

A PRACTICALS LAB REPORT

Submitted in the partial fulfilment for the Course of

CSA0516 Database Management Systems for Network Security

to the award of the degree of

BACHELOR OF ENGINEERING

IN

ARTIFICIAL INTELLIGENCE AND MEACHINE LEARNING

Submitted by

K. Vijay Bhaskar Reddy (192425155)

Under the Supervision of

DR. J. VELMURUGAN

DR. S. PANDIRAJ



SIMATS
ENGINEERING



SIMATS
Saveetha Institute of Medical And Technical Sciences
(Declared as Deemed to be University under Section 3 of UGC Act 1956)

SIMATS ENGINEERING

Saveetha Institute of Medical and Technical Sciences

Chennai-602105

September-2025

DDL Commands – CREATE, ALTER, DROP

Field	Type	Null	Key	Default	Extra
RegNo	int	NO	PRI	NULL	
Name	varchar(50)	YES		NULL	
Gender	varchar(15)	YES		NULL	
DOB	date	YES		NULL	
MobileNo	varchar(15)	YES		NULL	
City	varchar(15)	YES		NULL	

6 rows in set (0.01 sec)

```
mysql> ALTER TABLE STUDENT ADD Email VARCHAR(50);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> DESC STUDENT;
```

Field	Type	Null	Key	Default	Extra
RegNo	int	NO	PRI	NULL	
Name	varchar(50)	YES		NULL	
Gender	varchar(15)	YES		NULL	
DOB	date	YES		NULL	
MobileNo	varchar(15)	YES		NULL	
City	varchar(15)	YES		NULL	
Email	varchar(50)	YES		NULL	

7 rows in set (0.00 sec)

```
mysql> ALTER TABLE STUDENT DROP COLUMN City;
Query OK, 0 rows affected (0.01 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> DESC STUDENT;
```

Field	Type	Null	Key	Default	Extra
RegNo	int	NO	PRI	NULL	
Name	varchar(50)	YES		NULL	
Gender	varchar(15)	YES		NULL	
DOB	date	YES		NULL	
MobileNo	varchar(15)	YES		NULL	
Email	varchar(50)	YES		NULL	

6 rows in set (0.00 sec)

DDL Commands with Constraints – PRIMARY, FOREIGN

KEY, UNIQUE, CHECK

```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual
  RegNo INT PRIMARY KEY,
  Name VARCHAR(50) NOT NULL,
  Gender VARCHAR(15), ' at line 1
mysql> ALTER TABLE STUDENT
  -> ADD CONSTRAINT pk_student PRIMARY KEY (RegNo);
ERROR 1068 (42000): Multiple primary key defined
mysql> ALTER TABLE STUDENT
  -> ADD CONSTRAINT uq_mobile UNIQUE (MobileNo);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE STUDENT
  -> ADD CONSTRAINT chk_gender CHECK (Gender IN ('Male', 'Female'));
Query OK, 4 rows affected (0.06 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> DESC STUDENT;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| RegNo | int           | NO   | PRI | NULL    |       |
| Name  | varchar(50)   | YES  |     | NULL    |       |
| Gender | varchar(15)   | YES  |     | NULL    |       |
| DOB   | date          | YES  |     | NULL    |       |
| MobileNo | varchar(15) | YES  | UNI | NULL    |       |
| Email | varchar(50)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

DML Commands – INSERT, SELECT, UPDATE, DELETE

