mySQL LAB REPORT

16TH MARCH 2022

1. *DISPLAY EXISTING DATABASES*

COMMAND: mysql> show databases;
OUTPUT:

```
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sakila             |
| sys                |
| world              |
+--------------------+
6 rows in set (0.16 sec)
```

2. *CREATING A DATABASE*

SYNTAX: mysql> CREATE DATABASE DATABASE_NAME;

EG:

```
mysql> CREATE DATABASE GRADE_12_2022;
Query OK, 1 row affected (0.23 sec)

mysql> CREATE DATABASE AY2022;
Query OK, 1 row affected (0.12 sec)
```

3. *CHECK WHETHER DATABASE HAS BEEN CREATED*

```
mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| ay2022             |
| grade_12_2022      |
| information_schema |
| mysql              |
| performance_schema |
| sakila             |
| sys                |
```

```
| world              |
+--------------------+
8 rows in set (0.03 sec)
```

4. ***USE OF CREATED DATABASE (; IS OPTIONAL)***

COMMAND: mysql> USE DATABASE_NAME
Database changed
EG:
mysql> USE AY2022;
Database changed

5. Create a table STUDENT with the following specifications:

FIELD NAME	DATA TYPE AND SIZE	CONSTRAINTS
ROLL_NO	INT(5)	
STUD_NAME	VARCHAR(35)	
STREAM	CHAR(20)	
MARK1	DECIMAL(6,2)	
MARK2	DECIMAL(6,2)	

STUDENT table:

ROLL_NO	STUD_NAME	STREAM	MARK1	MARK2	DOB
101	Surya Takur	Science	90	87	10/10/1990
102	Chris Tom	Humanities	88	91	5/1/1994
103	Abel George	Commerce	93	95	7/10/1993
104	Nathel Pillai	Science	56	58	8/8/1994

CREATE TABLE STUDENT_1 (ROLL_NO INT(5),STUD_NAME VARCHAR(35),STREAM CHAR(20),MARK1 DECIMAL(6,2),MARK2 DECIMAL(6,2),DOB DATE);

5. ***DISPLAYING ALL EXISTING TABLES***

```
mysql> SHOW TABLES;
+------------------+
| Tables_in_ay2022 |
+------------------+
| student          |
+------------------+
1 row in set (0.19 sec)
```

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6. ***CREATING A TABLE 'TEACHER':***

Create a table TEACHER with the following specifications in the database AY2022:

FIELD NAME	DATA TYPE AND SIZE	CONSTRAINTS
TR_ID	INT(10)	
TR_NAME	VARCHAR(35)	
TR_SAL	DECIMAL(15,2)	
ROLL_NO	INT(5)	

```
mysql> CREATE TABLE TEACHER(TR_ID INT(10),TR_NAME VARCHAR(35),TR_SAL
DECIMAL(15,2),ROLL_NO INT(5));
Query OK, 0 rows affected, 2 warnings (5.32 sec)
```

7. ***CHECKING ALL EXSISTING TABLES IN AY2022:***

```
mysql> SHOW TABLES;
+------------------+
| Tables_in_ay2022 |
+------------------+
| student          |
| teacher          |
+------------------+
2 rows in set (0.48 sec)
```

8. ***CHOOSING A TABLE (DISPLAYING TABLE STRUCTURE)***

SYNTAX: DESCRIBE TABLE_NAME; / DESC TABLE_NAME;

```
mysql> USE AY2022
Database changed
mysql> DESCRIBE STUDENT;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| ROLL_NO   | int         | YES  |     | NULL    |       |
| STUD_NAME | varchar(35) | YES  |     | NULL    |       |
| STREAM    | char(20)    | YES  |     | NULL    |       |
| MARK1     | decimal(6,2)| YES  |     | NULL    |       |
| MARK2     | decimal(6,2)| YES  |     | NULL    |       |
| DOB       | date        | YES  |     | NULL    |       |
```

```
+-----------+--------------+------+-----+---------+-------+
6 rows in set (0.08 sec)
```

9. INSERTING THE ELEMENTS INTO A TABLE

SYNTAX: INSERT INTO TABLENAME VALUES(F_NAME1,F_NAME2,F_NAME3,....)

```
mysql> INSERT INTO STUDENT VALUES(101,'SURYA
TAKUR','SCIENCE',90,87,'1990/10/10');
Query OK, 1 row affected (1.06 sec)

mysql> INSERT INTO STUDENT VALUES(102,'CHRIS TOM','HUMANITIES',88,91,'1994/1/5');
Query OK, 1 row affected (0.12 sec)

mysql>  INSERT INTO STUDENT VALUES(103,'ABEL
GEORGE','COMMERCE',93,95,1993/10/7);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO STUDENT VALUES(104,'NATHEL PILLAI','SCIENCE',56,58,1994/8/8);
Query OK, 1 row affected (0.13 sec)
```

10. TO DISPLAY THE TABLE CONTENTS

SYNTAX: SELECT * FROM TABLE_NAME;

```
mysql> SELECT * FROM STUDENT;
+---------+--------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME    | STREAM     | MARK1 | MARK2 | DOB        |
+---------+--------------+------------+-------+-------+------------+
|     101 | SURYA TAKUR  | SCIENCE    | 90.00 | 87.00 | 1990-10-10 |
|     102 | CHRIS TOM    | HUMANITIES | 88.00 | 91.00 | 1994-01-05 |
|     103 | ABEL GEORGE  | COMMERCE   | 93.00 | 95.00 | 1993-10-07 |
|     104 | NATHEL PILLAI | SCIENCE    | 56.00 | 58.00 | 1994-08-08 |
+---------+--------------+------------+-------+-------+------------+
4 rows in set (0.00 sec)
```

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11. DELETE A TABLE

SYNTAX: DROP TABLE TABLE_NAME;

```
EG:mysql> USE AY2022;
Database changed
mysql> SHOW TABLES;
+-----------------+
| Tables_in_ay2022 |
+-----------------+
| student         |
| teacher         |
+-----------------+
2 rows in set (2.26 sec)

mysql> DROP TABLE TEACHER;
Query OK, 0 rows affected (2.41 sec)

mysql> SHOW TABLES;
+-----------------+
| Tables_in_ay2022 |
+-----------------+
| student         |
+-----------------+
1 row in set (0.10 sec)
```

