Lab-2: DML Statements

LAB 2
NAME: KAUSHAL KHATIWADA
ROLL_NO: 13

1. Insert at least 5 tuples in each of the tables of the Yourname_Roll_COMPANY database in LAB-1

Inserted records in all 5 tables.

```
mysql> show tables;
+----------------------------+
| Tables_in_kaushal_13_company |
+----------------------------+
| dependents                 |
| employee                   |
| office                     |
| project                    |
| works_on                   |
+----------------------------+
5 rows in set (0.00 sec)
```

```
mysql> insert into Office(Onumber,Oname,Country)
    -> values   (1,"C8I","Nepal"),
    ->          (2,"Cypher Technology","Nepal"),
    ->          (3,"Visec Technology","India"),
    ->          (4,"Dell Technology","USA"),
    ->          (5,"Info Developer","Nepal"),
    ->          (6,"Kaushal_Office_13","Nepal"),
    ->          (7,"Classy Print","Nepal");
Query OK, 7 rows affected (0.01 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql> insert into Employee (SSN, Ename, Gender, Bdate, Address, Salary, Ono, Years_of_experience)
    -> values   (1,"Santosh Parajuli","M","1996-05-01","Kirtipur",55000,1,7),
    ->          (2,"Raju Shrestha","M","1995-01-01","Kalimati",50000,2,5),
    ->          (3,"Bipin Maharjan","M","1994-08-12","Kirtipur",40000,5,2),
    ->          (4,"Rishi Pradhananga","M","1990-10-21","Anamnagar",60000,4,8),
    ->          (5,"Dipen Khatri","M","1993-02-07","Pepsicola",58000,3,10),
    ->          (6,"Gopal Shrama","M","200-01-01","Lagankhel",25000,1,1),
    ->          (7,"Tina  Lama","F","2002-07-12","Balkhu",36000,2,2),
    ->          (8,"Shyam Tamang","M","1998-12-12","Kalanki",48000,3,3),
    ->          (9,"Prakash Karki","M","1988-03-03","Baneshwor",57000,4,4),
    ->          (13,"Kaushal Khatiwada","M","1996-10-28","Kaushaltar",30000,6,6);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> insert into Project (Pnumber, Pname, Proj_location, Onumber)
    ->  values  (1,"SaaS Product Deployment","Satdobato",1),
    ->          (2,"HCI Deployment","Kupondole",2),
    ->          (3,"Sever Protection","Bangalore",3),
    ->          (4,"Dell R740 Resouce Upgradation","New York",4),
    ->          (5,"Payment Feature Addition","Sanepa",5),
    ->          (13,"Kaushal_ProjMDS","Kaushaltar",6);
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0
```

```
mysql> insert into Works_on(ESSN,Pno)
    -> values    (1,1),
    ->           (2,2),
    ->           (3,5),
    ->           (4,4),
    ->           (5,3),
    ->           (13,13);
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> insert into Dependents (Did,Dname,Dage,SSN,Drelation)
    -> values    (1,"Ram Khatiwada",15,13,"Brother"),
    ->           (2,"Sharmila Parajuli",11,1,"Sister"),
    ->           (3,"Ryan Shrestha",9,2,"Brother"),
    ->           (4,"Gopal Khatri",3,5,"Son"),
    ->           (5,"Maya Khatiwada",50,13,"Mother");
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

2. In the database Yourname_Roll_COMPANY in LAB-1, Create a table PF(PFID, SSN, PFCategoryName, Amount, Start_date, Remarks); where SSN is foreign key referencing Employee. The start date should be of date type.

```
mysql> create table PF(
    ->  PFID int primary key,
    ->     SSN int,
    ->     PFCategoryName varchar(255),
    ->     Amount decimal(10, 2),
    ->     Start_date date,
    ->     Remarks varchar(255),
    ->     foreign key (SSN) references Employee(SSN)
    -> );
Query OK, 0 rows affected (0.08 sec)
```

3. In the database Yourname_Roll_COMPANY in LAB-1, alter the table Employee and add an attribute Matrital_status of type varchar. Update the records in the table and set values of status to "Married", "Single", "Divorced". At least three records should have status married.

Alter table Employee
Add Matrial_status varchar(50);