```

mysql> SELECT * FROM STUDENT;
+-----+-----+-----+-----+-----+-----+
| RegNo | Name          | Gender | DOB          | MobileNo | Email |
+-----+-----+-----+-----+-----+-----+
| 101   | Amit Kumar    | Male   | 2002-05-14   | 9876543210 | NULL |
| 102   | Priya Sharma  | Female | 2003-08-21   | 9876501234 | NULL |
| 103   | Rahul Verma   | Male   | 2001-12-03   | 9876512345 | NULL |
| 104   | Neha Singh    | Female | 2002-02-18   | 9876523456 | NULL |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT * FROM STUDENT WHERE Gender = 'Female';
+-----+-----+-----+-----+-----+-----+
| RegNo | Name          | Gender | DOB          | MobileNo | Email |
+-----+-----+-----+-----+-----+-----+
| 102   | Priya Sharma  | Female | 2003-08-21   | 9876501234 | NULL |
| 104   | Neha Singh    | Female | 2002-02-18   | 9876523456 | NULL |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

```

SELECT with various clause – WHERE, pattern matching

```
mysql> SELECT * FROM STUDENT;
```

RegNo	Name	Gender	DOB	MobileNo	Email
101	Amit Kumar	Male	2002-05-14	9347773722	NULL
102	Priya Sharma	Female	2003-08-21	9876501234	NULL
103	Rahul Verma	Male	2001-12-03	9876512345	NULL

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

```
mysql> SELECT * FROM STUDENT WHERE DOB > '2002-05-14';
```

RegNo	Name	Gender	DOB	MobileNo	Email
102	Priya Sharma	Female	2003-08-21	9876501234	NULL

```
1 row in set (0.00 sec)
```

```
mysql> SELECT * FROM STUDENT WHERE Name LIKE 'A%';
```

RegNo	Name	Gender	DOB	MobileNo	Email
101	Amit Kumar	Male	2002-05-14	9347773722	NULL

```
1 row in set (0.00 sec)
```

SELECT with various clause – BETWEEN, IN, Aggregate

Function

```
mysql> SELECT * FROM STUDENT
-> WHERE RegNo BETWEEN 101 AND 103;
+-----+-----+-----+-----+-----+-----+
| RegNo | Name       | Gender | DOB       | MobileNo | Email |
+-----+-----+-----+-----+-----+-----+
| 101   | Amit Kumar | Male   | 2002-05-14 | 9347773722 | NULL |
| 102   | Priya Sharma | Female | 2003-08-21 | 9876501234 | NULL |
| 103   | Rahul Verma | Male   | 2001-12-03 | 9876512345 | NULL |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> SELECT * FROM STUDENT
-> WHERE RegNo IN (101, 103, 104);
+-----+-----+-----+-----+-----+-----+
| RegNo | Name       | Gender | DOB       | MobileNo | Email |
+-----+-----+-----+-----+-----+-----+
| 101   | Amit Kumar | Male   | 2002-05-14 | 9347773722 | NULL |
| 103   | Rahul Verma | Male   | 2001-12-03 | 9876512345 | NULL |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT Gender, COUNT(*) AS CountByGender
-> FROM STUDENT
-> GROUP BY Gender;
+-----+-----+
| Gender | CountByGender |
+-----+-----+
| Male   | 2             |
| Female | 1             |
+-----+-----+
2 rows in set (0.00 sec)
```

SELECT with various clause – GROUP BY, HAVING, ORDERBY

```
mysql> SELECT Gender, COUNT(*) AS TotalStudents
-> FROM STUDENT
-> GROUP BY Gender
-> HAVING COUNT(*) >= 2;
```

Gender	TotalStudents
Male	2

1 row in set (0.00 sec)

```
mysql> SELECT * FROM STUDENT
-> ORDER BY DOB DESC;
```

RegNo	Name	Gender	DOB	MobileNo	Email
102	Priya Sharma	Female	2003-08-21	9876501234	NULL
101	Amit Kumar	Male	2002-05-14	9347773722	NULL
103	Rahul Verma	Male	2001-12-03	9876512345	NULL

3 rows in set (0.00 sec)

```
mysql> SELECT Gender, COUNT(*) AS TotalStudents
-> FROM STUDENT
-> GROUP BY Gender;
```

Gender	TotalStudents
Male	2
Female	1

2 rows in set (0.00 sec)

SubQuery& Correlated Query

