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;

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

| 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)

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 |

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

| 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 | |

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