

**COLLEGE OF ENGINEERING VATAKARA**  
**DEPT. OF COMPUTER APPLICATIONS**  
**Course Code & Course Name: 20MCA134 Advanced DBMS Lab**  
**(Lab Experiment Details, 2020 Admission)**

**REG\_NO: VDA20MCA2034**

**NAME: GOPIKA P**

<b>S. No.</b>	<b>Experiment Title</b>	<b>Experiment Details</b>	<b>Date of Completion</b>	<b>Database Used</b>	<b>Remarks</b>
<b>1</b>	<b>Experiment with DDL commands in SQL</b>	Create database for the schemas <ul style="list-style-type: none"> <li>• Program (Program_ID, Program_Name, Duration, St_Strength, Program_Type, No_Semesters)</li> <li>• Student ( First_Name, Last_Name, Reg_no, Program_ID, DOB,Sex, Year_Admission)</li> </ul>	<b>22-06-2021</b>	<b>MySQL</b>	<b>Address the Key Concepts and Normalizations. Use appropriate datatypes to the attributes. Add Unique and Not Null Constraints</b>
<b>2.</b>	<b>Experiment with DDL &amp; DML commands in SQL</b>	Perform insertion of records into the database created in the first experiment. Alter the created table and Perform the Insertion, Updation and Deletion operation. Drop the created table and remake it.	<b>03-08-2021</b>	<b>MySQL</b>	<b>Familiarize the DDL and DML Commands</b>

3.	Experiment with DDL & DML commands in SQL	<p>Create database for the schemas</p> <ul style="list-style-type: none"> <li>Course(Course_ID, Course_Name, Credit, Semester, Internal_Mark, External_Mark Course_Type)</li> <li>Student_Mark(Reg_No, Course_ID, Student_Internal, Student_External)</li> </ul> <p>After associating these schemas in to the already created database and perform row insertion, deletion and updation.</p>	10-08-2021	MySQL	Familiarize the DDL and DML Commands in SQL
4,	Experiment that retrieves data from database with simple SQL queries.	Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections.		MySQL	Perform simple selection using with comparison operators. Familiarization of keywords such as distinct, all, etc.,
5,	Experiment that retrieves data from database by means using nested SQL queries.	Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections.		MySQL	Perform nested query selection using with comparison operators and Logical connectives
6.	Experiment that works with string operations in SQL	Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections.		MySQL	Write queries that familiarize all string operations in SQL.

7.	Experiment that works with Aggregate functions in SQL	Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections.		MySQL	Write sample queries that familiarize all aggregate functions, group by and having clauses in SQL
8.	Experiment that works with set operations in SQL	Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections.		MySQL	Write sample queries that familiarize all set operations in SQL.
9.	Experiment that retrieves data from the created views in SQL	Define a view on the already created database and perform query selection on it.		MySQL	Create sample view and write sample queries on it.
10.	Experiment that drives the knowledge on the development of sample database system	Develop a tiny database system and do necessary adding of data and data retrieval from that.		MySQL	Create sample database systems such as Department Library system, College canteen system, Hostel system, College store system etc.

### **EXPERIMENT NO:1**

**AIM:** Create database for the schemas

- Program (Program\_ID, Program\_Name, Duration, St\_Strength, Program\_Type, No\_Semesters)
- Student ( First\_Name, Last\_Name, Reg\_no, Program\_ID,

DOB,Sex,  
Year\_Admission)

