

■ PROCEDURE –

```
mysql>
mysql> -- Create a table
mysql> CREATE TABLE users (
  -> id INT PRIMARY KEY AUTO_INCREMENT,
  -> name VARCHAR(50),
  -> email VARCHAR(50)
  -> );
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- Insert some data into the table
mysql> INSERT INTO users (name, email) VALUES ('Alice', 'alice@example.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO users (name, email) VALUES ('Bob', 'bob@example.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO users (name, email) VALUES ('Charlie', 'charlie@example.com');
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> -- Create a stored procedure
mysql> DELIMITER //
mysql>
mysql> CREATE PROCEDURE get_users()
  -> BEGIN
  -> SELECT * FROM users;
  -> END//
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> DELIMITER ;
mysql>
mysql> -- Call the stored procedure
mysql> CALL get_users();
```

id	name	email
1	Alice	alice@example.com
2	Bob	bob@example.com
3	Charlie	charlie@example.com

```
3 rows in set (0.00 sec)

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

■ FUNCTION –

```
mysql>
mysql> -- Create a table
mysql> CREATE TABLE students (
  -> id INT PRIMARY KEY AUTO_INCREMENT,
  -> name VARCHAR(50),
  -> grade INT
  -> );
ERROR 1050 (HY000): Table 'students' already exists
mysql>
mysql> -- Insert some data into the table
mysql> INSERT INTO students (name, grade) VALUES ('Alice', 90);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO students (name, grade) VALUES ('Bob', 85);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO students (name, grade) VALUES ('Charlie', 75);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO students (name, grade) VALUES ('Dave', 95);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> -- Create a user-defined function
mysql> DELIMITER //
mysql>
mysql> CREATE FUNCTION is_passing(grade INT)
  -> RETURNS BOOLEAN
  -> BEGIN
  -> IF grade >= 60 THEN
  -> RETURN TRUE;
  -> ELSE
  -> RETURN FALSE;
  -> END IF;
  -> END//
ERROR 1418 (HY000): This function has none of DETERMINISTIC, NO SQL, or READS SQL DATA in its declaration and binary logging is enabled (you *might* want to use the less safe log_bin_trust_function_creators variable)
mysql>
mysql> DELIMITER ;
mysql> select * from students;
```

id	name	grade
1	Alice	90
2	Bob	85
3	Charlie	75
4	Dave	95
5	Alice	90
6	Bob	85
7	Charlie	75
8	Dave	95

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

GROUP C - 2

■ TRIGGERS –

```
mysql> delimiter $
mysql> create trigger trig1 after insert on Student_details for each row begin insert into backup_details set sid=NEW.s_id,sName=NEW.s_name;
-> END $
Query OK, 0 rows affected (0.01 sec)

mysql> select * from Student_details;
-> END$
Empty set (0.01 sec)

mysql> delimiter ;
mysql> desc student_details;
ERROR 1146 (42S02): Table 'assignmentc2.student_' doesn't exist
mysql> desc Student_details;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| s_id       | int       | YES  |     | NULL    |       |
| s_name     | varchar(20) | YES  |     | NULL    |       |
| s_address  | varchar(20) | YES  |     | NULL    |       |
| depart_name | varchar(20) | YES  |     | NULL    |       |
| s_mobile   | varchar(10) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> insert into Student_details values("1","Prathamesh","Pune","IT","859674525");
Query OK, 1 row affected (0.01 sec)

mysql> select * from backup_details;
+-----+-----+-----+-----+-----+
| sid | sName      | sAddress | departName | sMobile |
+-----+-----+-----+-----+-----+
| 1   | Prathamesh | NULL    | NULL      | NULL    |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

■ CURSOR –

```

Database changed
mysql> -- Create a database
mysql> CREATE DATABASE my_database;
ERROR 1007 (HY000): Can't create database 'my_database'; database exists
mysql>
mysql> -- Use the database
mysql> USE my_database;
Database changed
mysql>
mysql> -- Create a table
mysql> CREATE TABLE products (
  ->   id INT PRIMARY KEY AUTO_INCREMENT,
  ->   name VARCHAR(50),
  ->   price DECIMAL(10,2)
  -> );
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> -- Insert some data into the table
mysql> INSERT INTO products (name, price) VALUES ('Product A', 10.50);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO products (name, price) VALUES ('Product B', 15.00);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO products (name, price) VALUES ('Product C', 20.00);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO products (name, price) VALUES ('Product D', 12.75);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> -- Create a stored procedure with a cursor
mysql> DELIMITER //
mysql>
mysql> CREATE PROCEDURE show_products()
  -> BEGIN
  ->   DECLARE done BOOLEAN DEFAULT FALSE;
  ->   DECLARE product_id INT;
  ->   DECLARE product_name VARCHAR(50);
  ->   DECLARE product_price DECIMAL(10,2);
  ->   DECLARE products_cursor CURSOR FOR SELECT id, name, price FROM products;
  ->
  ->   -- Declare handlers for exceptions
  ->   DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;
  ->
  ->   OPEN products_cursor;
  ->   product_loop: LOOP
  ->     FETCH products_cursor INTO product_id, product_name, product_price;
  ->     IF done THEN
  ->       IF done THEN
mysql> CREATE PROCEDURE show_products()
  -> BEGIN
  ->   DECLARE done BOOLEAN DEFAULT FALSE;
  ->   DECLARE product_id INT;
  ->   DECLARE product_name VARCHAR(50);
  ->   DECLARE product_price DECIMAL(10,2);
  ->   DECLARE products_cursor CURSOR FOR SELECT id, name, price FROM products;
  ->
  ->   -- Declare handlers for exceptions
  ->   DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;
  ->
  ->   OPEN products_cursor;
  ->   product_loop: LOOP
  ->     FETCH products_cursor INTO product_id, product_name, product_price;
  ->     IF done THEN
  ->       LEAVE product_loop;
  ->     END IF;
  ->     SELECT CONCAT(product_id, ': ', product_name, ' - $', product_price) AS product_info;
  ->   END LOOP;
  ->   CLOSE products_cursor;
  -> END//
ERROR 1304 (42000): PROCEDURE show_products already exists
mysql>
mysql> DELIMITER ;
mysql>
mysql> -- Call the stored procedure
mysql> CALL show_products();
+-----+
| product_info |
+-----+
| 1: Product A - $10.50 |
+-----+
1 row in set (0.00 sec)

+-----+
| product_info |
+-----+
| 2: Product B - $15.00 |
+-----+
1 row in set (0.00 sec)

+-----+
| product_info |
+-----+
| 3: Product C - $20.00 |
+-----+
1 row in set (0.00 sec)

```

```
-> SELECT CONCAT(product_id, ': ', product_name, ' - $', product_price) AS product_info;  
-> END LOOP;  
-> CLOSE products_cursor;  
-> END//
```

ERROR 1304 (42000): PROCEDURE show_products already exists

mysql>

mysql> DELIMITER ;

mysql>

mysql> -- Call the stored procedure

mysql> CALL show_products();

```
+-----+  
| product_info |  
+-----+  
| 1: Product A - $10.50 |  
+-----+  
1 row in set (0.00 sec)
```

```
+-----+  
| product_info |  
+-----+  
| 2: Product B - $15.00 |  
+-----+  
1 row in set (0.00 sec)
```

```
+-----+  
| product_info |  
+-----+  
| 3: Product C - $20.00 |  
+-----+  
1 row in set (0.00 sec)
```

```
+-----+  
| product_info |  
+-----+  
| 4: Product D - $12.75 |  
+-----+  
1 row in set (0.01 sec)
```

Query OK, 0 rows affected (0.01 sec)