12. DELETING A DATABASE

SYNTAX: DROP DATABASE DATABASE_NAME;

```
mysql> CREATE DATABASE SCHOOL;
Query OK, 1 row affected (0.17 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| ay2022             |
| grade_12_2022      |
| information_schema |
| mysql              |
| performance_schema |
```

```
| sakila             |
| school             |
| sys                |
| world              |
+--------------------+
9 rows in set (0.15 sec)

mysql> DROP DATABASE SCHOOL;
Query OK, 0 rows affected (0.45 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| ay2022             |
| grade_12_2022      |
| information_schema |
| mysql              |
| performance_schema |
| sakila             |
| sys                |
| world              |
+--------------------+
8 rows in set (0.04 sec)
```

13. DISPLAYING A SPECIFIC FIELD(S)

SYNTAX: SELECT FIELD_NAMES FROM TABLE NAME;

14. DISPLAYING NAMES & STREAM

```
mysql> SELECT STUD_NAME,STREAM FROM STUDENT;
+---------------+------------+
| STUD_NAME     | STREAM     |
+---------------+------------+
| SURYA TAKUR   | SCIENCE    |
| CHRIS TOM     | HUMANITIES |
| ABEL GEORGE   | COMMERCE   |
| NATHEL PILLAI | SCIENCE    |
+---------------+------------+
4 rows in set (0.12 sec)
```

15. DISPLAY STUDENTS IN SCIENCE STREAM

```
mysql> SELECT * FROM STUDENT WHERE STREAM='SCIENCE';
+---------+--------------+---------+-------+-------+
| ROLL_NO | STUD_NAME    | STREAM  | MARK1 | MARK2 |
+---------+--------------+---------+-------+-------+
|     101 | SURYA TAKUR  | SCIENCE | 90.00 | 87.00 |
|     104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 |
+---------+--------------+---------+-------+-------+
2 rows in set (0.11 sec)
```

16. student name and both marks whose mark1 is greater than 89

```
mysql> SELECT STUD_NAME,MARK1,MARK2 FROM STUDENT WHERE
MARK1>89;

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

| STUD_NAME   | MARK1 | MARK2 |

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

| SURYA TAKUR | 90.00 | 87.00 |

| ABEL GEORGE | 93.00 | 95.00 |

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

2 rows in set (0.01 sec)
```

17. Display all student details whose mark2 is between 91 and 95.

```
mysql> SELECT STUD_NAME FROM STUDENT WHERE MARK2>=91 AND MARK2<=95;

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

| STUD_NAME   |

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

| CHRIS TOM   |

| ABEL GEORGE |

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

2 rows in set (0.00 sec)
```

OR

```
mysql>  SELECT STUD_NAME FROM STUDENT WHERE MARK2 BETWEEN 91 AND 95;
+-------------+
| STUD_NAME   |
+-------------+
| CHRIS TOM   |
| ABEL GEORGE |
+-------------+
2 rows in set (0.07 sec)
```

18. DISPLAY ALL STUDENT DETAILS WHOSE DOB IS AFTER 1ST JAN 1994

```
 mysql> SELECT * FROM STUDENT WHERE DOB>'1994/01/01';
+---------+--------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME    | STREAM     | MARK1 | MARK2 | DOB        |
+---------+--------------+------------+-------+-------+------------+
|     102 | CHRIS TOM    | HUMANITIES | 88.00 | 91.00 | 1994-01-05 |
|     104 | NATHEL PILLAI | SCIENCE    | 56.00 | 58.00 | 1994-08-08 |
+---------+--------------+------------+-------+-------+------------+
3 rows in set (0.05 sec)
```

19. DISPLAY ALL STUDENT DETAILS WHOSE DOB IS 1ST JAN 1994

```
mysql> SELECT * FROM STUDENT WHERE DOB='1994/01/01';
Empty set (0.00 sec)
```

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20. INSERT ELEMENTS IN A TABLE

SYNTAX_1: INSERT INTO TABLENAME VALUES(V1,V2,V3 +NORMAL);

SYNTAX_2: INSERT INTO TABLE TABLE NAME(F1,F2,F3…) VALUES(V1,V2,V3……);

mysql> INSERT INTO STUDENT VALUES(110,'KARTHIK KIRAN',NULL,100,NULL,’1993/10/10’);

Query OK, 1 row affected (0.20 sec)

mysql> INSERT INTO STUDENT (ROLL_NO,STUD_NAME,DOB) VALUES(111,'JERRY JOHN',’1994/11/19);

Query OK, 1 row affected (0.13 sec)

mysql> SELECT * FROM STUDENT;

```
+---------+--------------+------------+--------+-------+------------+
| ROLL_NO | STUD_NAME    | STREAM     | MARK1  | MARK2 | DOB        |
+---------+--------------+------------+--------+-------+------------+
|     101 | SURYA TAKUR  | SCIENCE    |  90.00 | 87.00 | 1990-10-10 |
|     102 | CHRIS TOM    | HUMANITIES |  88.00 | 91.00 | 1994-01-05 |
|     103 | ABEL GEORGE  | COMMERCE   |  93.00 | 95.00 | 1993-10-07 |
|     104 | NATHEL PILLAI | SCIENCE    |  56.00 | 58.00 | 1994-08-08 |
|     110 | KARTHIK KIRAN | NULL       | 100.00 |  NULL | 1993-10-10 |
|     111 | JERRY JOHN   | NULL       |   NULL |  NULL | 1994-11-19 |
+---------+--------------+------------+--------+-------+------------+
```

6 rows in set (0.00 sec)

21. DISPLAY NULL RECORDS

mysql> SELECT * FROM STUDENT WHERE MARK1 IS NULL OR MARK2 IS NULL;

```
+---------+--------------+--------+--------+-------+------------+
| ROLL_NO | STUD_NAME    | STREAM | MARK1  | MARK2 | DOB        |
```

```
+---------+---------------+--------+--------+-------+------------+
|     110 | KARTHIK KIRAN | NULL   | 100.00 |  NULL | 1993-10-10 |
|     111 | JERRY JOHN    | NULL   |   NULL |  NULL | 1994-11-19 |
+---------+---------------+--------+--------+-------+------------+
2 rows in set (0.00 sec)
```

22. BOTH NULL

```
mysql> SELECT * FROM STUDENT WHERE MARK1 IS NULL AND MARK2 IS NULL;
+---------+------------+--------+-------+-------+------------+
| ROLL_NO | STUD_NAME  | STREAM | MARK1 | MARK2 | DOB        |
+---------+------------+--------+-------+-------+------------+
|     111 | JERRY JOHN | NULL   |  NULL |  NULL | 1994-11-19 |
+---------+------------+--------+-------+-------+------------+
1 row in set (0.00 sec)
```

