Semester: V   **Subject:** Data Base Management System

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Roll No: 52   **Batch: A3**

Experiment No: 09

Name of the Experiment: **SQL commands**

Performed on: 30/11/2023

Submitted on: 30/11/2023

Problem Statement:
SQL Triggers and Cursors

Code:

MySQL 8.0 Command Line Client

```
    -> FOR EACH ROW
    -> BEGIN
    ->     SET NEW.total_books = NEW.total_books + NEW.available_books;
    -> END;
    -> //
Query OK, 0 rows affected (0.00 sec)

mysql> DELIMITER ;
mysql> INSERT INTO books VALUES (3, '1984', 'George Orwell', 10, 10);
Query OK, 1 row affected (0.00 sec)

mysql> DELIMITER //
mysql> CREATE PROCEDURE display_books()
    -> BEGIN
    ->     DECLARE done INT DEFAULT 0;
    ->     DECLARE bookTitle VARCHAR(255);
    ->     DECLARE bookAuthor VARCHAR(255);
    ->     DECLARE totalBooks INT;
    ->     DECLARE availableBooks INT;
    ->
    ->     DECLARE cur CURSOR FOR SELECT title, author, total_books, available_books FROM books;
    ->     DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
    ->
    ->     OPEN cur;
    ->
    ->     read_loop: LOOP
    ->         FETCH cur INTO bookTitle, bookAuthor, totalBooks, availableBooks;
    ->         IF done THEN
    ->             LEAVE read_loop;
    ->         END IF;
    ->
    ->         -- Display book information
    ->         SELECT CONCAT('Title: ', bookTitle, ', Author: ', bookAuthor, ', Total Books: ', totalBooks, ', Available Books: ', availableBooks) AS BookInfo;
    ->     END LOOP;
    ->
    ->     CLOSE cur;
    -> END;
    -> //
Query OK, 0 rows affected (0.00 sec)

mysql> DELIMITER ;
mysql> CALL display_books();
+---------------------------------------------------------------------+
| BookInfo                                                            |
+---------------------------------------------------------------------+
| Title: The Great Gatsby, Author: F. Scott Fitzgerald, Total Books: 5, Available Books: 5 |
+---------------------------------------------------------------------+
1 row in set (0.00 sec)
```

MySQL 8.0 Command Line Client

```
    ->     DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
    ->
    ->     OPEN cur;
    ->
    ->     read_loop: LOOP
    ->         FETCH cur INTO bookTitle, bookAuthor, totalBooks, availableBooks;
    ->         IF done THEN
    ->             LEAVE read_loop;
    ->         END IF;
    ->
    ->         -- Display book information
    ->         SELECT CONCAT('Title: ', bookTitle, ', Author: ', bookAuthor, ', Total Books: ', totalBooks, ', Available Books: ', availableBooks) AS BookInfo;
    ->     END LOOP;
    ->
    ->     CLOSE cur;
    -> END;
    -> //
Query OK, 0 rows affected (0.00 sec)

mysql> DELIMITER ;
mysql> CALL display_books();
+---------------------------------------------------------------------+
| BookInfo                                                            |
+---------------------------------------------------------------------+
| Title: The Great Gatsby, Author: F. Scott Fitzgerald, Total Books: 5, Available Books: 5 |
+---------------------------------------------------------------------+
1 row in set (0.00 sec)

+---------------------------------------------------------------------+
| BookInfo                                                            |
+---------------------------------------------------------------------+
| Title: To Kill a Mockingbird, Author: Harper Lee, Total Books: 3, Available Books: 3 |
+---------------------------------------------------------------------+
1 row in set (0.01 sec)

+---------------------------------------------------------------------+
| BookInfo                                                            |
+---------------------------------------------------------------------+
| Title: 1984, Author: George Orwell, Total Books: 20, Available Books: 10 |
+---------------------------------------------------------------------+
1 row in set (0.02 sec)

Query OK, 0 rows affected (0.03 sec)

mysql>
```