## OUTPUT:

```
MySQL 8.0 Command Line Client

mysql> show databases;
+-----+
| Database |
+-----+
| cev      |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| sys      |
| world    |
+-----+
7 rows in set (0.00 sec)

mysql> use cev;
Database changed
mysql> create table program(
  -> program_ID varchar(5) primary key,
  -> program_name varchar(20) not null,
  -> duration varchar(10),
  -> st_strength int not null,
  -> program_type varchar(10) not null,
  -> No_Semesters int not null);
Query OK, 0 rows affected (2.87 sec)

mysql> create table Student(
  -> First_Name varchar(20) not null,
  -> Last_Name varchar(20),
  -> Reg_No varchar(20) unique not null,
  -> Program_ID varchar(8),
  -> DOB date,
  -> Sex varchar(10),
  -> Year_Admission year not null,
  -> foreign key(program_ID) references program(program_ID));
Query OK, 0 rows affected (2.42 sec)

mysql>
```

```
MySQL 8.0 Command Line Client

mysql> show tables;
+-----+
| Tables_in_cev |
+-----+
| program       |
| student       |
+-----+
2 rows in set (0.16 sec)

mysql> desc program;
+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+
| program_ID | varchar(5) | NO   | PRI | NULL    |       |
| program_name | varchar(20) | NO   |     | NULL    |       |
| duration    | varchar(10) | YES  |     | NULL    |       |
| st_strength | int        | NO   |     | NULL    |       |
| program_type | varchar(10) | NO   |     | NULL    |       |
| No_Semesters | int        | NO   |     | NULL    |       |
+-----+
6 rows in set (0.01 sec)

mysql> show Student;
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 'Student' at 1
line 1
mysql> show student;
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 'student' at 1
line 1
mysql> desc student;
+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+
| First_Name | varchar(20) | NO   |     | NULL    |       |
| Last_Name  | varchar(20) | YES  |     | NULL    |       |
| Reg_No     | varchar(20) | NO   | PRI | NULL    |       |
| Program_ID | varchar(8)  | YES  | MUL | NULL    |       |
| DOB        | date       | YES  |     | NULL    |       |
| Sex        | varchar(10) | YES  |     | NULL    |       |
| Year_Admission | year      | NO   |     | NULL    |       |
+-----+
7 rows in set (0.04 sec)

mysql>
```

## EXPERIMENT NO:2

**AIM:** Perform insertion of records into the database created in the first experiment. Alter the created table and Perform the Insertion, Updation and Deletion operation. Drop the created table and remake it.

## OUTPUT:

```
MySQL 8.0 Command Line Client
mysql> INSERT INTO program values
-> ('20MCA','MCA','2',60,'Regular',4),
-> ('19MCA','MCA','3',15,'Regular',6),
-> ('21DCE','D.Civil','3',30,'Regular',6);
Query OK, 3 rows affected (0.30 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> SELECT *FROM program;
+-----+-----+-----+-----+-----+-----+
| program_ID | program_name | duration | st_strength | program_type | No_Semesters |
+-----+-----+-----+-----+-----+-----+
| 19MCA      | MCA          | 3        | 15          | Regular      | 6             |
| 20MCA      | MCA          | 2        | 60          | Regular      | 4             |
| 21DCE      | D.Civil      | 3        | 30          | Regular      | 6             |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.03 sec)

mysql> insert into student
-> ('GOPIKA','P','20MCA2034','20MCA','1999-02-08','FEMALE',2020),
-> ('ARUN','VARGHESE','21DCIVIL2108','21DCE','2000-12-25','MALE',2021),
-> ('EMMY','VARGHESE','19MCA1905','19MCA','1998-10-02','FEMALE',2019);
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 ''GOPIKA','P',
'20MCA2034','20MCA','1999-02-08','FEMALE',2020),
('ARUN','VARGHESE'' at line 2
mysql> insert into student
-> insert into student
->
-> ^C
mysql> INSERT INTO student values
-> ('GOPIKA','P','20MCA2034','20MCA','1999-02-08','FEMALE',2020),
-> ('ARUN','VARGHESE','21DCIVIL2108','21DCE','2000-12-25','MALE',2021),
-> ('EMMY','VARGHESE','19MCA1905','19MCA','1998-10-02','FEMALE',2019);
Query OK, 3 rows affected (0.36 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM student;
+-----+-----+-----+-----+-----+-----+
| First_Name | Last_Name | Reg_No | Program_ID | DOB | Sex | Year_Admission |
+-----+-----+-----+-----+-----+-----+
| EMMY      | VARGHESE | 19MCA1905 | 19MCA      | 1998-10-02 | FEMALE | 2019           |
| GOPIKA    | P        | 20MCA2034 | 20MCA      | 1999-02-08 | FEMALE | 2020           |
| ARUN      | VARGHESE | 21DCIVIL2108 | 21DCE      | 2000-12-25 | MALE   | 2021           |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```

MySQL 8.0 Command Line Client
mysql> alter table program add Tutor varchar(20);
Query OK, 0 rows affected (2.14 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> show program;
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 'program' at line 1
mysql> select * from program;
+-----+-----+-----+-----+-----+-----+-----+
| program_ID | program_name | duration | st_strength | program_type | No_Semesters | Tutor |
+-----+-----+-----+-----+-----+-----+-----+
| 19MCA      | MCA          | 3        | 15          | Regular      | 6             | NULL |
| 20MCA      | MCA          | 2        | 60          | Regular      | 4             | NULL |
| 21DCE      | D.Civil      | 3        | 30          | Regular      | 6             | NULL |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> update program set Tutor='Prasanth TK' where program_ID='20MCA';
Query OK, 1 row affected (0.11 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> update program set Tutor='Fathima A' where program_ID='19MCA';
Query OK, 1 row affected (0.17 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM program;
+-----+-----+-----+-----+-----+-----+-----+
| program_ID | program_name | duration | st_strength | program_type | No_Semesters | Tutor |
+-----+-----+-----+-----+-----+-----+-----+
| 19MCA      | MCA          | 3        | 15          | Regular      | 6             | Fathima A |
| 20MCA      | MCA          | 2        | 60          | Regular      | 4             | Prasanth TK |
| 21DCE      | D.Civil      | 3        | 30          | Regular      | 6             | NULL |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.03 sec)

mysql>