23. MARK 1 OR/AND MARK 2 IS NOT NULL:

```
SELECT * FROM STUDENT WHERE MARK1 IS NOT NULL AND MARK2 IS NOT NULL;
+---------+---------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME     | STREAM     | MARK1 | MARK2 | DOB        |
+---------+---------------+------------+-------+-------+------------+
|     101 | SURYA TAKUR   | SCIENCE    | 90.00 | 87.00 | 1990-10-10 |
|     102 | CHRIS TOM     | HUMANITIES | 88.00 | 91.00 | 1994-01-05 |
|     103 | ABEL GEORGE   | COMMERCE   | 93.00 | 95.00 | 1993-10-07 |
|     104 | NATHEL PILLAI | SCIENCE    | 56.00 | 58.00 | 1994-08-08 |
+---------+---------------+------------+-------+-------+------------+
```

```
4 rows in set (0.00 sec)

mysql> SELECT * FROM STUDENT WHERE MARK1 IS NOT NULL OR MARK2 IS NOT
NULL;

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

| ROLL_NO | STUD_NAME     | STREAM     | MARK1  | MARK2 | DOB        |

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

|     101 | SURYA TAKUR   | SCIENCE    |  90.00 | 87.00 | 1990-10-10 |

|     102 | CHRIS TOM     | HUMANITIES |  88.00 | 91.00 | 1994-01-05 |

|     103 | ABEL GEORGE   | COMMERCE   |  93.00 | 95.00 | 1993-10-07 |

|     104 | NATHEL PILLAI | SCIENCE    |  56.00 | 58.00 | 1994-08-08 |

|     110 | KARTHIK KIRAN | NULL       | 100.00 |  NULL | 1993-10-10 |

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

5 rows in set (0.00 sec)
```

24. DISPLAY A SPECIFIC FIELD:

SYNTAX: SELECT DISTINCT FIELD_NAME FROM TABLE_NAME;

```
mysql> SELECT DISTINCT STREAM FROM STUDENT;

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

| STREAM     |

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

| SCIENCE    |

| HUMANITIES |

| COMMERCE   |

| NULL       |

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

4 rows in set (0.07 sec)
```

25. CHANGING THE COLUMN NAMES (ROLL_NO=>ROLL_NUMBER; STUD_NAME=>STUDENT_NAME)

SYNTAX: SELECT FEILD_NAME ALIAS_NAME FROM TABLE_NAME;

```
mysql> USE AY2022;
Database changed
mysql> SELECT ROLL_NO ROLL_NUMBER,STUD_NAMNAME FROM STUDENT;
E STUDENT_+-------------+---------------+
| ROLL_NUMBER | STUDENT_NAME  |
+-------------+---------------+
|         101 | SURYA TAKUR   |
|         102 | CHRIS TOM     |
|         103 | ABEL GEORGE   |
|         104 | NATHEL PILLAI |
|         110 | KARTHIK KIRAN |
|         111 | JERRY JOHN    |
+-------------+---------------+
6 rows in set (0.05 sec)
```

26. Display student names along with date of birth whose mark2 is 91 and 95 (using IN operator)

SYNTAX: SELECT FEILD_NAME FROM TABLE_NAME WHERE MARK2 IN (91,95);

```
mysql> SELECT STUD_NAME,DOB FROM STUDENT WHERE FIELD NAME IN (V1,V2);
+-------------+------------+
| STUD_NAME   | DOB        |
+-------------+------------+
| CHRIS TOM   | 1994-01-05 |
| ABEL GEORGE | 1993-10-07 |
```

```
+-------------+------------+
```

2 rows in set (0.04 sec)

27. Display all the student details whose date of birth is in the year 1994 (using year() function)

```
mysql> SELECT * FROM STUDENT WHERE YEAR(DOB)='1994';
+---------+---------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME     | STREAM     | MARK1 | MARK2 | DOB        |
+---------+---------------+------------+-------+-------+------------+
|     102 | CHRIS TOM     | HUMANITIES | 88.00 | 91.00 | 1994-01-05 |
|     104 | NATHEL PILLAI | SCIENCE    | 56.00 | 58.00 | 1994-08-08 |
|     111 | JERRY JOHN    | NULL       |  NULL |  NULL | 1994-11-19 |
+---------+---------------+------------+-------+-------+------------+
```

3 rows in set (0.05 sec)

28. Display the student roll number along with student name whose date of birth is in October month (using month() function)

```
mysql>  SELECT STUD_NAME,ROLL_NO FROM STUDENT WHERE MONTH(DOB)=10;
+---------------+---------+
| STUD_NAME     | ROLL_NO |
+---------------+---------+
| SURYA TAKUR   |     101 |
| ABEL GEORGE   |     103 |
| KARTHIK KIRAN |     110 |
+---------------+---------+
```

3 rows in set (0.00 sec)

29. Display the student roll number along with student name whose date of birth is in date after 9th of the month (using day() function)

```
mysql> SELECT STUD_NAME,ROLL_NO FROM STUDENT WHERE DAY(DOB)>9;
+--------------+---------+
| STUD_NAME    | ROLL_NO |
+--------------+---------+
| SURYA TAKUR  |     101 |
| KARTHIK KIRAN |     110 |
| JERRY JOHN   |     111 |
+--------------+---------+
3 rows in set (0.01 sec)
```

EMPLOYEE TABLE:

```
+---------+---------------+------+-----+---------+-------+
| Field   | Type          | Null | Key | Default | Extra |
+---------+---------------+------+-----+---------+-------+
| eno     | int(5)        | YES  |     | NULL    |       |
| emp_sal | decimal(12,2) | YES  |     | NULL    |       |
| emp_sex | char(1)       | YES  |     | m       |       |
+---------+---------------+------+-----+---------+-------+
3 rows in set (0.47 sec)
```

30. SELECT STREAM FROM STUDENT WHERE THE LAST LETTER OF THE STREAM IS E

```
mysql> SELECT STREAM FROM STUDENT WHERE STREAM LIKE '%E';
+----------+
| STREAM   |
+----------+
```

| SCIENCE |

| COMMERCE |

| SCIENCE |

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

3 rows in set (0.60 sec)

31. STUDENT NAMES CONTAINING 'I'

mysql> SELECT STUD_NAME FROM STUDENT WHERE STUD_NAME LIKE '%I%';

