

1-

```
CREATE TABLE student (  
  -> student_id INT PRIMARY KEY,  
  -> name VARCHAR(50),  
  -> age INT,  
  -> course VARCHAR(50),  
  -> city VARCHAR(25),  
  -> year INT,  
  -> percentage INT  
  -> );
```

Query OK, 0 rows affected (0.93 sec)

```
mysql> INSERT INTO student (student_id, name, age, course, city, year, percentage)  
  -> VALUES  
  -> (1, 'Akshay Bh', 22, 'Computer Science', 'Wardha', 2023, 90),  
  -> (2, 'Shrey', 21, 'Engineering', 'Nagpur', 2022, 85),  
  -> (3, 'ABC', 23, 'Business Administration', 'Pune', 2022, 78),  
  -> (4, 'XYZ', 20, 'Psychology', 'Mumbai', 2023, 92),  
  -> (5, 'David ', 22, 'Mathematics', 'Boston', 2022, 88),  
  -> (6, 'Frankie', 21, 'English Literature', 'Ahmednagar', 2023, 87),  
  -> (7, 'AHDJ', 24, 'Chemistry', 'Denver', 2022, 79),  
  -> (8, 'Harshit', 23, 'History', 'Banagalore', 2023, 91);
```

Query OK, 8 rows affected (0.06 sec)

Records: 8 Duplicates: 0 Warnings: 0

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
student_id	int	NO	PRI	NULL	
name	varchar(50)	YES		NULL	
age	int	YES		NULL	
course	varchar(50)	YES		NULL	
city	varchar(25)	YES		NULL	
year	int	YES		NULL	
percentage	int	YES		NULL	

7 rows in set (0.01 sec)

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

student_id	name	age	course	city	year	percentage
1	Akshay Bh	22	Computer Science	Wardha	2023	90

2	Shrey	21	Engineering	Nagpur	2022	85
3	ABC	23	Business Administration	Pune	2022	78
4	XYZ	20	Psychology	Mumbai	2023	92
5	David	22	Mathematics	Boston	2022	88
6	Frankie	21	English Literature	Ahmednagar	2023	87
7	AHDJ	24	Chemistry	Denver	2022	79
8	Harshit	23	History	Banagalore	2023	91

8 rows in set (0.00 sec)

3-

mysql> ALTER TABLE student

-> CHANGE COLUMN course subject VARCHAR(50);

Query OK, 0 rows affected (0.11 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc student;

Field	Type	Null	Key	Default	Extra
student_id	int	NO	PRI	NULL	
name	varchar(50)	YES		NULL	
age	int	YES		NULL	
subject	varchar(50)	YES		NULL	
city	varchar(25)	YES		NULL	
year	int	YES		NULL	
percentage	int	YES		NULL	

7 rows in set (0.01 sec)

mysql> select*from student;

1	Akshay Bh	22	Computer Science	Wardha	2023	90
2	Shrey	21	Engineering	Nagpur	2022	85
3	ABC	23	Business Administration	Pune	2022	78
4	XYZ	20	Psychology	Mumbai	2023	92
5	David	22	Mathematics	Boston	2022	88
6	Frankie	21	English Literature	Ahmednagar	2023	87
7	AHDJ	24	Chemistry	Denver	2022	79
8	Harshit	23	History	Banagalore	2023	91

8 rows in set (0.00 sec)

4-

```
mysql> CREATE TABLE bkup_student AS
```

```
-> SELECT * FROM student;
```

Query OK, 8 rows affected (0.34 sec)

Records: 8 Duplicates: 0 Warnings: 0

```
mysql> desc bkup_student;
```

Field	Type	Null	Key	Default	Extra
student_id	int	NO		NULL	
name	varchar(50)	YES		NULL	
age	int	YES		NULL	
subject	varchar(50)	YES		NULL	
city	varchar(25)	YES		NULL	
year	int	YES		NULL	
percentage	int	YES		NULL	