```

```

MySQL 8.0 Command Line Client
mysql> alter table program drop Tutor;
Query OK, 0 rows affected (2.83 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> select * from program;
+-----+-----+-----+-----+-----+-----+
| program_ID | program_name | duration | st_strength | program_type | No_Semesters |
+-----+-----+-----+-----+-----+-----+
| 19MCA      | MCA          | 3        | 15          | Regular      | 6             |
| 20MCA      | MCA          | 2        | 60          | Regular      | 4             |
| 21DCE      | D.Civil      | 3        | 30          | Regular      | 6             |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>

```

```
MySQL 8.0 Command Line Client
mysql> show tables;
+-----+
| Tables_in_cev |
+-----+
| program       |
| student       |
+-----+
2 rows in set (0.05 sec)

mysql> drop table program;
ERROR 3720 (HY000): Cannot drop table 'program' referenced by a foreign key constraint 'student_ibfk_1' on table 'student'.
mysql> drop table student;
Query OK, 0 rows affected (2.22 sec)

mysql> show tables;
+-----+
| Tables_in_cev |
+-----+
| program       |
+-----+
1 row in set (0.03 sec)

mysql>
```

### **EXPERIMENT NO:3**

**AIM:**Create database for the schemas

- Course(Course\_ID, Course\_Name, Credit, Semester, Internal\_Mark,

External\_Mark Course\_Type)

- Student\_Mark(Reg\_No, Course\_ID, Student\_Internal, Student\_External)

After associating these schemas in to the already created database and perform row insertion, deletion and updation.