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

| STUD_NAME |

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

| CHIS TOM |

| NATHANEL PILLAI |

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

2 rows in set (0.00 sec)

32. 4 LETTER FIRST NAMES

mysql> SELECT STUD_NAME FROM STUDENT WHERE STUD_NAME LIKE '____ %';

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

| STUD_NAME |

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

| CHIS TOM |

| ABEL GEORGE |

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

2 rows in set (0.00 sec)

33. 3RD LETTER OF STREAM IS M

```
mysql> SELECT STREAM FROM STUDENT WHERE STREAM LIKE '__M%';
+------------+
| STREAM     |
+------------+
| HUMANITIES |
| COMMERCE   |
+------------+
2 rows in set (0.00 sec)
```

34. DOB IN OCTOBER

```
mysql> SELECT STUD_NAME,DOB FROM STUDENT WHERE DOB LIKE '%-10-%';
+-------------+------------+
| STUD_NAME   | DOB        |
+-------------+------------+
| SURYA TAKUR | 1990-10-10 |
| ABEL GEORGE | 1993-10-07 |
+-------------+------------+
2 rows in set, 1 warning (0.00 sec)
```

OR

```
mysql> SELECT STUD_NAME,DOB FROM STUDENT WHERE DOB LIKE '%_10_%';
+-------------+------------+
| STUD_NAME   | DOB        |
+-------------+------------+
| SURYA TAKUR | 1990-10-10 |
| ABEL GEORGE | 1993-10-07 |
```

```
+-------------+------------+
```

2 rows in set, 1 warning (0.01 sec)

35. STUDENT NAMES IN DESC ORDER

```
mysql> SELECT STUD_NAME FROM STUDENT ORDER BY STUD_NAME DESC;
+-----------------+
| STUD_NAME       |
+-----------------+
| SURYA TAKUR     |
| NATHANEL PILLAI |
| CHIS TOM        |
| ABEL GEORGE     |
+-----------------+
```

4 rows in set (0.24 sec)

36. SELECT NAMES AND DOB FROM SCIENCE STREAM IN THE ASCENDING ORDER

```
mysql> SELECT STUD_NAME,DOB FROM STUDENT WHERE STREAM='SCIENCE' ORDER
BY STUD_NAME;
+-----------------+------------+
| STUD_NAME       | DOB        |
+-----------------+------------+
| NATHANEL PILLAI | 1994-08-08 |
| SURYA TAKUR     | 1990-10-10 |
+-----------------+------------+
```

2 rows in set (0.03 sec)

DISPLAY STREAM NAMES WITH 7 CHARECTERS

```
mysql> SELECT STREAM FROM STUDENT WHERE LENGTH(STREAM)=7;
+---------+
| STREAM  |
+---------+
| SCIENCE |
| SCIENCE |
+---------+
2 rows in set (0.25 sec)
```

```
mysql> SELECT STREAM FROM STUDENT WHERE LENGTH(STREAM)<7;
```

LEN FUNCTION

```
mysql> SELECT STREAM FROM STUDENT WHERE LEN(STREAM)=7;
ERROR 1305 (42000): FUNCTION 12b2.LEN does not exist
```

37. CHANGE DOB OF ROLL NO102 AS 1/5/1994

```
mysql> USE 12B2
Database changed
mysql> SELECT * FROM STUDENT;
+---------+-----------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME       | STREAM     | MARK1 | MARK2 | DOB        |
+---------+-----------------+------------+-------+-------+------------+
|     101 | SURYA TAKUR     | SCIENCE    | 90.00 | 87.00 | 1990-10-10 |
|     102 | CHIS TOM        | HUMANITIES | 88.00 | 91.00 | 1994-01-05 |
```

```
|     103 | ABEL GEORGE     | COMMERCE   | 93.00 | 95.00 | 1993-10-07 |
|     104 | NATHANEL PILLAI | SCIENCE    | 56.00 | 58.00 | 1994-08-08 |
+---------+-----------------+------------+-------+-------+------------+
4 rows in set (0.22 sec)

mysql> UPDATE STUDENT SET DOB= '1994-5-1' WHERE ROLL_NO=102;
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM STUDENT;
+---------+-----------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME       | STREAM     | MARK1 | MARK2 | DOB        |
+---------+-----------------+------------+-------+-------+------------+
|     101 | SURYA TAKUR     | SCIENCE    | 90.00 | 87.00 | 1990-10-10 |
|     102 | CHIS TOM        | HUMANITIES | 88.00 | 91.00 | 1994-05-01 |
|     103 | ABEL GEORGE     | COMMERCE   | 93.00 | 95.00 | 1993-10-07 |
|     104 | NATHANEL PILLAI | SCIENCE    | 56.00 | 58.00 | 1994-08-08 |
+---------+-----------------+------------+-------+-------+------------+
4 rows in set (0.00 sec)
```

38. INCREASE THE MARK 1 OF ALL STUDENTS BY 2

```
mysql> UPDATE STUDENT SET MARK1=MARK1+2;
Query OK, 4 rows affected (0.15 sec)
Rows matched: 4  Changed: 4  Warnings: 0
```

```
mysql> SELECT * FROM STUDENT;
+---------+----------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME      | STREAM     | MARK1 | MARK2 | DOB        |
+---------+----------------+------------+-------+-------+------------+
|     101 | SURYA TAKUR    | SCIENCE    | 92.00 | 87.00 | 1990-10-10 |
|     102 | CHIS TOM       | HUMANITIES | 90.00 | 91.00 | 1994-05-01 |
|     103 | ABEL GEORGE    | COMMERCE   | 95.00 | 95.00 | 1993-10-07 |
|     104 | NATHANEL PILLAI | SCIENCE    | 58.00 | 58.00 | 1994-08-08 |
+---------+----------------+------------+-------+-------+------------+
4 rows in set (0.00 sec)
```

39. CHANGE THE NAME OF STUDENT ‘NATHEL PILLAI’ TO ‘NITHIN PILLAI’ WHERE ROLL NO IS 104

```
mysql> UPDATE STUDENT SET STUD_NAME='NITHIN PILLAI' WHERE ROLL_NO=104;
Query OK, 1 row affected (0.06 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM STUDENT;
+---------+--------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME    | STREAM     | MARK1 | MARK2 | DOB        |
+---------+--------------+------------+-------+-------+------------+
|     101 | SURYA TAKUR  | SCIENCE    | 92.00 | 87.00 | 1990-10-10 |
|     102 | CHIS TOM     | HUMANITIES | 90.00 | 91.00 | 1994-05-01 |
|     103 | ABEL GEORGE  | COMMERCE   | 95.00 | 95.00 | 1993-10-07 |
|     104 | NITHIN PILLAI | SCIENCE    | 58.00 | 58.00 | 1994-08-08 |
+---------+--------------+------------+-------+-------+------------+
```