7 rows in set (0.01 sec)

```
mysql> select*from bkup_student;
```

student_id	name	age	subject	city	year	percentage
1	Akshay Bh	22	Computer Science	Wardha	2023	90
2	Shrey	21	Engineering	Nagpur	2022	85
3	ABC	23	Business Administration	Pune	2022	78
4	XYZ	20	Psychology	Mumbai	2023	92
5	David	22	Mathematics	Boston	2022	88
6	Frankie	21	English Literature	Ahmednagar	2023	87
7	AHDJ	24	Chemistry	Denver	2022	79
8	Harshit	23	History	Banagalore	2023	91

8 rows in set (0.00 sec)

5-

```
mysql> SELECT *
```

```
-> FROM student
```

```
-> WHERE city IN ('Pune', 'Mumbai');
```

student_id	name	age	subject	city	year	percentage
------------	------	-----	---------	------	------	------------

```

+-----+-----+-----+-----+-----+-----+
|      3 | ABC | 23 | Business Administration | Pune | 2022 |      78 |
|      4 | XYZ | 20 | Psychology | Mumbai | 2023 |      92 |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

```

```

mysql> CREATE TABLE teacher (
->  teacher_id INT PRIMARY KEY,
->  name VARCHAR(50),
->  age INT,
->  course VARCHAR(50),
->  city VARCHAR(25),
->  subject_expert VARCHAR(50),
->  year_of_experience INT,
->  salary DECIMAL(10, 2)
-> );

```

Query OK, 0 rows affected (0.48 sec)

```

mysql> INSERT INTO teacher (teacher_id, name, age, course, city, subject_expert,
year_of_experience, salary)
-> VALUES
-> (1, 'Abhishek Dogal ', 35, 'Mathematics', 'Chandrapur', 'Algebra', 8, 75000.00),
-> (2, 'Alice Sunar', 40, 'Physics', 'Bangalore', 'Quantum Mechanics', 12, 90000.00),
-> (3, 'Shreya Bid', 32, 'Computer Science', 'San Francisco', 'Data Structures', 6, 65000.00),
-> (4, 'David Miller', 38, 'Biology', 'Chicago', 'Genetics', 10, 82000.00),
-> (5, 'Virat Somnath', 33, 'English', 'Boston', 'Literature', 7, 70000.00),
-> (6, 'Grac Der', 42, 'History', 'Seattle', 'Ancient Civilizations', 15, 95000.00),
-> (7, 'Vishal Khobragade', 36, 'Chemistry', 'Wardha', 'Organic Chemistry', 9, 78000.00),
-> (8, 'Jane Carter', 39, 'Economics', 'Houston', 'Microeconomics', 11, 88000.00);

```

Query OK, 8 rows affected (0.06 sec)

Records: 8 Duplicates: 0 Warnings: 0

```
mysql> desc teacher;
```

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| teacher_id | int       | NO   | PRI | NULL    |      |
| name       | varchar(50) | YES  |     | NULL    |      |
| age       | int       | YES  |     | NULL    |      |
| course     | varchar(50) | YES  |     | NULL    |      |
| city      | varchar(25) | YES  |     | NULL    |      |
| subject_expert | varchar(50) | YES  |     | NULL    |      |
| year_of_experience | int       | YES  |     | NULL    |      |
| salary     | decimal(10,2) | YES  |     | NULL    |      |

```

