mysql> use book;

Database changed

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | int | YES | | NULL | |

| price | int | YES | | NULL | |

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

5 rows in set (0.00 sec)

**Modify Table:-**

mysql> alter table book modify column bname varchar(20);

Query OK, 5 rows affected (0.13 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(20) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | int | YES | | NULL | |

| price | int | YES | | NULL | |

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

5 rows in set (0.00 sec)

**Q 1. Modify column**

mysql> alter table book modify column bname varchar(50);

Query OK, 0 rows affected (0.23 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | int | YES | | NULL | |

| price | int | YES | | NULL | |

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

5 rows in set (0.00 sec)

**Q 2. Modify column**

mysql> alter table book modify column publication double;

Query OK, 5 rows affected (0.17 sec)

Records: 5 Duplicates: 0 Warnings: 0

**Add Table:-**

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| price | int | YES | | NULL | |

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

5 rows in set (0.01 sec)

**Q 1. Add column**

mysql> alter table book add column version varchar(50);

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| price | int | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

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

6 rows in set (0.01 sec)

**Q 2. Add column**

mysql> alter table book add column libraryno int;

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| price | int | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| libraryno | int | YES | | NULL | |

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

7 rows in set (0.00 sec)

**Q 3. Add column**

mysql> alter table book add column bookimage varchar(50);

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| price | int | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| libraryno | int | YES | | NULL | |

| bookimage | varchar(50) | YES | | NULL | |

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

8 rows in set (0.00 sec)

**Drop Column:-**

mysql> alter table book drop column price;

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| libraryno | int | YES | | NULL | |

| bookimage | varchar(50) | YES | | NULL | |

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

7 rows in set (0.00 sec)

**Q 1. drop column**

mysql> alter table book drop column libraryno;

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| bname | varchar(50) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| bookimage | varchar(50) | YES | | NULL | |

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

6 rows in set (0.00 sec)

**Rename Table:-**

mysql> alter table book change column bname book\_name varchar(20);

Query OK, 5 rows affected (0.12 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| bid | int | YES | | NULL | |

| book\_name | varchar(20) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| bookimage | varchar(50) | YES | | NULL | |

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

6 rows in set (0.00 sec)

**Q 1. Rename column-**

mysql> alter table book change column bid book\_id int;

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| book\_id | int | YES | | NULL | |

| book\_name | varchar(20) | YES | | NULL | |

| Author | varchar(20) | YES | | NULL | |

| publication | double | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| bookimage | varchar(50) | YES | | NULL | |

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

6 rows in set (0.00 sec)

**Q 2. Rename column-**

mysql> alter table book change column author book\_author varchar(50);

Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc book;

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

| Field | Type | Null | Key | Default | Extra |

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

| book\_id | int | YES | | NULL | |

| book\_name | varchar(20) | YES | | NULL | |

| book\_author | varchar(50) | YES | | NULL | |

| publication | double | YES | | NULL | |

| version | varchar(50) | YES | | NULL | |

| bookimage | varchar(50) | YES | | NULL | |

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

**SQL NOT NULL CONSRAINT**

mysql> create table patient(id int not null,lastname varchar(255) not null,fristname varchar(255) not null,age int);

Query OK, 0 rows affected (0.06 sec)

mysql> desc patient;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | | NULL | |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | NO | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.01 sec)

**Q 2. NULL column-**

mysql> create table person(id int not null,lastname varchar(255) not null,fristname varchar(255) not null,age int);

Query OK, 0 rows affected (0.03 sec)

mysql> desc person;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | | NULL | |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | NO | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

**Q 2. NULL column-**

mysql> create table patient(id int ,lastname varchar(255) not null,fristname varchar(255) not null,age int);

ERROR 1050 (42S01): Table 'patient' already exists

mysql> create table candidate(id int,lastname varchar(255) not null,fristname varchar(255) not null,age int);

Query OK, 0 rows affected (0.04 sec)

mysql> desc candidate;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | YES | | NULL | |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | NO | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

**SQL UNIQUE CONSTAINT ON CREATE TABLE**

mysql> create table persons(id int not null unique,lastname varchar(255) not null,fristname varchar(255),age int);

Query OK, 0 rows affected (0.04 sec)

mysql> desc persons;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | PRI | NULL | |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

**Q 1,MySQL**

create table p(id int not null unique,lastname varchar(255),fristname varchar(255),age int,unique(id));

Query OK, 0 rows affected, 1 warning (0.17 sec)

mysql> desc p;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | PRI | NULL | |

| lastname | varchar(255) | YES | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.01 sec)