4 rows in set (0.00 sec)

DELETE STUDENT DETAILS WHOSE SCORE IS LESS THAN 88

*mysql> SELECT * FROM STUDENT;*

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

| ROLL_NO | STUD_NAME | STREAM | MARK1 | MARK2 | DOB |

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

| 101 | SURYA TAKUR | SCIENCE | 92.00 | 87.00 | 1990-10-10 |

| 102 | CHIS TOM | HUMANITIES | 90.00 | 91.00 | 1994-05-01 |

| 103 | ABEL GEORGE | COMMERCE | 95.00 | 95.00 | 1993-10-07 |

| 104 | NITHIN PILLAI | SCIENCE | 58.00 | 58.00 | 1994-08-08 |

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

4 rows in set (0.00 sec)

*mysql> SELECT * FROM STUDENT;*

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

| ROLL_NO | STUD_NAME | STREAM | MARK1 | MARK2 | DOB |

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

| 101 | SURYA TAKUR | SCIENCE | 92.00 | 87.00 | 1990-10-10 |

| 102 | CHIS TOM | HUMANITIES | 90.00 | 91.00 | 1994-05-01 |

| 103 | ABEL GEORGE | COMMERCE | 95.00 | 95.00 | 1993-10-07 |

| 104 | NITHIN PILLAI | SCIENCE | 58.00 | 58.00 | 1994-08-08 |

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

4 rows in set (0.00 sec)

mysql> DELETE FROM STUDENT WHERE MARK2<88;

Query OK, 2 rows affected (0.06 sec)

*mysql> SELECT * FROM STUDENT;*

```
+---------+-------------+------------+-------+-------+------------+
| ROLL_NO | STUD_NAME   | STREAM     | MARK1 | MARK2 | DOB        |
+---------+-------------+------------+-------+-------+------------+
|     102 | CHIS TOM    | HUMANITIES | 90.00 | 91.00 | 1994-05-01 |
|     103 | ABEL GEORGE | COMMERCE   | 95.00 | 95.00 | 1993-10-07 |
+---------+-------------+------------+-------+-------+------------+
```

2 rows in set (0.14 sec)

40. DELETE STUDENT TABLE

mysql> DELETE FROM STUDENT;

Query OK, 2 rows affected (0.09 sec)

*mysql> SELECT * FROM STUDENT;*

Empty set (0.00 sec);

41. CREATING A VEIW

CREATE VIEW NAME AS SELECT ROLL_NO,STUD_NAME FROM STUDENT WHERE MARK2>90 AND MARK1>90;

Query OK, 0 rows affected (0.17 sec)

mysql> SELECT * FROM NAME;

```
+---------+-------------+
| ROLL_NO | STUD_NAME   |
+---------+-------------+
|     103 | ABEL GEORGE |
+---------+-------------+
```

1 row in set (0.13 sec)

42. DELETING VEIW

```
mysql> DROP VIEW NAME;

Query OK, 0 rows affected (0.00 sec)
```

43. Add column location to student table with data type char of size 40

```
alter table student add location char(50);
Query OK, 0 rows affected (10.05 sec)
Records: 0  Duplicates: 0  Warnings: 0
mysql> desc student;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| ROLL_NO   | int(5)       | NO   | PRI | NULL    |       |
| STUD_NAME | varchar(35)  | YES  |     | NULL    |       |
| STREAM    | char(20)     | YES  |     | NULL    |       |
| MARK1     | decimal(6,2) | YES  |     | NULL    |       |
| MARK2     | decimal(6,2) | YES  |     | NULL    |       |
| DOB       | date         | YES  |     | NULL    |       |
| location  | char(50)     | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
7 rows in set (0.11 sec)
```

44. Delete column location from student table

```
mysql> alter table student drop column location;

Query OK, 0 rows affected (3.00 sec)

Records: 0  Duplicates: 0  Warnings: 0

mysql> desc student;

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

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

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

| ROLL_NO   | int(5)       | NO   | PRI | NULL    |       |

| STUD_NAME | varchar(35)  | YES  |     | NULL    |       |

| STREAM    | char(20)     | YES  |     | NULL    |       |

| MARK1     | decimal(6,2) | YES  |     | NULL    |       |
```

```
| MARK2     | decimal(6,2) | YES  |     | NULL    |       |
| DOB       | date         | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
6 rows in set (0.03 sec)
```

45. Modify column location from the student table

```
mysql> alter table student modify location varchar(40);
Query OK, 4 rows affected (1.09 sec)
Records: 4  Duplicates: 0  Warnings: 0
mysql> desc student;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| ROLL_NO   | int(5)       | NO   | PRI | NULL    |       |
| STUD_NAME | varchar(35)  | YES  |     | NULL    |       |
| STREAM    | char(20)     | YES  |     | NULL    |       |
| MARK1     | decimal(6,2) | YES  |     | NULL    |       |
| MARK2     | decimal(6,2) | YES  |     | NULL    |       |
| DOB       | date         | YES  |     | NULL    |       |
| location  | varchar(40)  | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
7 rows in set (0.15 sec)
```

46. Rename the column 'location' from the student table as street with varchar data type and size 90

```
mysql> alter table student change location street varchar(90);
Query OK, 4 rows affected (0.97 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> desc student;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| ROLL_NO   | int(5)      | NO   | PRI | NULL    |       |
| STUD_NAME | varchar(35) | YES  |     | NULL    |       |
| STREAM    | char(20)    | YES  |     | NULL    |       |
| MARK1     | decimal(6,2) | YES  |     | NULL    |       |
| MARK2     | decimal(6,2) | YES  |     | NULL    |       |
| DOB       | date        | YES  |     | NULL    |       |
| street    | varchar(90) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

47. Display the sum of mark1 in student table

```
mysql> select sum(mark1) from student;
+------------+
| sum(mark1) |
+------------+
|     327.00 |
+------------+
1 row in set (0.02 sec)
```

48. Display the senior most and juniour most student from table student0