```
mysql> select * from Employee;
+-----+------------------+--------+------------+-----------+----------+------+--------------------+----------------+
| SSN | Ename            | Gender | Bdate      | Address   | Salary   | Ono  | Years_of_experience | Matrial_status |
+-----+------------------+--------+------------+-----------+----------+------+--------------------+----------------+
|   1 | Santosh Parajuli | M      | 1996-05-01 | Kirtipur  | 55000.00 |    1 |                  7 | NULL           |
|   2 | Raju Shrestha    | M      | 1995-01-01 | Kalimati  | 50000.00 |    2 |                  5 | NULL           |
|   3 | Bipin Maharjan   | M      | 1994-08-12 | Kirtipur  | 40000.00 |    5 |                  2 | NULL           |
|   4 | Rishi Pradhananga| M      | 1990-10-21 | Anamnagar | 60000.00 |    4 |                  8 | NULL           |
|   5 | Dipen Khatri     | M      | 1993-02-07 | Pepsicola | 58000.00 |    3 |                 10 | NULL           |
|   6 | Gopal Shrama     | M      | 0200-01-01 | Lagankhel | 25000.00 |    1 |                  1 | NULL           |
|   7 | Tina  Lama       | F      | 2002-07-12 | Balkhu    | 36000.00 |    2 |                  2 | NULL           |
|   8 | Shyam Tamang     | M      | 1998-12-12 | Kalanki   | 48000.00 |    3 |                  3 | NULL           |
|   9 | Prakash Karki    | M      | 1988-03-03 | Baneshwor | 57000.00 |    4 |                  4 | NULL           |
|  13 | Kaushal Khatiwada| M      | 1996-10-28 | Kaushaltar| 30000.00 |    6 |                  6 | NULL           |
+-----+------------------+--------+------------+-----------+----------+------+--------------------+----------------+
10 rows in set (0.00 sec)

mysql> update Employee
    -> set Matrial_status ="Married" where ssn in (1,3,5);
Query OK, 3 rows affected (0.01 sec)
Rows matched: 3  Changed: 3  Warnings: 0

mysql> update Employee
    -> set Matrial_status="Divorced" where ssn in (4,6,8);
Query OK, 3 rows affected (0.01 sec)
Rows matched: 3  Changed: 3  Warnings: 0

mysql> update Employee
    -> set Matrial_status="Single" where ssn in (2,7,9,13);
Query OK, 4 rows affected (0.01 sec)
Rows matched: 4  Changed: 4  Warnings: 0

mysql> select * from Employee;
+-----+------------------+--------+------------+-----------+----------+------+--------------------+----------------+
| SSN | Ename            | Gender | Bdate      | Address   | Salary   | Ono  | Years_of_experience | Matrial_status |
+-----+------------------+--------+------------+-----------+----------+------+--------------------+----------------+
|   1 | Santosh Parajuli | M      | 1996-05-01 | Kirtipur  | 55000.00 |    1 |                  7 | Married        |
|   2 | Raju Shrestha    | M      | 1995-01-01 | Kalimati  | 50000.00 |    2 |                  5 | Single         |
|   3 | Bipin Maharjan   | M      | 1994-08-12 | Kirtipur  | 40000.00 |    5 |                  2 | Married        |
|   4 | Rishi Pradhananga| M      | 1990-10-21 | Anamnagar | 60000.00 |    4 |                  8 | Divorced       |
|   5 | Dipen Khatri     | M      | 1993-02-07 | Pepsicola | 58000.00 |    3 |                 10 | Married        |
|   6 | Gopal Shrama     | M      | 0200-01-01 | Lagankhel | 25000.00 |    1 |                  1 | Divorced       |
|   7 | Tina  Lama       | F      | 2002-07-12 | Balkhu    | 36000.00 |    2 |                  2 | Single         |
|   8 | Shyam Tamang     | M      | 1998-12-12 | Kalanki   | 48000.00 |    3 |                  3 | Divorced       |
|   9 | Prakash Karki    | M      | 1988-03-03 | Baneshwor | 57000.00 |    4 |                  4 | Single         |
|  13 | Kaushal Khatiwada| M      | 1996-10-28 | Kaushaltar| 30000.00 |    6 |                  6 | Single         |
+-----+------------------+--------+------------+-----------+----------+------+--------------------+----------------+
10 rows in set (0.00 sec)
```

Lab-2: DML Statements

4. Insert ten records in the table PF, where at least two records have the Remarks field NULL.