**OUTPUT:**

```
MySQL 8.0 Command Line Client
+-----+
| Database |
+-----+
| cev      |
| course_details |
| information_schema |
| mysql    |
| performance_schema |
| sakilla  |
| sys      |
| world    |
+-----+
8 rows in set (0.03 sec)

mysql> use course_details;
Database changed
mysql> create table Course(
  -> Course_ID varchar(5) primary key,
  -> Course_Name varchar(20) not null,
  -> Credit int not null,
  -> Internal_Mark int,
  -> External_Mark int,
  -> Course_Typr varchar(20) not null);
Query OK, 0 rows affected (1.75 sec)

mysql> desc course_details;
ERROR 1146 (42502): Table 'course_details.course_details' doesn't exist
mysql> show Course;
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 'Course' at line 1
mysql> desc course;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| Course_ID | varchar(5) | NO | PRI | NULL | |
| Course_Name | varchar(20) | NO | | NULL | |
| Credit | int | NO | | NULL | |
| Internal_Mark | int | YES | | NULL | |
| External_Mark | int | YES | | NULL | |
| Course_Typr | varchar(20) | NO | | NULL | |
+-----+
6 rows in set (0.06 sec)

mysql>
```

```
MySQL 8.0 Command Line Client
mysql> create table student_mark(
  -> Reg_No int primary key,
  -> Course_ID varchar(5),
  -> Student_Internal int,
  -> Student_External int,
  -> foreign key(Course_ID) references course(Course_ID));
Query OK, 0 rows affected (2.00 sec)

mysql> desc student_mark;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| Reg_No | int | NO | PRI | NULL | |
| Course_ID | varchar(5) | YES | MUL | NULL | |
| Student_Internal | int | YES | | NULL | |
| Student_External | int | YES | | NULL | |
+-----+
4 rows in set (0.03 sec)

mysql>
```



```
MySQL 8.0 Command Line Client
mysql> insert into course values
-> ('C12','MCA',22,40,60,'Regular'),
-> ('C13','MCA',20,40,60,'Regular');
Query OK, 2 rows affected (0.21 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> SHOW course;
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 'course' at line 1
mysql> select * from course;
+-----+-----+-----+-----+-----+-----+
| Course_ID | Course_Name | Credit | Internal_Mark | External_Mark | Course_Type |
+-----+-----+-----+-----+-----+-----+
| C12      | MCA         | 22     | 40            | 60            | Regular     |
| C13      | MCA         | 20     | 40            | 60            | Regular     |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> insert into student_mark values
-> (1432,'C12',32,56),
-> (1433,'C12',34,24),
-> (1438,'C13',35,56);
Query OK, 3 rows affected (0.19 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM student_mark;
+-----+-----+-----+-----+
| Reg_No | Course_ID | Student_Internal | Student_External |
+-----+-----+-----+-----+
| 1432   | C12       | 32              | 56               |
| 1433   | C12       | 34              | 24               |
| 1438   | C13       | 35              | 56               |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> _
```

```
Select MySQL 8.0 Command Line Client
mysql> delete from student_mark where Course_ID='C12';
Query OK, 2 rows affected (0.16 sec)

mysql> SELECT * FROM student_mark;
+-----+-----+-----+-----+
| Reg_No | Course_ID | Student_Internal | Student_External |
+-----+-----+-----+-----+
| 1438   | C13       | 35              | 56               |
+-----+-----+-----+-----+
1 row in set (0.03 sec)

mysql> update student_mark set Student_Internal=36 where Reg_No=1438;
Query OK, 1 row affected (0.10 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from student_mark;
+-----+-----+-----+-----+
| Reg_No | Course_ID | Student_Internal | Student_External |
+-----+-----+-----+-----+
| 1438   | C13       | 36              | 56               |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

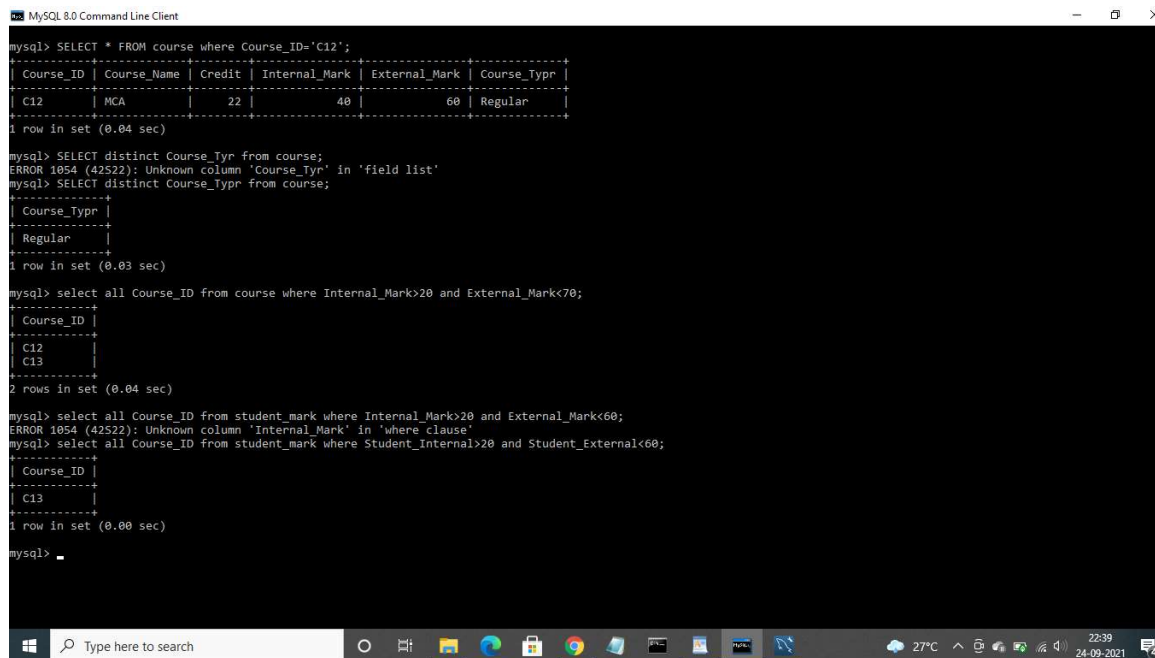
mysql>
```

