**Branch :- Computer Sci. & Engg. Class :- III Year**

**Subject :- DBMS Sem :- V**

**Teacher Manual**

**PRACTICAL NO 3**

**AIM**: To Study and implement DML Commands-I

**S/W REQUIRED: MYSQL 8.0 Commamd line client**

Sample **University** **Database** Considered is:

1. classroom(building, room\_number, capacity)

2. department(dept\_name, building, budget)

3. course(course\_id, title, dept name, credits)

4. instructor(inst\_id, name, dept name, salary)

5. section(course\_id, sec id, semester, year, building, room number, time slot\_id)

6. teaches(inst\_id, course\_id, sec-id, semester, year)

7. student(stu\_id, name, dept\_name, tot\_cred)

8. takes(stu\_id, course\_id, sec-id, semester, year, grade)

**SQL Queries:**

1. Find the titles of courses in the Comp. Sci. department that have 3 credits.
2. Find the highest salary of any instructor.
3. Find the department names of all instructors.

# Find the department names of all instructors(eliminate duplicate entry).

1. Find the names of all instructors in the computer science department who have salary greater than 70000.
2. Retrieve the names of all instructor along with their department names,department building.
3. Find the names and course\_id of all instructors.
4. Find the names and course\_id of all instructors using tuple variable.
5. For all instructor in the university who have taught some course,find their names and the course id of all course they taught.
6. Find the names of all instructor whose salary is grater than at least one instructor in the biology department.

11)Find the names of all departments whose building name includes substring ‘watson’

# 12)Find the names of all departments whose building name beginning with ‘wat’.

13)Find the names of all departments whose building name ending with ‘son’.

14)Find the names of all departments whose building name consist of 6 letters.

15)To list in alphabetic order all instructors in the physics department.

# SQL Commands:

1. **Find the titles of courses in the Comp. Sci. department that have 3 credits.**

MariaDB [university1]> select course\_name from course where dept\_name='Comp\_Sci' and credits=3;

| course\_name |

+-------------+

| C# |

| Java |

+-------------+

2 rows in set (0.016 sec)

1. **Find the highest salary of any instructor.**

mysql> select max(salary) from instructor;

+-------------+

| max(salary) |

+-------------+

| 95000.00 |

+-------------+

1 row in set (0.04 sec)

1. **Find the department names of all instructors.**

mysql> Select dept\_name from instructor;

+-----------------+

| dept\_name |

+-----------------+

| Computerscience |

| computerscience |

| finance |

| history |

| music |

| physics |

| physics |

+-----------------+

7 rows in set (0.01 sec)

1. **Find the department names of all instructors(eliminate duplicate entry).**

mysql> Select distinct dept\_name from instructor;

+-----------------+

| dept\_name |

+-----------------+

| Computerscience |

| finance |

| history |

| music |

| physics |

+-----------------+

5 rows in set (0.01 sec)

1. **Find the names of all instructors in the computer science department who have salary greater than 70000.**

mysql> Select name from instructor where dept\_name='computerscience' and salary>70000;

+------+

| name |

+------+

| katz |

+------+

1 row in set (0.01 sec)

1. **Retrieve the names of all instructor along with their department names,department building.**

MariaDB [university1]> select inst\_name, department.dept\_name, building from department, instructor where department.dept\_name=instructor.dept\_name;

+------------+-----------+----------+

| inst\_name | dept\_name | building |

+------------+-----------+----------+

| Srinivasan | Comp\_Sci | Taylor |

| Wu | Finance | Painter |

| Mozart | Music | Packard |

| Einstain | Physics | Watson |

| EI Said | History | Painter |

| Katz | Comp\_Sci | Taylor |

| Crick | Biology | Watson |

| Kim | Elec\_Engg | Taylor |

+------------+-----------+----------+

8 rows in set (0.030 sec)

1. **Find the names and course\_id of all instructors.**

mysql> Select name,course\_id from instructor,teaches where instructor.id=teaches.id;

+----------+-----------+

| name | course\_id |

+----------+-----------+

| Srinivas | cs-315 |

| Srinivas | cs-190 |

| Srinivas | cs-101 |

| wu | cs-190 |

+----------+-----------+

4 rows in set (0.23 sec);

1. **Find the names and course\_id of all instructors using tuple variable.**

mysql> Select name as n,course\_id as c from instructor,teaches where instructor.id=teaches.id;

+----------+--------+

| n | c |

+----------+--------+

| Srinivas | cs-101 |

| wu | cs-190 |

| Srinivas | cs-190 |

| Srinivas | cs-315 |

+----------+--------+

4 rows in set (0.04 sec)

1. **For all instructor in the university who have taught some course,find their names and the course id of all course they taught.**

mysql> Select I.name,T.course\_id from instructor as I,teaches as T where I.id=T.id;

+----------+-----------+

| name | course\_id |

+----------+-----------+

| Srinivas | cs-101 |

| wu | cs-190 |

| Srinivas | cs-190 |

| Srinivas | cs-315 |

+----------+-----------+

4 rows in set (0.03 sec)

**10)Find the names of all instructor whose salary is grater than at least one instructor in the biology department.**

mysql> Select distinct T.name from instructor as S, instructor as T where T.salary>S.salary and S.dept\_name='biology';

+----------+

| name |

+----------+

| Srinivas |

| wu |

| Mozart |

| einstein |

| el said |

| gold |

| katz |

+----------+

7 rows in set (0.10 sec)

**OR**

Select name from instructor where salary>some( select salary from instructor where dept\_name= ‘biology’);

1. **Find the names of all departments whose building name includes substring ‘watson’.**

mysql> Select dept\_name from department where buliding like '%watson%';

+-----------+

| dept\_name |

+-----------+

| biology |

| physics |

+-----------+

2 rows in set (0.01 sec)

1. **Find the names of all departments whose building name beginning with ‘wat’.**

mysql> Select dept\_name from department where buliding like 'wat%';

+-----------+

| dept\_name |

+-----------+

| biology |

| physics |

+-----------+

2 rows in set (0.00 sec)

1. **Find the names of all departments whose building name ending with ‘son’.**

mysql> Select dept\_name from department where buliding like '%son';

+-----------+

| dept\_name |

+-----------+

| biology |

| physics |

+-----------+

2 rows in set (0.00 sec)

1. **Find the names of all departments whose building name consist of 6 letters.**

mysql> Select dept\_name from department where buliding like '\_\_\_\_\_\_';

+-----------------+

| dept\_name |

+-----------------+

| biology |

| computerscience |

| electrical |

| physics |

+-----------------+

4 rows in set (0.00 sec)

1. **To list in alphabetic order all instructors in the physics department.**

mysql> Select name from instructor where dept\_name= 'physics' order by name;

+----------+

| name |

+----------+

| einstein |

| gold |

+----------+

2 rows in set (0.06 sec)

**CONCLUSION:** Thusvarious SQL queries on DML are executed.