```
mysql> select min(stud_name), max(stud_name) from student;
+---------------+---------------+
| min(stud_name) | max(stud_name) |
+---------------+---------------+
| ABEL GEORGE    | SURYA TAKUR    |
+---------------+---------------+
1 row in set (0.00 sec)
```

49. Display the students with mark1>90

```
mysql> select count(stud_name) from student where mark1>90;
+-----------------+
| count(stud_name) |
+-----------------+
|               1 |
+-----------------+
1 row in set (0.00 sec)
```

50. Display the avg marks from mark2 whose name starts with t

```
mysql> select round(avg(mark2)) from student where stud_name like '% t%';
+------------------+
| round(avg(mark2)) |
+------------------+
|               89 |
+------------------+
1 row in set (0.04 sec)
```

51. GROUP BY

```
mysql> select * from student where stud_name like '%a%' group by dob order by dob;
+---------+--------------+----------+-------+-------+------------+--------+
| ROLL_NO | STUD_NAME    | STREAM   | MARK1 | MARK2 | DOB        | street |
+---------+--------------+----------+-------+-------+------------+--------+
|     101 | SURYA TAKUR  | SCIENCE  | 90.00 | 87.00 | 1990-10-10 | NULL   |
|     103 | ABEL GEORGE  | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL   |
|     104 | NATHEL PILLAI | SCIENCE  | 56.00 | 58.00 | 1994-08-08 | NULL   |
+---------+--------------+----------+-------+-------+------------+--------+
3 rows in set (0.29 sec)
```

OR

```
mysql> select * from student group by dob having stud_name like '%a%';
+---------+--------------+----------+-------+-------+------------+--------+
| ROLL_NO | STUD_NAME    | STREAM   | MARK1 | MARK2 | DOB        | street |
+---------+--------------+----------+-------+-------+------------+--------+
|     101 | SURYA TAKUR  | SCIENCE  | 90.00 | 87.00 | 1990-10-10 | NULL   |
|     103 | ABEL GEORGE  | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL   |
|     104 | NATHEL PILLAI | SCIENCE  | 56.00 | 58.00 | 1994-08-08 | NULL   |
+---------+--------------+----------+-------+-------+------------+--------+
3 rows in set (0.00 sec)
```

52. Display the no of student in a stream

```
mysql> select stream,count(*) from student group by stream;
+------------+----------+
| stream     | count(*) |
+------------+----------+
```

| COMMERCE | 1 |

| HUMANITIES | 1 |

| SCIENCE | 2 |

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

3 rows in set (0.05 sec)

JOIN TABLE

mysql> use 12b2;

Database changed

mysql> select * from teacher,student;

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

| TR_ID | TR_NAME | TR_SAL | ROLL_NO | ROLL_NO | STUD_NAME | STREAM | MARK1 | MARK2 | DOB | street |

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

| 154 | ENRICK DK | 8900.00 | 101 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

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

12 rows in set (0.36 sec)

mysql> select * from teacher join student;

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

| TR_ID | TR_NAME | TR_SAL | ROLL_NO | ROLL_NO | STUD_NAME | STREAM | MARK1 | MARK2 | DOB | street |

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

| 154 | ENRICK DK | 8900.00 | 101 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

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

12 rows in set (0.04 sec)

mysql> select * from teacher equi join student;

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

| TR_ID | TR_NAME | TR_SAL | ROLL_NO | ROLL_NO | STUD_NAME | STREAM | MARK1 | MARK2 | DOB | street |

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

| 154 | ENRICK DK | 8900.00 | 101 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

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

12 rows in set (0.00 sec)

mysql> select * from teacher cross join student;

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

| TR_ID | TR_NAME | TR_SAL | ROLL_NO | ROLL_NO | STUD_NAME | STREAM | MARK1 | MARK2 | DOB | street |

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

| 154 | ENRICK DK | 8900.00 | 101 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 101 | SURYA TAKUR | SCIENCE | 90.00 | 87.00 | 1990-10-10 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 102 | CHRIS TOM | HUMANITIES | 88.00 | 91.00 | 1994-01-05 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00 | 1993-10-07 | NULL |

| 154 | ENRICK DK | 8900.00 | 101 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 210 | REKHA NAIR | 8500.00 | 102 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

| 999 | ELIAS JOHN | 9900.00 | 103 | 104 | NATHEL PILLAI | SCIENCE | 56.00 | 58.00 | 1994-08-08 | NULL |

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

12 rows in set (0.00 sec)

mysql> select * from teacher NATURAL join student;

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

| ROLL_NO | TR_ID | TR_NAME | TR_SAL | STUD_NAME | STREAM | MARK1 | MARK2 | DOB | street |

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

```
|     101 |   154 | ENRICK DK  | 8900.00 | SURYA TAKUR | SCIENCE    | 90.00 | 87.00 |
1990-10-10 | NULL   |

|     102 |   210 | REKHA NAIR | 8500.00 | CHRIS TOM   | HUMANITIES | 88.00 | 91.00 |
1994-01-05 | NULL   |

|     103 |   999 | ELIAS JOHN | 9900.00 | ABEL GEORGE | COMMERCE   | 93.00 | 95.00 |
1993-10-07 | NULL   |

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

3 rows in set (0.12 sec)

mysql> select * from teacher T,student S WHERE T.ROLL_NO=S.ROLL_NO;

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

| TR_ID | TR_NAME    | TR_SAL  | ROLL_NO | ROLL_NO | STUD_NAME   | STREAM     |
MARK1 | MARK2 | DOB        | street |

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

|   154 | ENRICK DK  | 8900.00 |     101 |     101 | SURYA TAKUR | SCIENCE    | 90.00 | 87.00 |
1990-10-10 | NULL   |

|   210 | REKHA NAIR | 8500.00 |     102 |     102 | CHRIS TOM   | HUMANITIES | 88.00 | 91.00 |
1994-01-05 | NULL   |

|   999 | ELIAS JOHN | 9900.00 |     103 |     103 | ABEL GEORGE | COMMERCE   | 93.00 |
95.00 | 1993-10-07 | NULL   |

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

3 rows in set (0.08 sec)
```

53. MARK1>90

```
mysql> select * from teacher T,student S WHERE T.ROLL_NO=S.ROLL_NO AND MARK1>90;

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

| TR_ID | TR_NAME    | TR_SAL  | ROLL_NO | ROLL_NO | STUD_NAME   | STREAM   |
MARK1 | MARK2 | DOB        | street |

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

|   999 | ELIAS JOHN | 9900.00 |     103 |     103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00
| 1993-10-07 | NULL   |
```