## EXPERIMENT NO:4

AIM:Data retrieval from the already created database/ Create

new sample database and necessary adding of data are made then perform the query selections. (Perform simple selection using with comparison operators. Familiarization of keywords such as distinct, all, etc.,)

## **OUTPUT:**



```
mysql> SELECT * FROM course where Course_ID='C12';
+-----+-----+-----+-----+-----+-----+
| Course_ID | Course_Name | Credit | Internal_Mark | External_Mark | Course_Typr |
+-----+-----+-----+-----+-----+-----+
| C12      | MCA        | 22    | 40           | 60           | Regular     |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.04 sec)

mysql> SELECT distinct Course_Tyr from course;
ERROR 1054 (42S22): Unknown column 'Course_Tyr' in 'field list'
mysql> SELECT distinct Course_Typr from course;
+-----+
| Course_Typr |
+-----+
| Regular     |
+-----+
1 row in set (0.03 sec)

mysql> select all Course_ID from course where Internal_Mark>20 and External_Mark<70;
+-----+
| Course_ID |
+-----+
| C12      |
| C13      |
+-----+
2 rows in set (0.04 sec)

mysql> select all Course_ID from student_mark where Internal_Mark>20 and External_Mark<60;
ERROR 1054 (42S22): Unknown column 'Internal_Mark' in 'where clause'
mysql> select all Course_ID from student_mark where Student_Internal>20 and Student_External<60;
+-----+
| Course_ID |
+-----+
| C13      |
+-----+
1 row in set (0.00 sec)

mysql>
```

## **EXPERIMENT NO:5**

**AIM:** Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections. (Perform nested query selection using with comparison operators and Logical connectives)

## **OUTPUT:**

```
MySQL 8.0 Command Line Client

mysql> select * from student_mark;
+-----+-----+-----+-----+
| Reg_No | Course_ID | Student_Internal | Student_External |
+-----+-----+-----+-----+
| 1432   | C12       | 34               | 78               |
| 1433   | C13       | 39               | 80               |
| 1438   | C13       | 36               | 56               |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from student_mark where Student_External > (select AVG(Student_External) from student_mark);
+-----+-----+-----+-----+
| Reg_No | Course_ID | Student_Internal | Student_External |
+-----+-----+-----+-----+
| 1432   | C12       | 34               | 78               |
| 1433   | C13       | 39               | 80               |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from course;
+-----+-----+-----+-----+-----+-----+
| Course_ID | Course_Name | Credit | Internal_Mark | External_Mark | Course_Typr |
+-----+-----+-----+-----+-----+-----+
| C12       | MCA         | 22     | 40            | 60            | Regular     |
| C13       | MCA         | 20     | 40            | 60            | Regular     |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select min(Student_Internal) from student_mark where Course_ID in(select Course_ID from course where Course_Nmae="MCA");
ERROR 1054 (42S22): Unknown column 'Course_Nmae' in 'where clause'
mysql> select min(Student_Internal) from student_mark where Course_ID in(select Course_ID from course where Course_Name="MCA");
+-----+
| min(Student_Internal) |
+-----+
| 34                    |
+-----+
1 row in set (0.03 sec)

mysql>
```

## **EXPERIMENT NO:6**

**AIM:**Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections. (Write queries that familiarize all string operations in SQL.)

## **OUTPUT:**

```
MySQL 8.0 Command Line Client
mysql> select Course_Name,length(Course_Name) as length from course;
+-----+-----+
| Course_Name | length |
+-----+-----+
| MCA         | 3      |
| MCA         | 3      |
+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT lower(Course_Name) as Course_Name from course;
+-----+
| Course_Name |
+-----+
| mca         |
| mca         |
+-----+
2 rows in set (0.00 sec)

mysql> select replace(Course_Name,'MCA','Master CA') as Course_Name from course;
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 'Master CA')
as Course_Name from course' at line 1
mysql> select replace(Course_Name,'MCA','Master CA') as Course_Name from course;
+-----+
| Course_Name |
+-----+
| Master CA   |
| Master CA   |
+-----+
2 rows in set (0.00 sec)

mysql> select Course_Name,reverse(Course_Name) as Reverse from course;
+-----+-----+
| Course_Name | Reverse |
+-----+-----+
| MCA         | ACH     |
| MCA         | ACH     |
+-----+-----+
2 rows in set (0.04 sec)

mysql>
```

## **EXPERIMENT NO:7**

**AIM:**Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections. (Write sample queries that familiarize all aggregate functions, group by and having clauses in SQL).