```
mysql> SELECT Name, Marks  
-> FROM STUDENT2  
-> WHERE Marks > (SELECT AVG(Marks) FROM STUDENT2);
```

Name	Marks
Amit	85
Neha	92
Priya	88
Kiran	95

4 rows in set (0.00 sec)

```
mysql> SELECT S1.Name, S1.City, S1.Marks  
-> FROM STUDENT2 S1  
-> WHERE Marks = (  
->     SELECT MAX(S2.Marks)  
->     FROM STUDENT2 S2  
->     WHERE S1.City = S2.City  
-> );
```

Name	City	Marks
Amit	Delhi	85
Priya	Chennai	88
Kiran	Mumbai	95

3 rows in set (0.00 sec)

Joins – EquiJoin, InnerJoin, OuterJoin

```
mysql> SELECT STUDENT2.RegNo, STUDENT2.Name, COURSE.CourseName  
-> FROM STUDENT2, COURSE  
-> WHERE STUDENT2.RegNo = COURSE.RegNo;
```

RegNo	Name	CourseName
101	Amit	DBMS
102	Neha	AI
103	Raj	ML
104	Priya	DBMS
106	Simran	Networks

5 rows in set (0.00 sec)

```
mysql> SELECT S.RegNo, S.Name, C.CourseName  
-> FROM STUDENT2 S  
-> INNER JOIN COURSE C  
-> ON S.RegNo = C.RegNo;
```

RegNo	Name	CourseName
101	Amit	DBMS
102	Neha	AI
103	Raj	ML
104	Priya	DBMS
106	Simran	Networks

5 rows in set (0.00 sec)

```
mysql> SELECT S.RegNo, S.Name, C.CourseName  
-> FROM STUDENT2 S  
-> LEFT JOIN COURSE C  
-> ON S.RegNo = C.RegNo;
```

RegNo	Name	CourseName
101	Amit	DBMS
102	Neha	AI
103	Raj	ML
104	Priya	DBMS
105	Kiran	NULL
106	Simran	Networks

6 rows in set (0.00 sec)

VIEW, INDEX, SEQUENCE

```
mysql> SELECT S.RegNo, S.Name, C.CourseName  
-> FROM STUDENT2 S  
-> INNER JOIN COURSE C  
-> ON S.RegNo = C.RegNo;
```

RegNo	Name	CourseName
101	Amit	DBMS
102	Neha	AI
103	Raj	ML
104	Priya	DBMS
106	Simran	Networks

5 rows in set (0.00 sec)

```
mysql> SELECT S.RegNo, S.Name, C.CourseName  
-> FROM STUDENT2 S  
-> LEFT JOIN COURSE C  
-> ON S.RegNo = C.RegNo;
```

RegNo	Name	CourseName
101	Amit	DBMS
102	Neha	AI
103	Raj	ML
104	Priya	DBMS
105	Kiran	NULL
106	Simran	Networks

6 rows in set (0.00 sec)

```
mysql> CREATE VIEW StudentView AS  
-> SELECT RegNo, Name, City, Marks  
-> FROM STUDENT2  
-> WHERE Marks > 80;
```

Query OK, 0 rows affected (0.01 sec)

```
mysql> SELECT * FROM StudentView;
```

RegNo	Name	City	Marks
101	Amit	Delhi	85
102	Neha	Mumbai	92
104	Priya	Chennai	88
105	Kiran	Mumbai	95

Simple programming exercises using CASE, IF, ITERATE,
LEAVE, LOOP

