


▼  college

▶ student  
Views

Functions  
sakila

▶  world

Administration Schemas

Information

no object selected

Session

```
1 • CREATE DATABASE college;
2 • CREATE DATABASE IF NOT EXISTS university;
3 • CREATE DATABASE IF NOT EXISTS college;
4
5
6 • USE college;
7
8 • CREATE TABLE student (
9     id INT PRIMARY KEY,
10    name VARCHAR(50),
11    age INT NOT NULL);
12
13 • INSERT INTO student VALUES ( 1, "ABDUL", 21 );
14 • INSERT INTO student VALUES (2, "JOHN DOE" , 25);
```

Output :

 Action Output

#	Time	Action	Message	Duration / Fetch
1	01:17:57	CREATE DATABASE IF NOT EXISTS university	1 row(s) affected	0.015 sec
2	01:18:29	CREATE DATABASE IF NOT EXISTS college	1 row(s) affected, 1 warning(s): 1007 Can't create database 'college': database exists	0.000 sec

Session

- ▼ college
  - ▼ Tables
    - ▶ student
  - Views
  - Stored Procedures
  - Functions
- ▶ sakila
- ▶ sys
- ▶ university
- ▶ world

Information .....

No object selected


Object Info Session

```
1 • CREATE DATABASE college;
2 • CREATE DATABASE IF NOT EXISTS university;
3 • CREATE DATABASE IF NOT EXISTS college;
4
5
6 • DROP DATABASE company;
7
8
9
10 • USE college;
11
12 • CREATE TABLE student (
13     id INT PRIMARY KEY,
14     name VARCHAR(50),
15     age INT NOT NULL);
16
17 • INSERT INTO student VALUES ( 1, "ABDUL", 21 );
18 • INSERT INTO student VALUES (2, "JOHN DOE" , 25);
```

Output :

 Action Output

#	Time	Action	Message	Duration / Fetch
✓	1 01:17:57	CREATE DATABASE IF NOT EXISTS university	1 row(s) affected	0.015 sec
⚠	2 01:18:29	CREATE DATABASE IF NOT EXISTS college	1 row(s) affected, 1 warning(s): 1007 Can't create database 'college'; database exists	0.000 sec
✗	3 01:27:37	DROP DATABASE company	Error Code: 1008. Can't drop database 'company'; database doesn't exist	0.000 sec

Query 1 

▼ college

▼  Table

▶  [stu](#)

Stored Procedure

 Functi

SQL

→  world

11

```
12 • CREATE TABLE student (
```

```
13 id INT PRIMARY KEY,
```

```
14 name VARCHAR(50),
```

```
15     age INT NOT NULL);
```

16

```
17 • INSERT INTO student VALUES ( 1, "ABDUL", 21 );
```

```
18 • INSERT INTO student VALUES (2, "JOHN DOE" , 25);
```


## Schemas

Output :

Action Output

	#	Time	Action	Message	Duration / Fetch
✓	1	01:17:57	CREATE DATABASE IF NOT EXISTS university	1 row(s) affected	0.015 sec
⚠	2	01:18:29	CREATE DATABASE IF NOT EXISTS college	1 row(s) affected, 1 warning(s): 1007 Can't create database 'college'; database exists	0.000 sec
✗	3	01:27:37	DROP DATABASE company	Error Code: 1008. Can't drop database 'company'; database doesn't exist	0.000 sec
✓	4	01:29:12	DROP DATABASE IF EXISTS university	0 row(s) affected	0.000 sec

Session

Query 1 

```
1 • CREATE DATABASE college;  
2 • CREATE DATABASE IF NOT EXISTS university;  
3 • CREATE DATABASE IF NOT EXISTS college;  
4  
5  
6 • DROP DATABASE company;  
7 • DROP DATABASE IF EXISTS university;  
8  
9  
10 • USE college;  
11  
12 • CREATE TABLE student (  
13     id INT PRIMARY KEY,  
14     name VARCHAR(50),  
15     age INT NOT NULL);  
16  
17 • INSERT INTO student VALUES ( 1, "ABDUL", 21 );  
18 • INSERT INTO student VALUES (2, "JOHN DOE" , 25);
```

Information .....