```
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

```
mysql> select*from teacher;
```

```
+-----+-----+-----+-----+-----+-----+-----+
-----+
| teacher_id | name          | age | course          | city          | subject_expert |
year_of_experience | salary |
+-----+-----+-----+-----+-----+-----+-----+
-----+
|      1 | Abhishek Dogal | 35 | Mathematics     | Chandrapur    | Algebra        |
8 | 75000.00 |
|      2 | Alice Sunar    | 40 | Physics         | Bangalore     | Quantum Mechanics |
12 | 90000.00 |
|      3 | Shreya Bid     | 32 | Computer Science | San Francisco | Data Structures  |
6 | 65000.00 |
|      4 | David Miller   | 38 | Biology         | Chicago       | Genetics        |
10 | 82000.00 |
|      5 | Virat Somnath  | 33 | English         | Boston        | Literature       |
7 | 70000.00 |
|      6 | Grac Der       | 42 | History         | Seattle       | Ancient Civilizations |
15 | 95000.00 |
|      7 | Vishal Khobragade | 36 | Chemistry       | Wardha        | Organic Chemistry |
9 | 78000.00 |
|      8 | Jane Carter    | 39 | Economics       | Houston       | Microeconomics  |
11 | 88000.00 |
+-----+-----+-----+-----+-----+-----+-----+
-----+
```

```
8 rows in set (0.00 sec)
```

```
mysql> UPDATE teacher
```

```
-> SET city = 'Ahmedabad'
```

```
-> WHERE name = 'Alice Sunar';
```

```
Query OK, 1 row affected (0.03 sec)
```

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

```
mysql> select*from teacher;
```

```
+-----+-----+-----+-----+-----+-----+-----+
-----+
| teacher_id | name          | age | course          | city          | subject_expert |
year_of_experience | salary |
+-----+-----+-----+-----+-----+-----+-----+
-----+
```

1	Abhishek Dogal	35	Mathematics	Chandrapur	Algebra	
8	75000.00					
2	Alice Sunar	40	Physics	Ahmedabad	Quantum Mechanics	
12	90000.00					
3	Shreya Bid	32	Computer Science	San Francisco	Data Structures	
6	65000.00					
4	David Miller	38	Biology	Chicago	Genetics	10
	82000.00					
5	Virat Somnath	33	English	Boston	Literature	7
	70000.00					
6	Grac Der	42	History	Seattle	Ancient Civilizations	15
	95000.00					
7	Vishal Khobragade	36	Chemistry	Wardha	Organic Chemistry	
9	78000.00					
8	Jane Carter	39	Economics	Houston	Microeconomics	
11	88000.00					

8 rows in set (0.00 sec)

6-

```
mysql> SELECT *
-> FROM teacher
-> WHERE city = 'Ahmedabad'
-> AND name LIKE 'A%';
```

teacher_id	name	age	course	city	subject_expert	year_of_experience	salary
2	Alice Sunar	40	Physics	Ahmedabad	Quantum Mechanics	12	90000.00

1 row in set (0.00 sec)

mysql>

7-

```
mysql> SELECT *
-> FROM teacher
-> WHERE year_of_experience >= 4;
```

teacher_id	name	age	course	city	subject_expert	year_of_experience	salary
------------	------	-----	--------	------	----------------	--------------------	--------

teacher_id	name	age	course	city	subject_expert	year_of_experience	salary
1	Abhishek Dogal	35	Mathematics	Chandrapur	Algebra	8	75000.00
2	Alice Sunar	40	Physics	Ahmedabad	Quantum Mechanics	12	90000.00
3	Shreya Bid	32	Computer Science	San Francisco	Data Structures	6	65000.00
4	David Miller	38	Biology	Chicago	Genetics	10	82000.00
5	Virat Somnath	33	English	Boston	Literature	7	70000.00
6	Grac Der	42	History	Seattle	Ancient Civilizations	15	95000.00
7	Vishal Khobragade	36	Chemistry	Wardha	Organic Chemistry	9	78000.00
8	Jane Carter	39	Economics	Houston	Microeconomics	11	88000.00

8 rows in set (0.00 sec)

```
mysql> select*from teacher;
```

teacher_id	name	age	course	city	subject_expert	year_of_experience	salary
1	Abhishek Dogal	35	Mathematics	Chandrapur	Algebra	8	75000.00
2	Alice Sunar	40	Physics	Ahmedabad	Quantum Mechanics	12	90000.00
3	Shreya Bid	32	Computer Science	San Francisco	Data Structures	6	65000.00
4	David Miller	38	Biology	Chicago	Genetics	10	82000.00
5	Virat Somnath	33	English	Boston	Literature	7	70000.00
6	Grac Der	42	History	Seattle	Ancient Civilizations	15	95000.00

```
|      7 | Vishal Khobragade | 36 | Chemistry      | Wardha      | Organic Chemistry |
9 | 78000.00 |
|      8 | Jane Carter      | 39 | Economics      | Houston      | Microeconomics    |
11 | 88000.00 |
+-----+-----+-----+-----+-----+-----+-----+
-----+
8 rows in set (0.00 sec)
```