```
mysql> CREATE TABLE STUDENT3 (  
->   RegNo INT AUTO_INCREMENT PRIMARY KEY,  
->   Name VARCHAR(50),  
->   Gender VARCHAR(10),  
->   DOB DATE,  
->   MobileNo VARCHAR(15),  
->   City VARCHAR(30),  
->   Marks INT  
-> );  
Query OK, 0 rows affected (0.02 sec)  
  
mysql> INSERT INTO STUDENT3 (Name, Gender, DOB, MobileNo, City, Marks) VALUE  
-> ('Amit', 'Male', '2002-05-10', '9876543210', 'Delhi', 85),  
-> ('Neha', 'Female', '2003-01-15', '9876501234', 'Mumbai', 92),  
-> ('Raj', 'Male', '2002-11-20', '9876512345', 'Delhi', 76);  
Query OK, 3 rows affected (0.01 sec)  
Records: 3  Duplicates: 0  Warnings: 0  
  
mysql> SELECT * FROM STUDENT3  
-> SELECT * FROM STUDENT3;  
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual t  
ELECT * FROM STUDENT3' at line 2  
mysql> SELECT * FROM STUDENT3;  
+-----+-----+-----+-----+-----+-----+-----+  
| RegNo | Name | Gender | DOB          | MobileNo | City   | Marks |  
+-----+-----+-----+-----+-----+-----+-----+  
| 1     | Amit | Male   | 2002-05-10   | 9876543210 | Delhi | 85    |  
| 2     | Neha | Female | 2003-01-15   | 9876501234 | Mumbai | 92    |  
| 3     | Raj  | Male   | 2002-11-20   | 9876512345 | Delhi | 76    |  
+-----+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

Simple programming exercises using REPEAT, WHILE

```
mysql> SELECT Gender, COUNT(*) AS TotalStudents
-> FROM STUDENT
-> GROUP BY Gender
-> HAVING COUNT(*) >= 2;
```

```
+-----+-----+
| Gender | TotalStudents |
+-----+-----+
| Male   | 2             |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT * FROM STUDENT
-> ORDER BY DOB DESC;
```

```
+-----+-----+-----+-----+-----+-----+
| RegNo | Name       | Gender | DOB       | MobileNo | Email |
+-----+-----+-----+-----+-----+-----+
| 102   | Priya Sharma | Female | 2003-08-21 | 9876501234 | NULL |
| 101   | Amit Kumar  | Male   | 2002-05-14 | 9347773722 | NULL |
| 103   | Rahul Verma | Male   | 2001-12-03 | 9876512345 | NULL |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT Gender, COUNT(*) AS TotalStudents
-> FROM STUDENT
-> GROUP BY Gender;
```

```
+-----+-----+
| Gender | TotalStudents |
+-----+-----+
| Male   | 2             |
| Female | 1             |
+-----+-----+
2 rows in set (0.00 sec)
```

TCL Commands – COMMIT, ROLLBACK, SAVEPOINT

```
mysql> INSERT INTO STUDENT4 (Name, City, Marks) VALUES
-> ('Amit', 'Delhi', 85),
-> ('Neha', 'Mumbai', 92),
-> ('Raj', 'Delhi', 76);
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> INSERT INTO STUDENT4 (Name, City, Marks) VALUES
-> ('Priya', 'Chennai', 88);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> COMMIT;
Query OK, 0 rows affected (0.01 sec)

mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> INSERT INTO STUDENT4 (Name, City, Marks) VALUES
-> ('Kiran', 'Mumbai', 95);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> ROLLBACK;
Query OK, 0 rows affected (0.00 sec)

mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> INSERT INTO STUDENT4 (Name, City, Marks) VALUES
-> ('Simran', 'Chennai', 70);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> SAVEPOINT sp1;
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> INSERT INTO STUDENT4 (Name, City, Marks) VALUES
-> ('Vikram', 'Delhi', 75);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> ROLLBACK TO sp1; -- Undo only Vikram's insert
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> COMMIT; -- Save Simran
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM STUDENT4
-> SELECT * FROM STUDENT4;
ERROR 1064 (42000): You have an error in your SQL syntax;
mysql> SELECT * FROM STUDENT4;
```

