOULE QUOTES TO CHANGE THE HEAD OF THE ATTRIBUTE. (" ")

SELECT ATTRIBUTENAME(SPACE)"NEWHEADNAME" ----

SQL> SELECT NAME,SEX "GENDER" FROM STUDENT;

NAME      GENDER
--------- ------
AJAY      MALE
PAWAN     MALE
RAHUL     MALE
AYUSH     MALE
CHARU     FEMALE
NEETU     FEMALE
NAKUL     MALE
DEEPTI    FEMALE

MOHIT     MALE
```

```
10 rows selected.
```

View: View is a virtual table with no data but can be operated like any other table. It is like a window through which a part of a table can be viewed. No separate memory is allocated for the data visible through the view.

```
SQL> select * from student;

      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        3 AJAY      MALE          80
        5 PAWAN     MALE          50
        7 RAHUL     MALE          77
        8 AYUSH     MALE          66
        1 CHARU     FEMALE        87
       11 NEETU     FEMALE        30
       14 NAKUL     MALE          23
       17 DEEPTI    FEMALE        60
       21                         91
          MOHIT     MALE

10 rows selected.

SQL> create view best as select * from student  where marks>80;

View created.

SQL> select * from best;

      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        1 CHARU     FEMALE        87
       21                         91
2 rows selected.

SQL> update best set name = 'KAVITA' WHERE MARKS=91;

1 row updated.

SQL> SELECT * FROM BEST
  2  ;

      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        1 CHARU     FEMALE        87
       21 KAVITA                  91
2 rows selected.
```

```
SQL> SELECT * FROM STUDENT;

      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        3 AJAY      MALE          80
        5 PAWAN     MALE          50
        7 RAHUL     MALE          77
        8 AYUSH     MALE          66
        1 CHARU     FEMALE        87
       11 NEETU     FEMALE        30
       14 NAKUL     MALE          23
       17 DEEPTI    FEMALE        60
       21 KAVITA                  91
          MOHIT     MALE

10 rows selected.

SQL> UPDATE STUDENT SET MARKS=99 WHERE MARKS=50;

1 row updated.

SQL> SELECT * FROM BEST;

      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        5 PAWAN     MALE          99
        1 CHARU     FEMALE        87
       21 KAVITA                  91
3 rows selected.


SQL> CREATE VIEW PORJ AS SELECT NAME,SEX FROM STUDENT;

View created.

SQL> SELECT * FROM PORJ;

NAME      SEX
--------- ------
AJAY      MALE
PAWAN     MALE
RAHUL     MALE
AYUSH     MALE
CHARU     FEMALE
NEETU     FEMALE
NAKUL     MALE
DEEPTI    FEMALE
KAVITA
MOHIT     MALE

10 rows selected.

SQL> DROP VIEW PORJ;

View dropped.
```

Creating a view form a view

```
SQL> CREATE VIEW B AS SELECT RNO,SEX FROM BEST;

View created.

SQL> SELECT * FROM B;

      RNO SEX
--------- ------
        5 MALE
        1 FEMALE
       21


SQL> select max (marks) from student;

MAX(MARKS)
----------
        99

SQL> select name from student where marks=99;

NAME
---------
PAWAN
```

SUBQUERY: A query within a query.

```
SQL> select name from student where marks=(select max(marks) from student);

NAME
---------
PAWAN

SQL> select avg(marks) from student;

AVG(MARKS)
----------
 68.111111

SQL>  select * from student
2    where marks> (select avg(marks) from student)


      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        3 AJAY      MALE          80
        5 PAWAN     MALE          99
        7 RAHUL     MALE          77
        1 CHARU     FEMALE        87
       21 KAVITA                  91
```

Order By (Within)

```
SQL> select * from student;
      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        3 AJAY      MALE          80
        5 PAWAN     MALE          99
        7 RAHUL     MALE          77
        8 AYUSH     MALE          66
        1 CHARU     FEMALE        87
       11 NEETU     FEMALE        30
       14 NAKUL     MALE          23
       17 DEEPTI    FEMALE        60
       21 KAVITA                  91
          MOHIT     MALE

10 rows selected.