```
+-------+------------+---------+---------+---------+-------------+----------+-------+-------+------------+--------+
```

1 row in set (0.13 sec)

```
mysql> select * from teacher,student WHERE TEACHER.ROLL_NO=STUDENT.ROLL_NO
AND MARK1>90;
```

```
+-------+------------+---------+---------+---------+-------------+----------+-------+-------+------------+--------+
```

```
| TR_ID | TR_NAME    | TR_SAL  | ROLL_NO | ROLL_NO | STUD_NAME   | STREAM   |
MARK1 | MARK2 | DOB        | street |
```

```
+-------+------------+---------+---------+---------+-------------+----------+-------+-------+------------+--------+
```

```
|   999 | ELIAS JOHN | 9900.00 |     103 |     103 | ABEL GEORGE | COMMERCE | 93.00 | 95.00
| 1993-10-07 | NULL   |
```

```
+-------+------------+---------+---------+---------+-------------+----------+-------+-------+------------+--------+
```

1 row in set (0.00 sec)

\

PYTHON CONNECTOR

1. INTRODUCTION

```
import mysql.connector
con=mysql.connector.connect(host='localhost',user='root',password='root',database='12b2')
if con.is_connected(): #return type is bool
    print("SUCCESSFULLY CONNECTED")
    print(con)
else:
    print("FAILED")
#con is known as the connection object
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03F08690>
```

OR

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03F4A650>
```

2. ***CURSOR OBJECT***

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
cursor=con.cursor()
print(cursor)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03EEA750>
MySQLCursor: (Nothing executed yet)
```

3. ***SHOW TABLES***

Each table is a tuple in python

CODE:

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
cursor=con.cursor()
```

```
print(cursor)
SQL='SHOW TABLES'
cursor.excecute(SQL)
RESULT_SET=cursor.fetchall()
print(RESULT_SET)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x032E0970>
MySQLCursor: (Nothing executed yet)
[('employee',), ('student',), ('teacher',)]
```

4. ***FETCHALL:***

RETURN TYPE: TUPLE

CODE:

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='SELECT * FROM TEACHER'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
```

```
print(RESULT_SET)
```

OUTPUT

```
SUCCESSFULLY CONNECTED

<mysql.connector.connection.MySQLConnection object at 0x03C32CB0>

MySQLCursor: (Nothing executed yet)

[]
```

MENU DRIVEN PROGRAM

(I)

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='SHOW DATABASES'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
print(RESULT_SET)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03D4AA50>
MySQLCursor: (Nothing executed yet)
[('information_schema',), ('12b2',), ('ay2021',), ('ay2022',), ('ay21',), ('christo',),
('final_exam',), ('final_exam_comp',), ('library',), ('myschool',), ('mysql',),
('performance_schema',), ('practicals',), ('saieesha',), ('sakila',), ('school',), ('sports',),
('sys',), ('tripify',), ('world',)]
```

(II) ROW COUNT IS AN ATTRIBUTE

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
```

```
cursor=con.cursor()
print(cursor)
SQL='SELECT * FROM STUDENT'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
print(RESULT_SET)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03A28A70>
MySQLCursor: (Nothing executed yet)
[(101, 'SURYA TAKUR', 'SCIENCE', Decimal('90.00'), Decimal('87.00'),
datetime.date(1990, 10, 10), None), (102, 'CHRIS TOM', 'HUMANITIES',
Decimal('88.00'), Decimal('91.00'), datetime.date(1994, 1, 5), None), (103, 'ABEL
GEORGE', 'COMMERCE', Decimal('93.00'), Decimal('95.00'), datetime.date(1993,
10, 7), None), (104, 'NATHEL PILLAI', 'SCIENCE', Decimal('56.00'), Decimal('58.00'),
datetime.date(1994, 8, 8), None)]
```

(III)

```
import mysql.connector as m
try:
   con=m.connect(host='localhost',user='root',password='root',database='12b2')
   print("SUCCESSFULLY CONNECTED")
   print(con)
except:
   print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='DESC STUDENT'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
print(RESULT_SET)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x0380AAB0>
MySQLCursor: (Nothing executed yet)
[('ROLL_NO', 'int(5)', 'NO', 'PRI', None, ''), ('STUD_NAME', 'varchar(35)', 'YES', '',
None, ''), ('STREAM', 'char(20)', 'YES', '', None, ''), ('MARK1', 'decimal(6,2)', 'YES', '',
None, ''), ('MARK2', 'decimal(6,2)', 'YES', '', None, ''), ('DOB', 'date', 'YES', '', None, ''),
('street', 'varchar(90)', 'YES', '', None, '')]
```

(IV)

```
import mysql.connector as m
try:
   con=m.connect(host='localhost',user='root',password='root',database='12b2')
```

```
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='SELECT * FROM STUDENT'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
print(cursor.rowcount)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03ACAB30>
MySQLCursor: (Nothing executed yet)
4
```

(V)

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='12b2')
    print("SUCCESSFULLY CONNECTED")
    print(con)
except:
    print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='SELECT * FROM STUDENT'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
print(cursor.rowcount)
for i in RESULT_SET:
    print(i)
```

OUTPUT:

```
SUCCESSFULLY CONNECTED
<mysql.connector.connection.MySQLConnection object at 0x03E9AC30>
MySQLCursor: (Nothing executed yet)
4
(101, 'SURYA TAKUR', 'SCIENCE', Decimal('90.00'), Decimal('87.00'),
datetime.date(1990, 10, 10), None)
(102, 'CHRIS TOM', 'HUMANITIES', Decimal('88.00'), Decimal('91.00'),
datetime.date(1994, 1, 5), None)
(103, 'ABEL GEORGE', 'COMMERCE', Decimal('93.00'), Decimal('95.00'),
datetime.date(1993, 10, 7), None)
```

(104, 'NATHEL PILLAI', 'SCIENCE', Decimal('56.00'), Decimal('58.00'), datetime.date(1994, 8, 8), None)

Database in the my sql connection statement is optional

```
STREAM=SCIENCE
import mysql.connector as m
try:
   con=m.connect(host='localhost',user='root',password='root',database='12b2')
   print("SUCCESSFULLY CONNECTED")
except:
   print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='SELECT STUD_NAME FROM STUDENT WHERE STREAM="SCIENCE"'
cursor.execute(SQL)
RESULT_SET=cursor.fetchall()
print(RESULT_SET)
for i in RESULT_SET:
   for j in i:
      print(j)
```