## **OUTPUT:**

```
MySQL 8.0 Command Line Client
2 rows in set (0.04 sec)

mysql> select * from course;
+-----+-----+-----+-----+-----+-----+
| Course_ID | Course_Name | Credit | Internal_Mark | External_Mark | Course_Typr |
+-----+-----+-----+-----+-----+-----+
| C12      | MCA         | 22     | 40            | 60            | Regular     |
| C13      | MCA         | 20     | 40            | 60            | Regular     |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select count(Course_Name) as No_Courses from course;
+-----+
| No_Courses |
+-----+
| 2          |
+-----+
1 row in set (0.09 sec)

mysql> select*from course limit 1;
+-----+-----+-----+-----+-----+-----+
| Course_ID | Course_Name | Credit | Internal_Mark | External_Mark | Course_Typr |
+-----+-----+-----+-----+-----+-----+
| C12      | MCA         | 22     | 40            | 60            | Regular     |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select max(External_Mark) from course;
+-----+
| max(External_Mark) |
+-----+
| 60                 |
+-----+
1 row in set (0.00 sec)

mysql> select min(External_Mark) from course;
+-----+
| min(External_Mark) |
+-----+
| 60                 |
+-----+
1 row in set (0.00 sec)
```

```
MySQL 8.0 Command Line Client

mysql> select avg(External_Mark) from course;
+-----+
| avg(External_Mark) |
+-----+
| 60.0000            |
+-----+
1 row in set (0.04 sec)

mysql> select sum(External_Mark) from course;
+-----+
| sum(External_Mark) |
+-----+
| 120                |
+-----+
1 row in set (0.03 sec)

mysql> select Course_ID,count(Course_ID) from student_mark group by Course_ID;
+-----+-----+
| Course_ID | count(Course_ID) |
+-----+-----+
| C12      | 1                 |
| C13      | 2                 |
+-----+-----+
2 rows in set (0.03 sec)

mysql> select Course_ID,count(Course_ID) from student_mark group by Course_ID having count(Course_ID) >1;
+-----+-----+
| Course_ID | count(Course_ID) |
+-----+-----+
| C13      | 2                 |
+-----+-----+
1 row in set (0.07 sec)

mysql>
```

## **EXPERIMENT NO:8**

**AIM:**Data retrieval from the already created database/ Create new sample database and necessary adding of data are made then perform the query selections. (Write sample queries that familiarize all set operations in SQL)