RegNo	Name	City	Marks
1	Amit	Delhi	85
2	Neha	Mumbai	92
3	Raj	Delhi	76
4	Priya	Chennai	88
6	Simran	Chennai	70

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

DCL Commands – GRANT, REVOKE

```
mysql> REVOKE INSERT
-> ON studentdb.STUDENT3
-> FROM 'student_user'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> SHOW GRANTS FOR 'student_user'@'localhost';
+-----+
| Grants for student_user@localhost |
+-----+
| GRANT USAGE ON *.* TO 'student_user'@'localhost' |
| GRANT ALL PRIVILEGES ON 'studentdb'.* TO 'student_user'@'localhost' WITH GRANT OPTION |
| GRANT SELECT, UPDATE ON 'studentdb'.'student3' TO 'student_user'@'localhost' |
+-----+
3 rows in set (0.01 sec)

mysql> REVOKE ALL PRIVILEGES
-> ON studentdb.*
-> FROM 'student_user'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> SHOW GRANTS FOR 'student_user'@'localhost';
+-----+
| Grants for student_user@localhost |
+-----+
| GRANT USAGE ON *.* TO 'student_user'@'localhost' |
| GRANT USAGE ON 'studentdb'.* TO 'student_user'@'localhost' WITH GRANT OPTION |
| GRANT SELECT, UPDATE ON 'studentdb'.'student3' TO 'student_user'@'localhost' |
+-----+
3 rows in set (0.00 sec)
```

Procedures

```
mysql>
mysql> DELIMITER ;
mysql>
mysql> DELIMITER //
mysql>
mysql> CREATE PROCEDURE GetTopStudents (
-> IN p_MinMarks INT
-> )
-> BEGIN
-> SELECT RegNo, Name, Marks
-> FROM STUDENT3
-> WHERE Marks >= p_MinMarks;
-> END //
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> DELIMITER ;
mysql>
mysql> CALL InsertStudent('Simran', 'Female', '2003-03-18', '9876549999', 'D
elhi', 91);
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> CALL GetTopStudents(80);
+-----+
| RegNo | Name   | Marks |
+-----+
| 1     | Amit  | 85    |
| 2     | Neha  | 92    |
| 3     | Amit  | 85    |
| 4     | Neha  | 92    |
| 6     | Priya | 88    |
| 7     | Kiran | 95    |
| 8     | Simran | 91    |
+-----+
7 rows in set (0.00 sec)

Query OK, 0 rows affected (0.02 sec)

mysql> |
```

Function

```
Database changed
mysql>
mysql> DELIMITER //
mysql>
mysql> CREATE FUNCTION GetGrade(marks INT)
    -> RETURNS VARCHAR(10)
    -> DETERMINISTIC
    -> BEGIN
    ->     DECLARE grade VARCHAR(10);
    ->
    ->     IF marks >= 90 THEN
    ->         SET grade = 'A+';
    ->     ELSEIF marks >= 80 THEN
    ->         SET grade = 'A';
    ->     ELSEIF marks >= 70 THEN
    ->         SET grade = 'B';
    ->     ELSEIF marks >= 60 THEN
    ->         SET grade = 'C';
    ->     ELSE
    ->         SET grade = 'F';
    ->     END IF;
    ->
    ->     RETURN grade;
    -> END //
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> DELIMITER ;
mysql>
mysql> SELECT RegNo, Name, Marks, GetGrade(Marks) AS Grade FROM STUDENT3;
+-----+-----+-----+-----+
| RegNo | Name  | Marks | Grade |
+-----+-----+-----+-----+
| 1     | Amit  | 85    | A     |
| 2     | Neha  | 92    | A+    |
| 3     | Amit  | 85    | A     |
| 4     | Neha  | 92    | A+    |
| 5     | Raj   | 76    | B     |
| 6     | Priya | 88    | A     |
| 7     | Kiran | 95    | A+    |
| 8     | Simran | 91    | A+    |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql> |
```