OUTPUT:
SUCCESSFULLY CONNECTED
MySQLCursor: (Nothing executed yet)
[('SURYA TAKUR',), ('NATHEL PILLAI',)]
SURYA TAKUR
NATHEL PILLAI

ADDING ELEMENTS TO TABLE

```
'''import mysql.connector as m
try:
   con=m.connect(host='localhost',user='root',password='root',database='SCHOOL')
   print("SUCCESSFULLY CONNECTED")
except:
   print("FAILED")
cursor=con.cursor()
print(cursor)
SQL='INSERT INTO FEES VALUES(101,"JERRY JACOB",1050)'
cursor.execute(SQL)
con.commit()'''
```

LOOP FOR ADDING VALUES:

```
import mysql.connector as m
try:
   con=m.connect(host='localhost',user='root',password='root',database='school')
   print("SUCESSFULLY CONNECTED")
except:
   print("FAILED")
C=con.cursor()
print(C)
while True:
   R=int(input("ENTER THE ROLL NUMBER"))
   N=input("ENTER THE STUDENT NAME")
   A=int(input("ENTER THE AMOUNT "))
   SQL="INSERT INTO FEES VALUES({},'{}',{})".format(R,N,A)
   C.execute(SQL)
   con.commit()
   B=input("DO YOU WANT TO CONTINUE? Y/N ")
   if B=='N':
      break
```

#search & display stud_name whose amt is above n

```
import mysql.connector as m

try:

   con=m.connect(host='localhost',user='root',password='root',database='school')

   print("SUCESSFULLY CONNECTED")

except:

   print("FAILED")

C=con.cursor()

print(C)

D=int(input("ENTER THE VALUE OF D: "))

SQL="SELECT NAME FROM FEES WHERE AMOUNT>{}".format(D)

C.execute(SQL)
```

```
R=C.fetchall()
for i in R:
    for j in i:
        print(j)
    print()
```

show all elements

```
'import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='school')
    print("SUCESSFULLY CONNECTED")
except:
    print("FAILED")
C=con.cursor()
print(C)
SQL="SELECT * FROM FEES"
C.execute(SQL)
R=C.fetchall()
for i in R:
    for j in i:
        print(i,end=' | ')
```

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='inventory')
    print("SUCESSFULLY CONNECTED")
except:
    print("FAILED")
C=con.cursor()
print(C)
def NO_SUPPLIER():
    S="SELECT * FROM SUPPLIER"
    C.execute(S)
    rs=cursor.fetchall()
    if rs==[]:
        print("SUPPLIER DOES NOT EXSIST")
def ADD():
    while True:
        a=(input("ENTER THE TABLE TO BE USED: "))
        if a.lower()=='item':
            b=input("ENTER THE ITEM_NUMBER ")
            c=input("ENTER THE ITEM NAME ")
            d=input("ENTER THE QUANTITY ")
            e=int(input("ENTER THE UNIT PRICE "))
            f=input("ENTER THE SUPPLY CODE ")
            SQL="INSERT INTO ITEM VALUES('{}','{}','{}','{}','{}')".format(b,c,d,e,f)
            C.execute(SQL)
```

```
            con.commit()
            CONTINUE=input("DO YOU WANT TO CONTINUE? Y/N ")
            if CONTINUE.upper()=='N':
                break
        if a.lower()=='supplier':
            g=input("ENTER THE SUPPLIER CODE ")
            h=input("ENTER THE SUPPLIER NAME ")
            i=input("ENTER THE SUPPLIER CONTACT ")
            if CONTINUE.upper()=='N':
                break
            SQL="INSERT INTO SUPPLIER VALUES('{}','{}','{}')".format(g,h,i)
            C.execute(SQL)
            con.commit()
while True:
    print("MAIN MENU")
    print("1. ADD RECORDS")
    print("2. UPDATE EXISTING DATA")
    print("3. EDIT EXISTING DATA")
    print("4. DELETE RECORDS")
    CHOICE=int(input("ENTER YOUR CHOICE: "))
    if CHOICE==1:
        NO_SUPPLIER()
        ADD()
```

```
import mysql.connector as m
try:
    con=m.connect(host='localhost',user='root',password='root',database='inventory')
    print("SUCESSFULLY CONNECTED")
except:
    print("FAILED")
C=con.cursor()
print(C)
def ADD_ITEM():
    while True:
        b=input("ENTER THE ITEM_NUMBER ")
        c=input("ENTER THE ITEM NAME ")
        d=input("ENTER THE QUANTITY ")
        e=int(input("ENTER THE UNIT PRICE "))
        f=input("ENTER THE SUPPLY CODE ")
        SQL="INSERT INTO ITEM VALUES('{}','{}','{}','{}','{}')".format(b,c,d,e,f)
        C.execute(SQL)
        con.commit()
        CONTINUE=input("DO YOU WANT TO CONTINUE? Y/N ")
        if CONTINUE.upper()=='N':
            break
def ADD_SUPPLIER():
    while True:
        g=input("ENTER THE SUPPLIER CODE ")
        h=input("ENTER THE SUPPLIER NAME ")
```

```
        i=input("ENTER THE SUPPLIER CONTACT ")
        CONTINUE=input("DO YOU WANT TO CONTINUE? Y/N ")
        SQL="INSERT INTO SUPPLIER VALUES('{}','{}','{}')".format(g,h,i)
        C.execute(SQL)
        con.commit()
        if CONTINUE.upper()=='N':
            break
def NO_SUPPLIER():
    S="SELECT * FROM SUPPLIER"
    C.execute(S)
    rs=C.fetchall()
    print(rs)
while True:
    print("MAIN MENU")
    print("1. ADD RECORDS")
    print("2. SEARCH RECORDS")
    print("3. EDIT EXISTING DATA")
    print("4. DELETE RECORDS")
    CHOICE=int(input("ENTER YOUR CHOICE: "))
    if CHOICE==1:
        a=(input("ENTER THE TABLE TO BE USED: "))
        if a.upper()=='SUPPLIER':
            ADD_SUPPLIER()
        if a.upper()=='ITEM':
            S="SELECT * FROM SUPPLIER"
```

```
C.execute(S)
rs=C.fetchall()
print(rs)
if rs==[]:
    print("SUPPLIER DOES NOT EXSIST")
    W=input("DO YOU WANT TO ENTER A NEW SUPPLIER? Y/N")
    if W.lower()=='y':
        ADD_SUPPLIER()
else:
    ADD_ITEM()
```