## OUTPUT:

```
MySQL 8.0 Command Line Client
mysql> create table St_mal(
-> si_no int,
-> Name varchar(20));
Query OK, 0 rows affected (2.27 sec)

mysql> insert into St_mal values
-> (1,'anu'),
-> (2,'malu');
Query OK, 2 rows affected (0.24 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql> create table St_mal2(
-> si_no int,
-> Name varchar(20));
Query OK, 0 rows affected (1.04 sec)

mysql> insert into St_mal2 values
-> (0,'kannan'),
-> (9,'vinitha'),
-> (5,'amal');
Query OK, 3 rows affected (0.28 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> show St_mal;
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 'St_mal' at line 1
mysql> select*from St_mal;
+-----+
| si_no | Name |
+-----+
| 1 | anu |
| 2 | malu |
+-----+
2 rows in set (0.03 sec)

mysql> select *from St_mal2;
+-----+
| si_no | Name |
+-----+
| 0 | kannan |
| 9 | vinitha |
| 5 | amal |
+-----+
3 rows in set (0.00 sec)
```

```
MySQL 8.0 Command Line Client
mysql> select * from St_mal
-> union all
-> select * from St_mal2;
+-----+
| si_no | Name |
+-----+
| 1 | anu |
| 2 | malu |
| 0 | kannan |
| 9 | vinitha |
| 5 | amal |
+-----+
5 rows in set (0.05 sec)

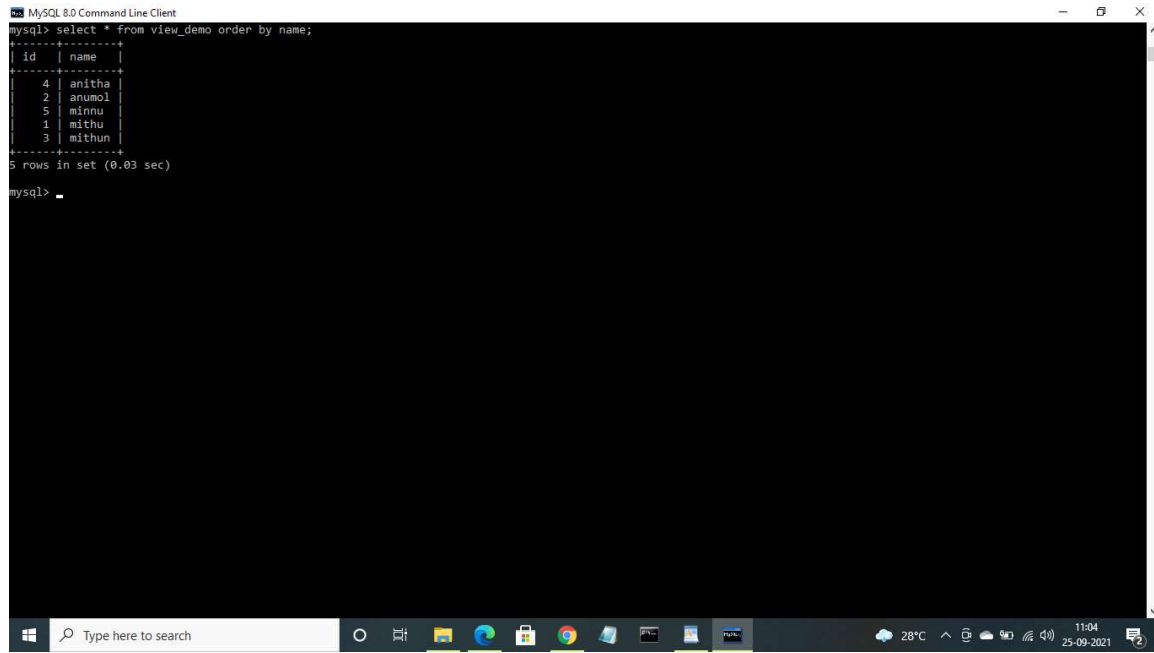
mysql>
```

## EXPERIMENT NO:9

AIM: Define a view on the already created database and perform

query selection on it(Create sample view and write sample queries on it)

## **OUTPUT:**



```
mysql> select * from view_demo order by name;
```

id	name
4	anitha
2	anumol
5	minnu
1	mithu
3	mithun

```
5 rows in set (0.03 sec)
```

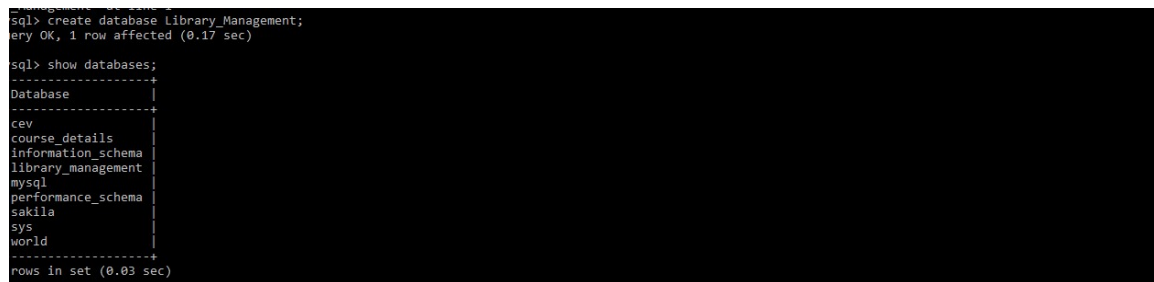
```
mysql>
```

## **EXPERIMENT NO:10**

**AIM:**Develop a tiny database system and do necessary adding of data and data retrieval from that (Create sample database systems such as Department Librarysystem, College canteen system, Hostel system, College store system etc.)