**SQL UNIQUE CONSTAINT ON ALTER TABLE**

**ADD:-**

mysql> desc person;

ERROR 1146 (42S02): Table 'oit.person' doesn't exist

mysql> create table person(id int,fristname varchar(255),lastname varchar(255));

Query OK, 0 rows affected (0.04 sec)

mysql> desc person;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | YES | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| lastname | varchar(255) | YES | | NULL | |

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

3 rows in set (0.00 sec)

**ADD CONSTRAINT-**

mysql> alter table person add constraint oit unique(id,lastname);

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc person;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | YES | MUL | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| lastname | varchar(255) | YES | | NULL | |

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

3 rows in set (0.00 sec)

**DROP CONSTAINT**

mysql> alter table person drop constraint oit;

Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc person;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | YES | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| lastname | varchar(255) | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> create table per(id int not null,lastname varchar(255)not null,fristname varchar(255),age int,constraint oit unique(id,lastname));

Query OK, 0 rows affected (0.04 sec)

mysql> desc per;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | PRI | NULL | |

| lastname | varchar(255) | NO | PRI | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.01 sec)

mysql> insert into per values(101,'abc','xyz',23),(102,'abc','xyz',23);

Query OK, 2 rows affected (0.01 sec)

Records: 2 Duplicates: 0 Warnings: 0

mysql> select\* from per;

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

| id | lastname | fristname | age |

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

| 101 | abc | xyz | 23 |

| 102 | abc | xyz | 23 |

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

2 rows in set (0.00 sec)

mysql> alter table per drop constraint oit;

Query OK, 2 rows affected (0.10 sec)

Records: 2 Duplicates: 0 Warnings: 0

mysql> select\* from per;

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

| id | lastname | fristname | age |

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

| 101 | abc | xyz | 23 |

| 102 | abc | xyz | 23 |

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

2 rows in set (0.00 sec)

mysql> select\* from oit;

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

| id | fristname | lastname |

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

| 101 | komal | bagal |

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

1 row in set (0.00 sec)

mysql> create table per1(id int not null,lastname varchar(255) not null,fristname varchar(255),age int check(age>=18));

Query OK, 0 rows affected (0.04 sec)

mysql> desc per1;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | | NULL | |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

**SQL PRIMARY KEY ON CONSTAINT**

**CREATE TABLE**

mysql> insert into per1 values(123,'abc','xyz',26);

Query OK, 1 row affected (0.01 sec)

mysql> select\* from per1;

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

| id | lastname | fristname | age |

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

| 123 | abc | xyz | 26 |

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

1 row in set (0.00 sec)

mysql> alter table per1 add constraint check(age>=1 and age<=125);

Query OK, 1 row affected (0.10 sec)

Records: 1 Duplicates: 0 Warnings: 0

mysql> desc per1;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | | NULL | |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.00 sec)

mysql> create table worker(id int not null,fristname varchar(255)not null,lastname varchar(255),age int,city varchar(255) default'work');

Query OK, 0 rows affected (0.07 sec)

**SQL DEFAULT Constraint on CREATE TABLE**

mysql> desc worker;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | | NULL | |

| fristname | varchar(255) | NO | | NULL | |

| lastname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

| city | varchar(255) | YES | | work | |

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

5 rows in set (0.02 sec)

**CREATE TABLE**

mysql> create table worker1(wid int not null auto\_increment,lastname varchar(255)not null,fristname varchar(255),age int,primary key(wid));

Query OK, 0 rows affected (0.04 sec)

mysql> desc worker1;

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

| Field | Type | Null | Key | Default | Extra |

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

| wid | int | NO | PRI | NULL | auto\_increment |

| lastname | varchar(255) | NO | | NULL | |

| fristname | varchar(255) | YES | | NULL | |

| age | int | YES | | NULL | |

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

4 rows in set (0.01 sec)

mysql> insert into worker1(lastname,fristname,age)values('shinde','anurag',22);

Query OK, 1 row affected (0.01 sec)

mysql> select\* from worker1;

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

| wid | lastname | fristname | age |

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

| 1 | shinde | anurag | 22 |

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

1 row in set (0.00 sec)

mysql> insert into worker1(lastname,fristname,age)values('bagal','priyanka',27);

Query OK, 1 row affected (0.00 sec)

mysql> select\* from worker1;

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

| wid | lastname | fristname | age |

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

| 1 | shinde | anurag | 22 |

| 2 | bagal | priyanka | 27 |

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

2 rows in set (0.00 sec)