SQL> select * from student order by sex;
      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        1 CHARU     FEMALE        87
       11 NEETU     FEMALE        30
       17 DEEPTI    FEMALE        60
        3 AJAY      MALE          80
        5 PAWAN     MALE          99
          MOHIT     MALE
       14 NAKUL     MALE          23
        7 RAHUL     MALE          77
        8 AYUSH     MALE          66
       21 KAVITA                  91

10 rows selected.

SQL> select * from student order by sex,name;
      RNO NAME      SEX        MARKS G
--------- --------- ------ --------- -
        1 CHARU     FEMALE        87
       17 DEEPTI    FEMALE        60
       11 NEETU     FEMALE        30
        3 AJAY      MALE          80
        8 AYUSH     MALE          66
          MOHIT     MALE
       14 NAKUL     MALE          23
        5 PAWAN     MALE          99
        7 RAHUL     MALE          77
       21 KAVITA                  91

10 rows selected.
```

To read further:
Distinct clause
Various constraints that can be given while creating a table i.e. primary key
Sysdate
Dual
String functions
Groub by clause and having clause
Equi join

```
Enter password: ***
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.1.73-community MySQL Community Server (GPL)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use db2
Database changed
mysql> select * from stu;
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    8 | anuj    |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
11 rows in set (0.58 sec)

mysql> select * from stu where name <> 'anuj';
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
10 rows in set (0.00 sec)

mysql> select * from stu where name != 'anuj';
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
```

```
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
10 rows in set (0.00 sec)

mysql> select * from stu where not name = 'anuj';
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
10 rows in set (0.00 sec)

mysql> select
    -> *
    -> from
    -> stu
    -> ;
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    8 | anuj    |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
11 rows in set (0.00 sec)

mysql> select * from stu where name = 'ankit;
    '>
    '>
    '>
    '>
    '>
    '> dfg
    '> dfg
    '> dfg
    '> dfgfg
    '> h
    '> fgh
    '> '
```

```
    ->
    -> jkl
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'jkl'
at line 3
mysql> select count (*) from stu;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near '*) fr
om stu' at line 1
mysql> select * from stu where name = 'ankit;
    '> ';
Empty set (0.00 sec)

mysql> select * from stu where not name = 'anuj';
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
10 rows in set (0.00 sec)

mysql> select count* from stu where not name = 'anuj';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'from
stu where not name = 'anuj'' at line 1
mysql> select count(*) from stu where not name = 'anuj';
+----------+
| count(*) |
+----------+
|       10 |
+----------+
1 row in set (0.02 sec)

mysql> select count(*) from stu;
+----------+
| count(*) |
+----------+
|       11 |
+----------+
1 row in set (0.00 sec)

mysql> #dont give space after function name ever.
mysql> select * from stu ;
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | DARSHIL |    80 | NULL |
|    8 | anuj    |    80 | NULL |
|    1 | ayush   |    66 | NULL |
```

```
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
|    6 | DARSHIL |  NULL | NULL |
+------+---------+-------+------+
11 rows in set (0.00 sec)

mysql> UPDATE STU SET NAME=NULL WHERE NAME = 'DARSHIL'
    -> ;
Query OK, 3 rows affected (0.02 sec)
Rows matched: 3  Changed: 3  Warnings: 0

mysql> select * from stu ;
+------+---------+-------+------+
| RNO  | NAME    | marks | sec  |
+------+---------+-------+------+
|    4 | SAKSHAM |    99 | NULL |
|    6 | NULL    |    80 | NULL |
|    8 | anuj    |    80 | NULL |
|    1 | ayush   |    66 | NULL |
|   18 | vivek   |    75 | NULL |
|    3 | aditya  |    80 | NULL |
|    9 | ankit   |    80 | NULL |
|   15 | harsh   |    89 | NULL |
|   14 | ashish  |  NULL | NULL |
|    6 | NULL    |  NULL | NULL |
|    6 | NULL    |  NULL | NULL |
+------+---------+-------+------+
11 rows in set (0.00 sec)

mysql>
```