```
mysql> insert into PF(PFID,SSN,PFCategoryName,Amount,Start_date,Remarks)
    ->  values  (1,1,"SSF",5500,"2017-05-01","Regular Contributor"),
    ->                (2,2,"SSF",5000,"2019-03-01","Irregular Contributor"),
    ->              (3,3,"SSF",4000,"2022-02-01","Regular Contributor"),
    ->              (4,4,"SSF",6000,"2016-08-01","Irregular Contributor"),
    ->              (5,5,"SSF",5800,"2014-12-01","Regular Contributor"),
    ->              (6,6,"CIT",2500,"2023-07-01","Irregular Contributor"),
    ->              (7,7,"CIT",3600,"2022-06-01","Regular Contributor"),
    ->              (8,8,"CIT",4800,"2021-05-01","Irregular Contributor"),
    ->              (9,9,"CIT",5700,"2020-11-01",NULL),
    ->              (13,13,"CIT",3000,"2018-02-01",NULL);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from PF;
+------+------+----------------+---------+------------+-----------------------+
| PFID | SSN  | PFCategoryName | Amount  | Start_date | Remarks               |
+------+------+----------------+---------+------------+-----------------------+
|    1 |    1 | SSF            | 5500.00 | 2017-05-01 | Regular Contributor   |
|    2 |    2 | SSF            | 5000.00 | 2019-03-01 | Irregular Contributor |
|    3 |    3 | SSF            | 4000.00 | 2022-02-01 | Regular Contributor   |
|    4 |    4 | SSF            | 6000.00 | 2016-08-01 | Irregular Contributor |
|    5 |    5 | SSF            | 5800.00 | 2014-12-01 | Regular Contributor   |
|    6 |    6 | CIT            | 2500.00 | 2023-07-01 | Irregular Contributor |
|    7 |    7 | CIT            | 3600.00 | 2022-06-01 | Regular Contributor   |
|    8 |    8 | CIT            | 4800.00 | 2021-05-01 | Irregular Contributor |
|    9 |    9 | CIT            | 5700.00 | 2020-11-01 | NULL                  |
|   13 |   13 | CIT            | 3000.00 | 2018-02-01 | NULL                  |
+------+------+----------------+---------+------------+-----------------------+
10 rows in set (0.00 sec)
```

5. Select all employees.

```
mysql> select * from Employee;
+-----+-------------------+--------+------------+-----------+----------+-----+--------------------+----------------+
| SSN | Ename             | Gender | Bdate      | Address   | Salary   | Ono | Years_of_experience | Matrial_status |
+-----+-------------------+--------+------------+-----------+----------+-----+--------------------+----------------+
|   1 | Santosh Parajuli  | M      | 1996-05-01 | Kirtipur  | 55000.00 |   1 |                  7 | Married        |
|   2 | Raju Shrestha     | M      | 1995-01-01 | Kalimati  | 50000.00 |   2 |                  5 | Single         |
|   3 | Bipin Maharjan    | M      | 1994-08-12 | Kirtipur  | 40000.00 |   5 |                  2 | Married        |
|   4 | Rishi Pradhananga | M      | 1990-10-21 | Anamnagar | 60000.00 |   4 |                  8 | Divorced       |
|   5 | Dipen Khatri      | M      | 1993-02-07 | Pepsicola | 58000.00 |   3 |                 10 | Married        |
|   6 | Gopal Shrama      | M      | 0200-01-01 | Lagankhel | 25000.00 |   1 |                  1 | Divorced       |
|   7 | Tina  Lama        | F      | 2002-07-12 | Balkhu    | 36000.00 |   2 |                  2 | Single         |
|   8 | Shyam Tamang      | M      | 1998-12-12 | Kalanki   | 48000.00 |   3 |                  3 | Divorced       |
|   9 | Prakash Karki     | M      | 1988-03-03 | Baneshwor | 57000.00 |   4 |                  4 | Single         |
|  13 | Kaushal Khatiwada | M      | 1996-10-28 | Kaushaltar| 30000.00 |   6 |                  6 | Single         |
+-----+-------------------+--------+------------+-----------+----------+-----+--------------------+----------------+
10 rows in set (0.00 sec)
```

6. Select employees having salary greater than 30000 and list the results in descending order of Ename.