No object selected

 Action Output

#	Time	Action	Message	Duration / Fetch
✓ 1	01:17:57	CREATE DATABASE IF NOT EXISTS university	1 row(s) affected	0.015 sec
⚠ 2	01:18:29	CREATE DATABASE IF NOT EXISTS college	1 row(s) affected, 1 warning(s): 1007 Can't create database 'college'; database exists	0.000 sec
✗ 3	01:27:37	DROP DATABASE company	Error Code: 1008. Can't drop database 'company'; database doesn't exist	0.000 sec
✓ 4	01:29:12	DROP DATABASE IF EXISTS university	0 row(s) affected	0.000 sec
⚠ 5	01:29:41	DROP DATABASE IF EXISTS university	0 row(s) affected, 1 warning(s): 1008 Can't drop database 'university'; database doesn't exist	0.016 sec



```
15     age INT NOT NULL);
16
17 • INSERT INTO student VALUES ( 1, "ABDUL", 21 );
18 • INSERT INTO student VALUES (2, "JOHN DOE" , 25);
19
20 • SHOW DATABASES;
21 • SHOW TABLES;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

Action Output

	#	Time	Action	Message	Duration / Fetch
⚠	2	01:18:29	CREATE DATABASE IF NOT EXISTS college	1 row(s) affected, 1 warning(s): 1007 Can't create database 'college'; database exists	0.000 sec
✖	3	01:27:37	DROP DATABASE company	Error Code: 1008. Can't drop database 'company'; database doesn't exist	0.000 sec
✔	4	01:29:12	DROP DATABASE IF EXISTS university	0 row(s) affected	0.000 sec
⚠	5	01:29:41	DROP DATABASE IF EXISTS university	0 row(s) affected, 1 warning(s): 1008 Can't drop database 'university'; database doesn't exist	0.016 sec
✔	6	01:32:13	SHOW DATABASES	7 row(s) returned	0.000 sec / 0.000 sec
✖	7	01:33:24	SHOW TABLES	Error Code: 1046. No database selected Select the default DB to be used by double-clicking its name in the SCHEMAS list in the sidebar.	0.000 sec
✔	8	01:33:39	USE college	0 row(s) affected	0.000 sec
✔	9	01:33:44	SHOW TABLES	1 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Local instance MySQL80

FileEditViewQueryDatabaseServerToolsScriptingHelp

SQL

SQL

Navigator

Query 1

SCHEMAS

Filter objects

college

Tables

Views

Stored Procedures

Functions

sakila

sys

world

Administration

Schemas

Information

No object selected

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

CREATE DATABASE college;

CREATE DATABASE IF NOT EXISTS university;

CREATE DATABASE IF NOT EXISTS college;

DROP DATABASE company;

DROP DATABASE IF EXISTS university;

USE college;

CREATE TABLE student (

id INT PRIMARY KEY,

name VARCHAR(50),

age INT NOT NULL);

INSERT INTO student VALUES ( 1, "ABDUL", 21 );

INSERT INTO student VALUES (2, "JOHN DOE" , 25);

SHOW DATABASES;

SHOW TABLES;

DROP TABLE student;

Limit to 1000 rows

Output

Action Output

#	Time	Action	Message	Duration / Fetch
4	01:29:12	DROP DATABASE IF EXISTS university	0 row(s) affected	0.000 sec
5	01:29:41	DROP DATABASE IF EXISTS university	0 row(s) affected, 1 warning(s): 1008 Can't drop database 'university'; database doesn't exist	0.016 sec
6	01:32:13	SHOW DATABASES	7 row(s) returned	0.000 sec / 0.000 sec
7	01:33:24	SHOW TABLES	Error Code: 1046. No database selected Select the default DB to be used by double-clicking its name in the SCHEMAS list in the sidebar.	0.000 sec
8	01:33:39	USE college	0 row(s) affected	0.000 sec
9	01:33:44	SHOW TABLES	1 row(s) returned	0.000 sec / 0.000 sec
10	01:42:52	EXPLAIN SHOW TABLES	Error Code: 1064 You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use ne...	
11	01:45:00	DROP TABLE student	0 row(s) affected	0.015 sec

Object Info

Session




▼  college

▼  st  
▼ 

1



Stored  
Function

▶  sys

Information .....

No object e

```
4      rollno INT PRIMARY KEY,  
5      name VARCHAR(20)  
6  );  
7  
8  • INSERT INTO student VALUES( 2 , 'JOHN SMITH' );  
9  
10 • SELECT * FROM student;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

	rollno	name
▶	2	JOHN SMITH
✱	NULL	NULL

Administration Schemas

Information .....

