

MySQL Practical Summary — Step by Step

Step No.	Command / Operation	Result / Output	Explanation
1	create database dsabatch18;	Database created	Created a new database named dsabatch18.
2	use dsabatch18;	Switched	Current working database set to dsabatch18.
3	create table student (sid int(11), name varchar(20), email varchar(30));	Table created	Table student created with 3 columns (no constraints).
4	alter table student add column phone varchar(12);	Added	Added new column phone.
5	alter table student drop column phone;	Dropped	Removed column phone.
6	alter table student rename column name to studentName;	Renamed	Changed column name → studentName.
7	alter table student modify email char(100);	Modified	Changed data type of email from varchar(30) → char(100).
8	alter table student add column phone varchar(12), address varchar(40);	Added	Added 2 columns using correct bracket syntax.
9	alter table student drop column phone; alter table student drop column address;	Dropped	Dropped both added columns.
10	alter table student add column graduation boolean;	Added	Added boolean column (internally tinyint(1)).
11	alter table student alter graduation set default 12;	Updated	Set default value of graduation column to 12.
12	rename table student to megastar;	Renamed	Table renamed to megastar.
13	insert into megastar values (1,'Jagmohan Rai','jagmohan@gmail.com',13);	Inserted	First record inserted.
14	insert into megastar values (1,'Jagmohan Rai','jagmohan@gmail.com',13);	Inserted	Inserted multiple records in one statement (correct syntax).
15	insert into megastar values (3,'syam','syam@gmail.com',19);	Inserted	Added record for Syam.
16	insert into megastar (sid,studentName,email) values (4,'radhe','radhe@gmail.com');	Inserted	Inserted with partial columns (graduation gets default 12).
17	update megastar set sid=12 where sid=1;	Updated	Updated sid from 1 to 12 for matching rows.
18	update megastar set studentName='xyz' where sid=12;	Updated	Updated name where sid=12.
19	delete from megastar where sid=12;	Deleted	Deleted two rows with sid=12.
20	set autocommit=0;	Done	Disabled auto-commit for transaction testing.
21	delete from megastar; rollback;	Rollback	Deleted all rows then restored them using rollback.
22	truncate table megastar; rollback;	Rollback failed	TRUNCATE auto-commits, cannot be rolled back.
23	insert into megastar values (1,'rty','rty@gmail.com',14);	Inserted	Inserted two records.
24	rollback;	Rollback	Restored previous state (since delete/truncate).
25	alter table megastar add primary key (sid);	Added	Added primary key to sid (after truncating to remove NULLs).
26	alter table megastar modify email char(20) not null;	Modified	Made email non-null.
27	insert into megastar values (1,'rty','abc@gmail.com',14);	Inserted	Inserted valid data.
28	insert into megastar values (2,'rty','abc@gmail.com',14);	Duplicate	Duplicate email but sid unique → passes until unique added.
29	alter table megastar modify email char(20) unique;	Added	Added unique constraint after removing duplicates.
30	insert into megastar values (2,'rty','abc1@gmail.com',14);	Inserted	Different email, allowed.
31	insert into megastar values (3,'rty',null,14);	Inserted	Null allowed for unique columns.
32	alter table megastar drop primary key;	Dropped	Removed sid primary key.
33	alter table megastar add primary key (email);	Failed	Error: one record had NULL email.
34	delete from megastar where sid=3;	Deleted	Deleted null email record.
35	alter table megastar add primary key (email);	Added	Made email the new primary key.
36	insert into megastar values (3,'rty','jagmohan@gmail.com',true);	Inserted	Boolean TRUE stored as 1.
37	insert into megastar values (3,'rty','jagmohan@gmail.com',false);	Inserted	Boolean FALSE stored as 0.
38	insert into megastar values (3,'rty','jagmohan@gmail.com',false);	Duplicate	Email already exists → violates primary key constraint.

Final Table Structure (megastar)

Column Name	Data Type	Null	Key	Default	xplanation
sid	INT	NO	—	NULL	Normal column, can repeat values
studentName	VARCHAR(20)	YES	—	NULL	Allows NULL
email	CHAR(20)	NO	PRI	NULL	Primary Key (unique, non-null)
graduation	TINYINT(1)	YES	—	12	Stores TRUE/FALSE or number
Final Data in Table					
sid	studentName	email	graduation		
1	rty	abc@gmail.com		14	
2	rty	abc1@gmail.com		14	
3	rty	jagmohan@gmail11.com		0	
3	rty	jagmohan@gmail.com		1	

Key Learnings From Your Session

Concept	What You Learned
CREATE DATABASE	Creates new schema.
CREATE TABLE	Defines columns with data types.
ALTER TABLE	Add, drop, modify, rename columns.
RENAME TABLE	Rename existing table.
INSERT INTO	Add single or multiple rows.
TRUNCATE	Deletes all rows permanently (can't rollback).
DELETE + ROLLBACK	Works only before COMMIT.
PRIMARY KEY	Unique and non-null identifier.
UNIQUE	Ensures no duplicates (allows one NULL).
BOOLEAN	Stored as tinyint(1): TRUE=1, FALSE=0.
DEFAULT	Auto-inserts default value if none provided.