8-

```
UPDATE teacher
  -> SET salary = salary + 1000
  -> WHERE year_of_experience > 5;
Query OK, 8 rows affected (0.02 sec)
Rows matched: 8  Changed: 8  Warnings: 0
```

```
mysql> select*from teacher;
+-----+-----+-----+-----+-----+-----+-----+
-----+
| teacher_id | name          | age | course          | city          | subject_expert    |
year_of_experience | salary |
+-----+-----+-----+-----+-----+-----+-----+
-----+
|      1 | Abhishek Dogal | 35 | Mathematics     | Chandrapur    | Algebra           |
8 | 76000.00 |
|      2 | Alice Sunar    | 40 | Physics         | Ahmedabad     | Quantum Mechanics |
12 | 91000.00 |
|      3 | Shreya Bid    | 32 | Computer Science | San Francisco | Data Structures    |
6 | 66000.00 |
|      4 | David Miller   | 38 | Biology         | Chicago       | Genetics          |
10 | 83000.00 |
|      5 | Virat Somnath  | 33 | English         | Boston        | Literature         |
7 | 71000.00 |
|      6 | Grac Der      | 42 | History         | Seattle       | Ancient Civilizations |
15 | 96000.00 |
|      7 | Vishal Khobragade | 36 | Chemistry      | Wardha      | Organic Chemistry |
9 | 79000.00 |
|      8 | Jane Carter    | 39 | Economics      | Houston      | Microeconomics    |
11 | 89000.00 |
+-----+-----+-----+-----+-----+-----+-----+
-----+
8 rows in set (0.00 sec)
```


9—

```
SELECT city, COUNT(*) as student_count
```

```
-> FROM student
```

```
-> GROUP BY city;
```

```
+-----+-----+
| city    | student_count |
+-----+-----+
| Wardha   |      1 |
| Nagpur   |      1 |
| Pune     |      1 |
| Mumbai   |      1 |
| Boston   |      1 |
| Ahmednagar |      1 |
| Denver   |      1 |
| Banagalore |      1 |
+-----+-----+
```

10—

```
SELECT *
```

```
-> FROM student
```

```
-> WHERE percentage > 70
```

```
-> AND city IN (SELECT city FROM teacher WHERE year_of_experience > 3);
```

```
+-----+-----+-----+-----+-----+-----+
| student_id | name      | age | subject      | city | year | percentage |
+-----+-----+-----+-----+-----+-----+
|      1 | Akshay Bh |  22 | Computer Science | Wardha | 2023 |      90 |
|      5 | David     |  22 | Mathematics      | Boston | 2022 |      88 |
+-----+-----+-----+-----+-----+-----+
```

11- CREATE TABLE backup_table_name LIKE teacher;

Query OK, 0 rows affected (0.20 sec)

```
desc backup_table_name;
```

```
+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| teacher_id | int       | NO   | PRI | NULL    |      |
```

name	varchar(50)	YES		NULL		
age	int	YES		NULL		
course	varchar(50)	YES		NULL		
city	varchar(25)	YES		NULL		
subject_expert	varchar(50)	YES		NULL		
year_of_experience	int	YES		NULL		
salary	decimal(10,2)	YES		NULL		
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+

12-

```
CREATE TABLE multimedia (
->  name VARCHAR(50),
->  image_data LONGBLOB,
->  video_data LONGBLOB
-> );
```

Query OK, 0 rows affected (0.21 sec)

mysql> desc multimedia;

+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
Field	Type	Null	Key	Default	Extra
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
name	varchar(50)	YES		NULL	
image_data	longblob	YES		NULL	
video_data	longblob	YES		NULL	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+