```
mysql> select * from Employee
    -> where salary>30000
    -> order by Ename desc;
+-----+------------------+--------+------------+----------+----------+------+-------------------+----------------+
| SSN | Ename            | Gender | Bdate      | Address  | Salary   | Ono  | Years_of_experience | Matrial_status |
+-----+------------------+--------+------------+----------+----------+------+-------------------+----------------+
|   7 | Tina  Lama       | F      | 2002-07-12 | Balkhu   | 36000.00 |    2 |                 2 | Single         |
|   8 | Shyam Tamang     | M      | 1998-12-12 | Kalanki  | 48000.00 |    3 |                 3 | Divorced       |
|   1 | Santosh Parajuli | M      | 1996-05-01 | Kirtipur | 55000.00 |    1 |                 7 | Married        |
|   4 | Rishi Pradhananga| M      | 1990-10-21 | Anamnagar| 60000.00 |    4 |                 8 | Divorced       |
|   2 | Raju Shrestha    | M      | 1995-01-01 | Kalimati | 50000.00 |    2 |                 5 | Single         |
|   9 | Prakash Karki    | M      | 1988-03-03 | Baneshwor| 57000.00 |    4 |                 4 | Single         |
|   5 | Dipen Khatri     | M      | 1993-02-07 | Pepsicola| 58000.00 |    3 |                10 | Married        |
|   3 | Bipin Maharjan   | M      | 1994-08-12 | Kirtipur | 40000.00 |    5 |                 2 | Married        |
+-----+------------------+--------+------------+----------+----------+------+-------------------+----------------+
8 rows in set (0.00 sec)
```

7. Retrieve the tuples from project table. Sort the tuples on the basis of Pname.

```
mysql> select * from Project
    -> order by Pname;
+---------+-----------------------------+--------------+---------+
| Pnumber | Pname                       | Proj_location | Onumber |
+---------+-----------------------------+--------------+---------+
|       4 | Dell R740 Resouce Upgradation | New York    |       4 |
|       2 | HCI Deployment              | Kupondole    |       2 |
|      13 | Kaushal_ProjMDS             | Kaushaltar   |       6 |
|       5 | Payment Feature Addition    | Sanepa       |       5 |
|       1 | SaaS Product Deployment     | Satdobato    |       1 |
|       3 | Sever Protection            | Bangalore    |       3 |
+---------+-----------------------------+--------------+---------+
6 rows in set (0.00 sec)
```

8. Select the employees having salary greater than 30000 and years of experience less than 3 years.

```
mysql> select * from Employee
    -> where salary>30000 and Years_of_experience<3;
+-----+----------------+--------+------------+----------+----------+------+-------------------+----------------+
| SSN | Ename          | Gender | Bdate      | Address  | Salary   | Ono  | Years_of_experience | Matrial_status |
+-----+----------------+--------+------------+----------+----------+------+-------------------+----------------+
|   3 | Bipin Maharjan | M      | 1994-08-12 | Kirtipur | 40000.00 |    5 |                 2 | Married        |
|   7 | Tina  Lama     | F      | 2002-07-12 | Balkhu   | 36000.00 |    2 |                 2 | Single         |
+-----+----------------+--------+------------+----------+----------+------+-------------------+----------------+
2 rows in set (0.00 sec)
```

9. Select the name, address, and salary of employees having salary greater than 30000 or years of experience less than 3 years.

```
mysql> select Ename,Address,Salary from Employee
    -> where salary>30000 or Years_of_experience<3;
+--------------------+-----------+-----------+
| Ename              | Address   | Salary    |
+--------------------+-----------+-----------+
| Santosh Parajuli   | Kirtipur  | 55000.00  |
| Raju Shrestha      | Kalimati  | 50000.00  |
| Bipin Maharjan     | Kirtipur  | 40000.00  |
| Rishi Pradhananga  | Anamnagar | 60000.00  |
| Dipen Khatri       | Pepsicola | 58000.00  |
| Gopal Shrama       | Lagankhel | 25000.00  |
| Tina  Lama         | Balkhu    | 36000.00  |
| Shyam Tamang       | Kalanki   | 48000.00  |
| Prakash Karki      | Baneshwor | 57000.00  |
+--------------------+-----------+-----------+
9 rows in set (0.00 sec)
```

10. Select the all dependents.

```
mysql> select * from Dependents;
+-----+------------------+------+------+-----------+
| Did | Dname            | Dage | SSN  | Drelation |
+-----+------------------+------+------+-----------+
|   1 | Ram Khatiwada    |   15 |   13 | Brother   |
|   2 | Sharmila Parajuli|   11 |    1 | Sister    |
|   3 | Ryan Shrestha    |    9 |    2 | Brother   |
|   4 | Gopal Khatri     |    3 |    5 | Son       |
|   5 | Maya Khatiwada   |   50 |   13 | Mother    |
+-----+------------------+------+------+-----------+
5 rows in set (0.00 sec)
```

11. Select the name and age of the dependents having age between 5 to 60.

```
mysql> select Dname,Dage from Dependents
    -> where Dage between 5 and 60;
+-------------------+-------+
| Dname             | Dage  |
+-------------------+-------+
| Ram Khatiwada     |    15 |
| Sharmila Parajuli |    11 |
| Ryan Shrestha     |     9 |
| Maya Khatiwada    |    50 |
+-------------------+-------+
4 rows in set (0.00 sec)
```

12. Select the offices having office name like "%Nt%" as substring.

