

Third Year B. Tech (EL & CE)

Semester: V

Subject: Data Base Management System

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Class: TY

Roll No: 52

Batch: A3

Experiment No: 07

Name of the Experiment: SQL commands

Performed on: 06/10/2023

Submitted on: 04/11/2023

Problem Statement:

SQL Join operations, set operations, View, TCL commands

Code:

```
MySQL 8.0 Command Line Client
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.34 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| company  |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| sys      |
| world    |
+-----+
7 rows in set (0.01 sec)

mysql> DROP DATABASE company;
-> DROP DATABASE company;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'DROP DATABASE company' at line 2
mysql> DROP DATABASE company;
Query OK, 1 row affected (0.01 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql            |
| performance_schema |
| sakila           |
| sys              |
| world            |
+-----+
6 rows in set (0.00 sec)

mysql> CREATE DATABASE company;
Query OK, 1 row affected (0.00 sec)

mysql> USE company;
```

```

MySQL 8.0 Command Line Client
world
-----
0 rows in set (0.00 sec)

mysql> CREATE DATABASE company;
Query OK, 1 row affected (0.00 sec)

mysql> USE company;
Database changed
mysql> CREATE TABLE employees (
  ->   emp_id INT PRIMARY KEY,
  ->   first_name VARCHAR(50),
  ->   last_name VARCHAR(50),
  ->   salary DECIMAL(10, 2),
  ->   department_id INT
  -> );
Query OK, 0 rows affected (0.01 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_company |
+-----+
| employees          |
+-----+
1 row in set (0.00 sec)

mysql> CREATE TABLE departments (
  ->   department_id INT PRIMARY KEY,
  ->   department_name VARCHAR(50)
  -> );
Query OK, 0 rows affected (0.01 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_company |
+-----+
| departments        |
| employees          |
+-----+
2 rows in set (0.00 sec)

mysql> -- Sample data for employees table
mysql> INSERT INTO employees (emp_id, first_name, last_name, salary, department_id)
  -> VALUES
  -> (1, 'John', 'Doe', 50000, 1),
  -> (2, 'Jane', 'Smith', 60000, 1),
  -> (3, 'Bob', 'Johnson', 75000, 2),
  -> (4, 'Alice', 'Williams', 80000, 2),
  -> (5, 'Charlie', 'Brown', 55000, 1);
Query OK, 5 rows affected (0.01 sec)

```

```

MySQL 8.0 Command Line Client
departments
employees
-----
2 rows in set (0.00 sec)

mysql> -- Sample data for employees table
mysql> INSERT INTO employees (emp_id, first_name, last_name, salary, department_id)
  -> VALUES
  -> (1, 'John', 'Doe', 50000, 1),
  -> (2, 'Jane', 'Smith', 60000, 1),
  -> (3, 'Bob', 'Johnson', 75000, 2),
  -> (4, 'Alice', 'Williams', 80000, 2),
  -> (5, 'Charlie', 'Brown', 55000, 1);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql>
mysql> -- Sample data for departments table
mysql> INSERT INTO departments (department_id, department_name)
  -> VALUES
  -> (1, 'HR'),
  -> (2, 'IT');
Query OK, 2 rows affected (0.00 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> DESC employees;
+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+
| emp_id     | int       | NO   | PRI | NULL    |       |
| first_name | varchar(50) | YES  |     | NULL    |       |
| last_name  | varchar(50) | YES  |     | NULL    |       |
| salary     | decimal(10,2) | YES  |     | NULL    |       |
| department_id | int       | YES  |     | NULL    |       |
+-----+
5 rows in set (0.00 sec)

mysql> DESC departments
  -> DESC departments;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'DESC departments' at line 2
mysql> DESC departments;
+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+
| department_id | int       | NO   | PRI | NULL    |       |
| department_name | varchar(50) | YES  |     | NULL    |       |
+-----+
2 rows in set (0.00 sec)

mysql> SELECT e.first_name, e.last_name, d.department_name

```

```
MySQL 8.0 Command Line Client
+-----+-----+-----+
| department_name | varchar(50) | YES | | NULL | |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT e.first_name, e.last_name, d.department_name
-> FROM employees e
-> INNER JOIN departments d ON e.department_id = d.department_id;
+-----+-----+-----+
| first_name | last_name | department_name |
+-----+-----+-----+
| John      | Doe       | HR               |
| Jane      | Smith    | HR               |
| Bob       | Johnson   | IT               |
| Alice     | Williams  | IT               |
| Charlie   | Brown     | HR               |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT e.first_name, e.last_name, d.department_name
-> FROM employees e
-> LEFT JOIN departments d ON e.department_id = d.department_id;
+-----+-----+-----+
| first_name | last_name | department_name |
+-----+-----+-----+
| John      | Doe       | HR               |
| Jane      | Smith    | HR               |
| Bob       | Johnson   | IT               |
| Alice     | Williams  | IT               |
| Charlie   | Brown     | HR               |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT first_name, last_name
-> FROM employees
-> WHERE department_id = 1
-> UNION
-> SELECT first_name, last_name
-> FROM employees
-> WHERE department_id = 2;
+-----+-----+
| first_name | last_name |
+-----+-----+
| John      | Doe       |
| Jane      | Smith    |
| Charlie   | Brown     |
| Bob       | Johnson   |
| Alice     | Williams  |
+-----+-----+
5 rows in set (0.00 sec)
```

```
MySQL 8.0 Command Line Client
+-----+-----+
| John      | Doe       |
| Jane      | Smith    |
| Charlie   | Brown     |
| Bob       | Johnson   |
| Alice     | Williams  |
+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT e1.first_name, e1.last_name
-> FROM employees e1
-> WHERE e1.department_id = 1
-> INTERSECT
-> SELECT e2.first_name, e2.last_name
-> FROM employees e2
-> WHERE e2.department_id = 2;
Empty set (0.00 sec)

mysql> CREATE VIEW hr_employees AS
-> SELECT first_name, last_name, salary
-> FROM employees
-> WHERE department_id = 1;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM hr_employees;
+-----+-----+-----+
| first_name | last_name | salary |
+-----+-----+-----+
| John      | Doe       | 50000.00 |
| Jane      | Smith    | 60000.00 |
| Charlie   | Brown     | 55000.00 |
+-----+-----+-----+
3 rows in set (0.00 sec)

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

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

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

mysql> ROLLBACK TO my_savepoint;
ERROR 1305 (42000): SAVEPOINT my_savepoint does not exist
mysql>
```



Dr. Vishwanath Karad

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