No object selected

student 3 x

Output :



Action Output

#	Time	Action	Message	Duration / Fetch
✓ 8	01:33:39	USE college	0 row(s) affected	0.000 sec
✓ 9	01:33:44	SHOW TABLES	1 row(s) returned	0.000 sec / 0.000 sec
✗ 10	01:42:52	EXPLAIN SHOW TABLES	Error Code: 1064 You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use ne...	
✓ 11	01:45:00	DROP TABLE student	0 row(s) affected	0.015 sec
✓ 12	01:55:25	CREATE TABLE student(rollno INT PRIMARY KEY, name VARCHAR(20) )	0 row(s) affected	0.031 sec
✗ 13	02:10:02	INSERT INTO student( 1, "john smith" )	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use ne...	0.000 sec
✓ 14	02:12:21	INSERT INTO student VALUES( 2 , 'JOHN SMITH' )	1 row(s) affected	0.000 sec
✓ 15	02:16:25	SELECT * FROM student LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info



Result Grid


Form Editor

Field Types



Query State

Execution Plan

Apply



They define the **type of values** that can be stored in a column

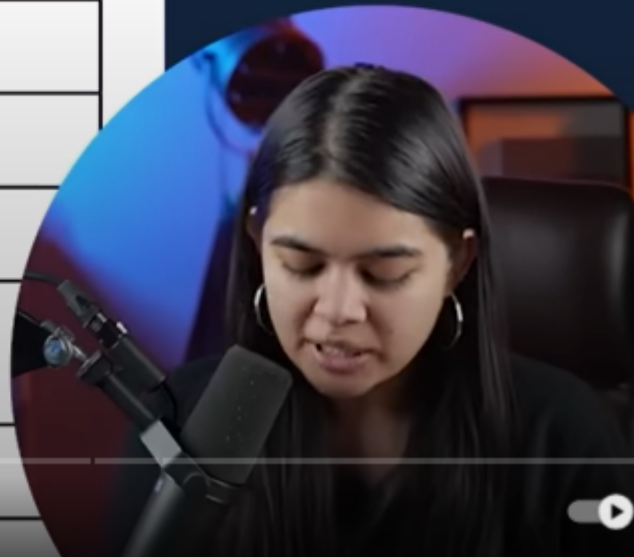
DATATYPE	DESCRIPTION	USAGE
CHAR	string(0-255), can store characters of fixed length	CHAR(50)
VARCHAR	string(0-255), can store characters up to given length	VARCHAR(50)
BLOB	string(0-65535), can store binary large object	BLOB(1000)
INT	integer( -2,147,483,648 to 2,147,483,647 )	INT
TINYINT	integer(-128 to 127)	TINYINT
BIGINT	integer( -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 )	BIGINT
BIT	can store x-bit values. x can range from 1 to 64	BIT(2)
FLOAT	Decimal number - with precision to 23 digits	FLOAT
DOUBLE	Decimal number - with 24 to 53 digits	DOUBLE
BOOLEAN	Boolean values 0 or 1	BOOLEAN
DATE	date in format of YYYY-MM-DD ranging from 1000-01-01 to 9999-12-31	DATE
YEAR	year in 4 digits format ranging from 1901 to 2155	YEAR

P | V | N

M | V | M

BIT(1)  
↓  
0, 1

BIT  
{ 0, 1 }





## Types of SQL Commands

**DDL (Data Definition Language)** : create, alter, rename, truncate & drop

**DQL (Data Query Language)** : select

**DML (Data Manipulation Language)** : , insert, update & delete

**DCL (Data Control Language)** : grant & revoke permission to users

**TCL (Transaction Control Language)** : start transaction, commit, rollback &