```
mysql> select * from Office
    -> where Oname like "%Nt%";
+---------+--------------+---------+
| Onumber | Oname        | Country |
+---------+--------------+---------+
|       7 | Classy Print | Nepal   |
+---------+--------------+---------+
1 row in set (0.00 sec)
```

13. Select the offices having office number in (1, 2, 3).

```
mysql> select * from Office
    -> where Onumber in (1,2,3);
+---------+-------------------+---------+
| Onumber | Oname             | Country |
+---------+-------------------+---------+
|       1 | C8I               | Nepal   |
|       2 | Cypher Technology | Nepal   |
|       3 | Visec Technology  | India   |
+---------+-------------------+---------+
3 rows in set (0.00 sec)
```

14. Select the records from PF table where remarks is NULL

```
mysql> select * from PF
    -> where Remarks is null;
+------+------+----------------+---------+------------+---------+
| PFID | SSN  | PFCategoryName | Amount  | Start_date | Remarks |
+------+------+----------------+---------+------------+---------+
|    9 |    9 | CIT            | 5700.00 | 2020-11-01 | NULL    |
|   13 |   13 | CIT            | 3000.00 | 2018-02-01 | NULL    |
+------+------+----------------+---------+------------+---------+
2 rows in set (0.00 sec)
```

15. Select PF category name, amount, start date and remarks from PF where remarks is not NULL

```
mysql> select PFCategoryName,Amount,Start_date,Remarks from PF
    -> where Remarks is not null;
+----------------+---------+------------+-----------------------+
| PFCategoryName | Amount  | Start_date | Remarks               |
+----------------+---------+------------+-----------------------+
| SSF            | 5500.00 | 2017-05-01 | Regular Contributor   |
| SSF            | 5000.00 | 2019-03-01 | Irregular Contributor |
| SSF            | 4000.00 | 2022-02-01 | Regular Contributor   |
| SSF            | 6000.00 | 2016-08-01 | Irregular Contributor |
| SSF            | 5800.00 | 2014-12-01 | Regular Contributor   |
| CIT            | 2500.00 | 2023-07-01 | Irregular Contributor |
| CIT            | 3600.00 | 2022-06-01 | Regular Contributor   |
| CIT            | 4800.00 | 2021-05-01 | Irregular Contributor |
+----------------+---------+------------+-----------------------+
8 rows in set (0.00 sec)
```

16. Select the five records from PF table using LIMIT Clause.

```
mysql> select * from PF
    -> limit 5;
+------+------+----------------+---------+------------+-----------------------+
| PFID | SSN  | PFCategoryName | Amount  | Start_date | Remarks               |
+------+------+----------------+---------+------------+-----------------------+
|    1 |    1 | SSF            | 5500.00 | 2017-05-01 | Regular Contributor   |
|    2 |    2 | SSF            | 5000.00 | 2019-03-01 | Irregular Contributor |
|    3 |    3 | SSF            | 4000.00 | 2022-02-01 | Regular Contributor   |
|    4 |    4 | SSF            | 6000.00 | 2016-08-01 | Irregular Contributor |
|    5 |    5 | SSF            | 5800.00 | 2014-12-01 | Regular Contributor   |
+------+------+----------------+---------+------------+-----------------------+
5 rows in set (0.00 sec)
```

17. Select the category name of PF where amount is not equal to 3000.

```
mysql> select PFCategoryName from PF
    -> where Amount != 3000;
+----------------+
| PFCategoryName |
+----------------+
| SSF            |
| SSF            |
| SSF            |
| SSF            |
| SSF            |
| CIT            |
| CIT            |
| CIT            |
| CIT            |
+----------------+
9 rows in set (0.00 sec)
```

18. Select all employees who works on project no 2.

```
mysql> select * from Employee
    -> join Works_On on Employee.SSN=Works_On.ESSN
    -> where Works_On.Pno=2;
+-----+---------------+--------+------------+----------+----------+-----+-------------------+---------------+------+-----+
| SSN | Ename         | Gender | Bdate      | Address  | Salary   | Ono | Years_of_experience | Matrial_status | ESSN | Pno |
+-----+---------------+--------+------------+----------+----------+-----+-------------------+---------------+------+-----+
|   2 | Raju Shrestha | M      | 1995-01-01 | Kalimati | 50000.00 |   2 |                 5 | Single        |    2 |   2 |
+-----+---------------+--------+------------+----------+----------+-----+-------------------+---------------+------+-----+
1 row in set (0.01 sec)
```