Cursors

```
mysql> USE studentdb;
Database changed
mysql>
mysql> DELIMITER //
mysql>
mysql> CREATE PROCEDURE ShowStudentMarks()
-> BEGIN
->     DECLARE done INT DEFAULT 0;
->     DECLARE sName VARCHAR(50);
->     DECLARE sMarks INT;
->     DECLARE cur CURSOR FOR SELECT Name, Marks FROM STUDENT3;
->     DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
->
->     OPEN cur;
->
->     read_loop: LOOP
->         FETCH cur INTO sName, sMarks;
->         IF done = 1 THEN
->             LEAVE read_loop;
->         END IF;
->         SELECT sName AS Name, sMarks AS Marks;
->     END LOOP;
->
->     CLOSE cur;
-> END //
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> DELIMITER ;
mysql>
mysql> CALL ShowStudentMarks();
+-----+-----+
| Name | Marks |
+-----+-----+
| Amit |    85 |
+-----+-----+
1 row in set (0.00 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Neha |    92 |
+-----+-----+
1 row in set (0.00 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Amit |    85 |
+-----+-----+
1 row in set (0.00 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Neha |    92 |
+-----+-----+
1 row in set (0.00 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Raj  |    76 |
+-----+-----+
1 row in set (0.01 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Priya |   88 |
+-----+-----+
1 row in set (0.01 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Kiran |   95 |
+-----+-----+
1 row in set (0.01 sec)

+-----+-----+
| Name | Marks |
+-----+-----+
| Simran |  91 |
+-----+-----+
1 row in set (0.01 sec)
```

Triggers

```

ERROR 1007 (HY000): Can't create database 'studentdb'; database exists
mysql> USE studentdb;
Database changed
mysql>
mysql> CREATE TABLE STUDENT3 (
  ->   RegNo INT AUTO_INCREMENT PRIMARY KEY,
  ->   Name VARCHAR(50),
  ->   Gender VARCHAR(10),
  ->   DOB DATE,
  ->   MobileNo VARCHAR(15),
  ->   City VARCHAR(30),
  ->   Marks INT,
  ->   LastUpdated TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
  -> );
ERROR 1050 (42S01): Table 'student3' already exists
mysql>
mysql> CREATE TABLE StudentLog (
  ->   LogID INT AUTO_INCREMENT PRIMARY KEY,
  ->   RegNo INT,
  ->   Name VARCHAR(50),
  ->   Action VARCHAR(20),
  ->   ActionTime TIMESTAMP DEFAULT CURRENT_TIMESTAMP
  -> );
ERROR 1050 (42S01): Table 'studentlog' already exists
mysql>
mysql> DELIMITER //
mysql>
mysql> CREATE TRIGGER after_student_insert
  -> AFTER INSERT ON STUDENT3
  -> FOR EACH ROW
  -> BEGIN
  ->   INSERT INTO StudentLog (RegNo, Name, Action)
  ->   VALUES (NEW.RegNo, NEW.Name, 'INSERTED');
  -> END //
ERROR 1359 (HY000): Trigger already exists
mysql>
mysql> DELIMITER ;
mysql>
mysql> INSERT INTO STUDENT3 (Name, Gender, DOB, MobileNo, City, Marks)
  -> VALUES ('Rahul', 'Male', '2004-04-21', '9876543211', 'Bangalore', 87);
Query OK, 1 row affected (0.02 sec)

mysql>
mysql> SELECT * FROM STUDENT3 WHERE Name = 'Rahul';
+-----+-----+-----+-----+-----+-----+-----+
| RegNo | Name  | Gender | DOB       | MobileNo | City      | Marks | LastUpdated          |
+-----+-----+-----+-----+-----+-----+-----+
| 9     | Rahul | Male   | 2004-04-21 | 9876543211 | Bangalore | 87    | 2025-09-13 13:46:33 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM StudentLog WHERE Name = 'Rahul';
+-----+-----+-----+-----+-----+
| LogID | RegNo | Name  | Action  | ActionTime          |
+-----+-----+-----+-----+-----+
| 1     | 9     | Rahul | INSERTED | 2025-09-13 13:46:33 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```


String Functions