## **OUTPUT:**

### **library management database:**



```
sql> create database Library_Management;
```

```
very OK, 1 row affected (0.17 sec)
```

```
sql> show databases;
```

Database
cev
course_details
information_schema
library_management
mysql
performance_schema
sakila
sys
world

```
rows in set (0.03 sec)
```

## Tables:

### department

```
sql> use library_management;
Database changed
sql> create table department(
  -> department_id int(10) primary key,
  -> hod_name varchar(20) not null,
  -> contact_no int(10) not null);
Query OK, 0 rows affected, 2 warnings (1.49 sec)

sql> desc department;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| department_id | int | NO | PRI | NULL | |
| hod_name | varchar(20) | NO | | NULL | |
| contact_no | int | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.07 sec)
```

### student

```
mysql> create table student(
  -> student_id int(10) primary key,
  -> student_name varchar(20),
  -> st_address varchar(100) not null,
  -> reg_date date not null);
Query OK, 0 rows affected, 1 warning (0.74 sec)

mysql> desc student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| student_id | int | NO | PRI | NULL | |
| student_name | varchar(20) | YES | | NULL | |
| st_address | varchar(100) | NO | | NULL | |
| reg_date | date | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.12 sec)

mysql> _
```

### book



```
MySQL 8.0 Command Line Client

mysql> create table book(
  -> book_id int(20) not null primary key,
  -> book_title varchar(50) not null,
  -> category varchar(20) not null,
  -> rental_price int(10) not null,
  -> status varchar(20),
  -> author varchar(20) not null,
  -> publisher varchar(20) not null);
Query OK, 0 rows affected, 2 warnings (2.37 sec)

mysql> desc book;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| book_id | int | NO | PRI | NULL |  |
| book_title | varchar(50) | NO |  | NULL |  |
| category | varchar(20) | NO |  | NULL |  |
| rental_price | int | NO |  | NULL |  |
| status | varchar(20) | YES |  | NULL |  |
| author | varchar(20) | NO |  | NULL |  |
| publisher | varchar(20) | NO |  | NULL |  |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.32 sec)

mysql>
```

## employee

```
MySQL 8.0 Command Line Client

mysql> create table employee(
  -> employee_id int(10) not null primary key,
  -> employee_name varchar(20) not null,
  -> salary int(10) not null,
  -> position varchar(20) not null);
Query OK, 0 rows affected, 2 warnings (1.46 sec)

mysql> desc employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| employee_id | int | NO | PRI | NULL |  |
| employee_name | varchar(20) | NO |  | NULL |  |
| salary | int | NO |  | NULL |  |
| position | varchar(20) | NO |  | NULL |  |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.06 sec)

mysql>
```

## issue status

```
MySQL 8.0 Command Line Client
mysql> create table issue_status(
-> issue_id int(10) primary key,
-> issued_stud int(10) not null,
-> issued_book_name varchar(50) not null,
-> issue_date date not null,
-> id_book int(10) not null,
-> constraint foreign key(id_book) references book(book_id),
-> constraint foreign key(issued_stud) references student(student_id));
Query OK, 0 rows affected, 3 warnings (2.09 sec)

mysql> desc issue_status
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| issue_id | int | NO | PRI | NULL | |
| issued_stud | int | NO | MUL | NULL | |
| issued_book_name | varchar(50) | NO | | NULL | |
| issue_date | date | NO | | NULL | |
| id_book | int | NO | MUL | NULL | |
+-----+
5 rows in set (0.01 sec)

mysql>
```

## return status

```
MySQL 8.0 Command Line Client
mysql> create table return_status(
-> return_id int(10) primary key,
-> return_stud int(10) not null,
-> returned_book varchar(50) not null,
-> return_date date not null,
-> id_book2 int(10) not null,
-> constraint foreign key(id_book2) references book(book_id),
-> constraint foreign key(return_stud) references issue_status(issued_stud));
Query OK, 0 rows affected, 3 warnings (1.41 sec)

mysql> desc return_status;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| return_id | int | NO | PRI | NULL | |
| return_stud | int | NO | MUL | NULL | |
| returned_book | varchar(50) | NO | | NULL | |
| return_date | date | NO | | NULL | |
| id_book2 | int | NO | MUL | NULL | |
+-----+
5 rows in set (0.11 sec)

mysql>
```