```
mysql> -- Create table
mysql> CREATE TABLE student2 (
  ->   RegNo INT PRIMARY KEY AUTO_INCREMENT,
  ->   Name VARCHAR(50),
  ->   Gender VARCHAR(10),
  ->   City VARCHAR(30)
  -> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> -- Insert sample records
mysql> INSERT INTO student2 (Name, Gender, City) VALUES
  -> ('Ramesh', 'Male', 'Hyderabad'),
  -> ('Suresh', 'Male', 'Delhi'),
  -> ('Geeta', 'Female', 'Mumbai'),
  -> ('Anita', 'Female', 'Chennai');
Query OK, 4 rows affected (0.00 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql>
mysql> -- 1. REPLACE: Replace 'esh' with 'Kumar' in Name
mysql> SELECT Name, REPLACE(Name, 'esh', 'Kumar') AS ModifiedName
  -> FROM student2;
+-----+-----+
| Name   | ModifiedName |
+-----+-----+
| Ramesh | RamKumar     |
| Suresh | SurKumar     |
| Geeta  | Geeta        |
| Anita  | Anita        |
+-----+-----+
4 rows in set (0.00 sec)

mysql>
mysql> -- 2. REPEAT: Repeat the City name 2 times
mysql> SELECT City, REPEAT(City, 2) AS RepeatedCity
  -> FROM student2;
+-----+-----+
| City      | RepeatedCity |
+-----+-----+
| Hyderabad | HyderabadHyderabad |
| Delhi     | DelhiDelhi   |
| Mumbai    | MumbaiMumbai |
| Chennai   | ChennaiChennai |
+-----+-----+
4 rows in set (0.00 sec)

mysql>
mysql> -- 3. RIGHT: Get last 3 characters of Name
mysql> SELECT Name, RIGHT(Name, 3) AS LastThreeChars
  -> FROM student2;
+-----+-----+
| Name   | LastThreeChars |
+-----+-----+
| Ramesh | esh            |
| Suresh | esh            |
| Geeta  | eta            |
| Anita  | ita            |
+-----+-----+
4 rows in set (0.00 sec)

mysql>
mysql> -- 4. RPAD: Pad Name with '*' to make it 10 characters long
mysql> SELECT Name, RPAD(Name, 10, '*') AS PaddedName
  -> FROM student2;
+-----+-----+
| Name   | PaddedName |
+-----+-----+
| Ramesh | Ramesh***** |
| Suresh | Suresh***** |
| Geeta  | Geeta*****  |
| Anita  | Anita*****  |
+-----+-----+
4 rows in set (0.00 sec)

mysql>
mysql> -- Display all contents of table at end
mysql> SELECT * FROM student2;
+-----+-----+-----+-----+
| RegNo | Name   | Gender | City   |
+-----+-----+-----+-----+
| 1     | Ramesh | Male   | Hyderabad |
| 2     | Suresh | Male   | Delhi     |
| 3     | Geeta  | Female | Mumbai    |
| 4     | Anita  | Female | Chennai   |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

Database Connectivity – Using PHP& MySQL

Showing rows 0 - 1 (2 total, Query took 0.0004 seconds.)

`SELECT * FROM `emp``

☐ Profiling [\[Edit inline\]](#) [\[Export\]](#)

☐ Show all | Number of rows: | Filter rows: | Sort by key:

+ Options

					id	name	empsalary		
<input type="checkbox"/>		Edit		Copy		Delete	1	Rana	2000000
<input type="checkbox"/>		Edit		Copy		Delete	312	RANA	2000000

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: | Filter rows: | Sort by key: